

**DEPARTMENT OF DEFENSE AUTHORIZATION FOR  
APPROPRIATIONS FOR FISCAL YEAR 2020 AND  
THE FUTURE YEARS DEFENSE PROGRAM**

---

**HEARINGS**

BEFORE THE

**COMMITTEE ON ARMED SERVICES  
UNITED STATES SENATE**

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

ON

**S. 1790**

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 2020 FOR MILITARY  
ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CON-  
STRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF  
ENERGY, TO PRESCRIBE MILITARY PERSONNEL STRENGTHS FOR  
SUCH FISCAL YEAR, AND FOR OTHER PURPOSES

---

**PART 1**

**U.S. CENTRAL COMMAND**

**U.S. AFRICA COMMAND AND U.S. SOUTHERN COMMAND**

**U.S. INDO-PACIFIC COMMAND AND U.S. FORCES KOREA**

**U.S. SPECIAL OPERATIONS COMMAND AND U.S. CYBER COMMAND**

**U.S. STRATEGIC COMMAND AND U.S. NORTHERN COMMAND**

**U.S. EUROPEAN COMMAND AND U.S. TRANSPORTATION COMMAND**

**DEPARTMENT OF DEFENSE BUDGET POSTURE**

**ARMY POSTURE**

**DEPARTMENT OF ENERGY'S ATOMIC ENERGY DEFENSE PROGRAMS**

**AIR FORCE POSTURE**

**NAVY POSTURE**

---

FEBRUARY 5, 7, 12, 14, 26; MARCH 5, 14, 26, 28; APRIL 4, 9, 2019



Printed for the use of the Committee on Armed Services

**DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2020 AND THE FUTURE YEARS**  
**DEFENSE PROGRAM—Part 1**

**U.S. CENTRAL COMMAND ● U.S. AFRICA COMMAND AND U.S. SOUTHERN COMMAND ● U.S. INDO-PACIFIC COMMAND  
AND U.S. FORCES KOREA ● U.S. SPECIAL OPERATIONS COMMAND AND U.S. CYBER COMMAND ● U.S. STRATEGIC  
COMMAND AND U.S. NORTHERN COMMAND ● U.S. EUROPEAN COMMAND AND U.S. TRANSPORTATION COMMAND  
● DEPARTMENT OF DEFENSE BUDGET POSTURE ● ARMY POSTURE ● DEPARTMENT OF ENERGY'S ATOMIC EN-  
ERGY DEFENSE PROGRAMS ● AIR FORCE POSTURE ● NAVY POSTURE**



**DEPARTMENT OF DEFENSE AUTHORIZATION FOR  
APPROPRIATIONS FOR FISCAL YEAR 2020 AND  
THE FUTURE YEARS DEFENSE PROGRAM**

---

**HEARINGS**

BEFORE THE

**COMMITTEE ON ARMED SERVICES**

**UNITED STATES SENATE**

**ONE HUNDRED SIXTEENTH CONGRESS**

**FIRST SESSION**

**ON**

**S. 1790**

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 2020 FOR MILITARY  
ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CON-  
STRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF  
ENERGY, TO PRESCRIBE MILITARY PERSONNEL STRENGTHS FOR  
SUCH FISCAL YEAR, AND FOR OTHER PURPOSES

---

**PART 1**

**U.S. CENTRAL COMMAND**

**U.S. AFRICA COMMAND AND U.S. SOUTHERN COMMAND**

**U.S. INDO-PACIFIC COMMAND AND U.S. FORCES KOREA**

**U.S. SPECIAL OPERATIONS COMMAND AND U.S. CYBER COMMAND**

**U.S. STRATEGIC COMMAND AND U.S. NORTHERN COMMAND**

**U.S. EUROPEAN COMMAND AND U.S. TRANSPORTATION COMMAND**

**DEPARTMENT OF DEFENSE BUDGET POSTURE**

**ARMY POSTURE**

**DEPARTMENT OF ENERGY'S ATOMIC ENERGY DEFENSE PROGRAMS**

**AIR FORCE POSTURE**

**NAVY POSTURE**

---

FEBRUARY 5, 7, 12, 14, 26; MARCH 5, 14, 26, 28; APRIL 4, 9, 2019

Printed for the use of the Committee on Armed Services



Available via: <http://www.govinfo.gov>

U.S. GOVERNMENT PUBLISHING OFFICE

COMMITTEE ON ARMED SERVICES

JAMES M. INHOFE, Oklahoma, *Chairman*

ROGER F. WICKER, Mississippi	JACK REED, Rhode Island
DEB FISCHER, Nebraska	JEANNE SHAHEEN, New Hampshire
TOM COTTON, Arkansas	KIRSTEN E. GILLIBRAND, New York
MIKE ROUNDS, South Dakota	RICHARD BLUMENTHAL, Connecticut
JONI ERNST, Iowa	MAZIE HIRONO, Hawaii
THOM TILLIS, North Carolina	TIM Kaine, Virginia
DAN SULLIVAN, Alaska	ANGUS S. KING, Jr., Maine
DAVID PERDUE, Georgia	MARTIN HEINRICH, New Mexico
KEVIN CRAMER, North Dakota	ELIZABETH WARREN, Massachusetts
MARTHA McSALLY, Arizona	GARY C. PETERS, Michigan
RICK SCOTT, Florida	JOE MANCHIN, West Virginia
MARSHA BLACKBURN, Tennessee	TAMMY DUCKWORTH, Illinois
JOSH HAWLEY, Missouri	DOUG JONES, Alabama

JOHN BONSELL, *Staff Director*

ELIZABETH L. KING, *Minority Staff Director*

# CONTENTS

FEBRUARY 5, 2019

	Page
UNITED STATES CENTRAL COMMAND .....	1
MEMBERS STATEMENTS	
Statement of Senator James M. Inhofe .....	1
Statement of Senator Jack Reed .....	2
WITNESS STATEMENTS	
Votel, General Joseph L., USA, Commander, United States Central Command .....	8
Questions for the Record .....	66
FEBRUARY 7, 2019	
UNITED STATES AFRICA COMMAND AND UNITED STATES SOUTHERN COMMAND ..	71
MEMBERS STATEMENTS	
Statement of Senator Mike Rounds .....	71
Statement of Senator Jack Reed .....	72
WITNESS STATEMENTS	
Waldhauser, General Thomas D., USMC, Commander, United States Africa Command .....	73
Faller, Admiral Craig S., USN, Commander, United States Southern Command .....	89
Questions for the Record .....	145
FEBRUARY 12, 2019	
UNITED STATES INDO-PACIFIC COMMAND AND UNITED STATES FORCES KOREA ..	165
MEMBERS STATEMENTS	
Statement of Senator James M. Inhofe .....	165
Statement of Senator Jack Reed .....	166
WITNESS STATEMENTS	
Davidson, Admiral Philip S., USN, Commander, United States Indo-Pacific Command .....	168
Abrams, General Robert B., USA Commander, United Nations Command/ Combined Forces Command/United States Forces Korea .....	188
Questions for the Record .....	230

FEBRUARY 14, 2019

	Page
UNITED STATES SPECIAL OPERATIONS COMMAND AND UNITED STATES CYBER COMMAND .....	243

MEMBERS STATEMENTS

Statement of Senator James M. Inhofe .....	243
Statement of Senator Jack Reed .....	244

WITNESS STATEMENTS

West, The Honorable Owen O., Assistant Secretary of Defense, Special Oper- ations and Low-Intensity Conflict .....	246
Thomas, General Raymond A., III, USA, Commander, United States Special Operations Command .....	250
Nakasone, General Paul M., USA, Commander, United States Cyber Com- mand; Director, National Security Agency; Chief, Central Security Service ..	256
Questions for the Record .....	293

FEBRUARY 26, 2019

UNITED STATES STRATEGIC COMMAND AND UNITED STATES NORTHERN COMMAND .....	309
---	-----

MEMBERS STATEMENTS

Statement of Senator James M. Inhofe .....	309
Statement of Senator Jack Reed .....	310

WITNESS STATEMENTS

Hyten, General John E., USAF, Commander, United States Strategic Command .....	312
O'Shaughnessy, General Terrence J., USAF, Commander, United States Northern Command and North American Aerospace Defense Command .....	327
Questions for the Record .....	378

MARCH 5, 2019

UNITED STATES EUROPEAN COMMAND AND UNITED STATES TRANSPORTATION COMMAND .....	403
--	-----

MEMBERS STATEMENTS

Statement of Senator James M. Inhofe .....	403
Statement of Senator Jack Reed .....	404

WITNESS STATEMENTS

Scaparrotti, General Curtis M., USA, Commander, United States European Command/North Atlantic Treaty Organization Supreme Allied Commander Europe .....	406
Lyons, General Stephen R., USA, Commander, United States Transportation Command .....	415
Questions for the Record .....	453

MARCH 14, 2019

BUDGET POSTURE .....	Page 473
----------------------	-------------

MEMBERS STATEMENTS

Statement of Senator James M. Inhofe .....	473
Statement of Senator Jack Reed .....	474

WITNESS STATEMENTS

Shanahan, The Honorable Patrick M., Acting Secretary of Defense; Accompanied by The Honorable David L. Norquist, Under Secretary of Defense (Comptroller) .....	476
Dunford, General Joseph F., Jr., USMC, Chairman of the Joint Chiefs of Staff .....	490
Questions for the Record .....	538
Appendix A .....	560

MARCH 26, 2019

ARMY POSTURE .....	581
--------------------	-----

MEMBERS STATEMENTS

Statement of Senator James M. Inhofe .....	581
Statement of Senator Jack Reed .....	582

WITNESS STATEMENTS

Esper, The Honorable Mark T., Secretary of the Army .....	587
Milley, General Mark A., USA, Chief of Staff of the Army .....	590
Questions for the Record .....	639

MARCH 28, 2019

THE DEPARTMENT OF ENERGY'S ATOMIC ENERGY DEFENSE PROGRAMS .....	653
---	-----

MEMBERS STATEMENTS

Statement of Senator James M. Inhofe .....	653
Statement of Senator Jack Reed .....	656

WITNESS STATEMENTS

Perry, The Honorable J. Richard, Secretary of Energy .....	658
Gordon-Hagerty, The Honorable Lisa E., Under Secretary of Energy for Nuclear Security and Administrator, National Nuclear Security Administration .....	667
Questions for the Record .....	688

APRIL 4, 2019

AIR FORCE POSTURE .....	Page 705
-------------------------	-------------

MEMBERS STATEMENTS

Statement of Senator James M. Inhofe .....	705
Statement of Senator Jack Reed .....	706

WITNESS STATEMENTS

Wilson, The Honorable Heather A., Secretary of the Air Force .....	708
Goldfein, General David L., USAF, Chief of Staff of the Air Force .....	709
Questions for the Record .....	759
Appendix A .....	776

APRIL 9, 2019

NAVY POSTURE .....	779
--------------------	-----

MEMBERS STATEMENTS

Statement of Senator James M. Inhofe .....	779
Statement of Senator Jack Reed .....	782

WITNESS STATEMENTS

Spencer, The Honorable Richard V., Secretary of the Navy .....	783
Richardson, Admiral John M., USN, Chief of Naval Operations .....	787
Neller, General Robert B., USMC, Commandant of the Marine Corps .....	800
Questions for the Record .....	846

**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**TUESDAY, FEBRUARY 5, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**UNITED STATES CENTRAL COMMAND**

The Committee met, pursuant to notice, at 9:28 a.m. in room SH-216, Hart Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee Members present: Senators Inhofe, Wicker, Cotton, Rounds, Ernst, Tillis, Sullivan, Perdue, Cramer, McSally, Scott, Blackburn, Hawley, Reed, Shaheen, Gillibrand, Blumenthal, Hirono, Kaine, King, Heinrich, Warren, Peters, Manchin, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. Good morning.

The Committee today will receive testimony from the United States Central Command (CENTCOM).

I would like to welcome our witness, General Joseph Votel, Commander of the United States Central Command. Welcome.

General Votel will hand over the Central Command at the end of March, and I want to thank him for his outstanding service to our country over his 38-year career. General, you have had a tough job at CENTCOM, and with the rise of ISIS [the Islamic State of Iraq and Syria] and the spread of Iran's proxies and the return of Russia to the Middle East, you and the President have grappled with some of the very hard decisions. Thank you for all you have done to keep America safe.

The Senate Armed Services Committee's top priority is to ensure the effective implementation of the National Defense Strategy (NDS), which identifies competition with China and Russia as, quote, the central challenge to the United States' prosperity and security. Clearly, we do not want to be the world's policeman, but without any United States presence, our strategic competitors will rush to fill the void. We have seen this repeatedly in the Middle East. When we step away from partners, Russia steps in. When our military pulls back, Russia pulls forward. When we do not enforce our redlines, Russia tries to create its own.

The NDS also makes countering terrorist threats a top priority. Part of this strategy has been achieved. The ISIS caliphate has been defeated, but ISIS and al Qaeda are still active in the region and threaten our Homeland.

Both priorities, competing with Russia and countering terrorists, are at stake in Syria. As we draw down in Syria, we must continue to support our partners and friends. I am also interested in how we are going to prevent ISIS resurging. It is one thing to come out, but then, of course, to stop them from coming back up. We believe that is going to happen, and the right person is here to explain that to us. We welcome you General Votel.

Senator Reed?

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Thank you very much, Mr. Chairman.

General Votel, welcome back, which will likely be your last hearing before the Committee. Let me thank you for 39 years of exemplary service to the Nation. We owe you and your family an incredible debt of gratitude for the contributions you have made to our national security throughout your career, but especially during your leadership of the Joint Special Operations Command, the Special Operations Command, and now Central Command. We sincerely thank you, General.

The focus of the National Defense Strategy is, rightly, a return to great power competition and a more resource sustainable approach to counterterrorism. However, this has led to some uncertainty about the United States Military's continued role in the CENTCOM area of responsibility. As we consider this question, it is important that we remain clear-eyed about the continued threat to the Homeland posed by ISIS, al Qaeda, and other extremist groups; the malign behavior of Iran; and the objectives of Russia and China in the region.

Each of these issues are relevant to current discussions about our military presence in Afghanistan and Syria. In addition to a complicated military situation, resolutions to broader stabilization, diplomatic, and political challenges have been far more difficult to come by.

Bringing our troops home should always be our objective, but it must be done in a deliberate and well-thought-out manner in concert with our partners and allies. In the case of Syrian withdrawal, contradictory statements by the President, his National Security Advisor, and other administration officials have only served to underscore that this decision was anything but thoughtful and deliberate. If public reports are accurate, the President may be about to make similar quick decisions with respect to Afghanistan.

The conflict in Afghanistan has occurred at great cost in terms of both lives and resources. However, in considering the prospect of conflict termination, we must also weigh the cost of getting it wrong. ISIS, al Qaeda, and an estimated 18 other terrorist groups are still present in the region, and some within the intelligence community assess that external plotting would surge upon our withdrawal.

We must also consider our allies and partners that have fought alongside us. As former Secretary Mattis said, "our strength as a



Nation is inexorably linked to the strength of our unique and comprehensive system of alliances and partnerships.” The allies and partners who joined us after 9/11 and have sacrificed with us in Afghanistan deserve to be included in conversations with respect to the future of the conflict.

Regarding the decision in Syria, the President’s statement that ISIS is defeated may be premature. According to the intelligence community assessment released last week, ISIS in their words, “very likely will continue to pursue external attacks from Iraq and Syria against regional and Western adversaries, including the United States.” General McKenzie made a similar point in December when he said “ISIS probably still is more capable than al Qaeda in Iraq at its peak, suggesting it is well positioned to re-emerge if pressure on the group is relieved.”

The security and stability of key partners in the region, most notably, Iraq, Israel, and Jordan, is bolstered by our continued presence. While our deployed forces do not have a military mission to counter Iran, I agree with our military leaders that there is a derivative benefit associated with their presence and the reassurance it provides. We should not take these partners for granted. If we were to withdraw precipitously from the region, we would risk the reemergence of ISIS, squandering gains made in Iraq, destabilizing Jordan and increasing the pressure on King Abdullah, and allowing Iran and its proxies to become further entrenched, thereby posing a greater threat to Israel.

No one, myself included, is in favor of endless wars or indefinite deployments of United States troops to dangerous parts of the world. Far too often, we view the use of the United States Military as the solution to every problem. I share the frustration of Americans that we have, thus far, been unable to fully achieve our foreign policy objectives in Afghanistan, Syria, and elsewhere.

However, just as decisions to employ the U.S. Military must be given great consideration, so too must decisions to disengage military, with particular attention paid to the second and third order effects such a decision will have on our security and foreign policy interests. I do not think sufficient consideration has been given to these issues to date.

General Votel, we look forward to hearing your views on these and other issues.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Now that a quorum is present, I would ask the Committee to consider and approve a Senate resolution authorizing funding for our Committee from March 1st through February 28th. The funding resolution is completely consistent with the minority and majority leader in the January 9th agreement.

Senator REED. So moved.

Senator WICKER. Second.

Chairman INHOFE. I would entertain a motion. Is there a motion?

Senator REED. So moved, Mr. Chairman.

Senator WICKER. Second.

Chairman INHOFE. All in favor, say aye.

[Chorus of ayes.]

Chairman INHOFE. Opposed, no?

[No response.]  
Chairman INHOFE. The ayes have it.  
[The Senate resolution approved by the Committee follows:]

ARM19156

S.L.C.

116TH CONGRESS  
1ST SESSION

## S. RES. \_\_\_\_\_

Authorizing expenditures by the Committee on Armed Services.

IN THE SENATE OF THE UNITED STATES

Mr. INHOFE, from the Committee on Armed Services, reported the following  
original resolution; which was \_\_\_\_\_

## RESOLUTION

Authorizing expenditures by the Committee on Armed  
Services.

1 *Resolved,*

### 2 **SECTION 1. GENERAL AUTHORITY.**

3 In carrying out its powers, duties, and functions  
4 under the Standing Rules of the Senate, in accordance  
5 with its jurisdiction under rule XXV of the Standing Rules  
6 of the Senate, including holding hearings, reporting such  
7 hearings, and making investigations as authorized by  
8 paragraphs 1 and 8 of rule XXVI of the Standing Rules  
9 of the Senate, the Committee on Armed Services (in this  
10 resolution referred to as the “committee”) is authorized

ARM19156

S.L.C.

2

1 from March 1, 2019 through February 28, 2021, in its  
2 discretion, to—

3 (1) make expenditures from the contingent fund  
4 of the Senate;

5 (2) employ personnel; and

6 (3) with the prior consent of the Government  
7 department or agency concerned and the Committee  
8 on Rules and Administration, use on a reimbursable  
9 or nonreimbursable basis the services of personnel of  
10 any such department or agency.

11 **SEC. 2. EXPENSES.**

12 (a) EXPENSES FOR PERIOD ENDING SEPTEMBER 30,  
13 2019.—The expenses of the committee for the period  
14 March 1, 2019 through September 30, 2019 under this  
15 resolution shall not exceed \$4,162,229, of which amount—

16 (1) not to exceed \$51,333 may be expended for  
17 the procurement of the services of individual consult-  
18 ants, or organizations thereof (as authorized by sec-  
19 tion 202(i) of the Legislative Reorganization Act of  
20 1946 (2 U.S.C. 4301(i))); and

21 (2) not to exceed \$19,250 may be expended for  
22 the training of the professional staff of the com-  
23 mittee (under procedures specified by section 202(j)  
24 of that Act).

1 (b) EXPENSES FOR FISCAL YEAR 2020 PERIOD.—

2 The expenses of the committee for the period October 1,  
3 2019 through September 30, 2020 under this resolution  
4 shall not exceed \$7,135,250, of which amount—

5 (1) not to exceed \$88,000 may be expended for  
6 the procurement of the services of individual consult-  
7 ants, or organizations thereof (as authorized by sec-  
8 tion 202(i) of the Legislative Reorganization Act of  
9 1946 (2 U.S.C. 4301(i))); and

10 (2) not to exceed \$33,000 may be expended for  
11 the training of the professional staff of the com-  
12 mittee (under procedures specified by section 202(j)  
13 of that Act).

14 (c) EXPENSES FOR PERIOD ENDING FEBRUARY 28,  
15 2021.—The expenses of the committee for the period Oc-  
16 tober 1, 2020 through February 28, 2021 under this reso-  
17 lution shall not exceed \$2,973,021, of which amount—

18 (1) not to exceed \$36,667 may be expended for  
19 the procurement of the services of individual consult-  
20 ants, or organizations thereof (as authorized by sec-  
21 tion 202(i) of the Legislative Reorganization Act of  
22 1946 (2 U.S.C. 4301(i))); and

23 (2) not to exceed \$13,750 may be expended for  
24 the training of the professional staff of the com-

1 mittee (under procedures specified by section 202(j))  
 2 of that Act).

3 **SEC. 3. EXPENSES AND AGENCY CONTRIBUTIONS.**

4 (a) **EXPENSES OF THE COMMITTEE.—**

5 (1) **IN GENERAL.**—Except as provided in para-  
 6 graph (2), expenses of the committee under this res-  
 7 olution shall be paid from the contingent fund of the  
 8 Senate upon vouchers approved by the chairman of  
 9 the committee.

10 (2) **VOUCHERS NOT REQUIRED.**—Vouchers shall  
 11 not be required for—

12 (A) the disbursement of salaries of employ-  
 13 ees paid at an annual rate;

14 (B) the payment of telecommunications  
 15 provided by the Office of the Sergeant at Arms  
 16 and Doorkeeper;

17 (C) the payment of stationery supplies pur-  
 18 chased through the Keeper of the Stationery;

19 (D) payments to the Postmaster of the  
 20 Senate;

21 (E) the payment of metered charges on  
 22 copying equipment provided by the Office of the  
 23 Sergeant at Arms and Doorkeeper;

24 (F) the payment of Senate Recording and  
 25 Photographic Services; or

ARM19156

S.L.C.

5

1 (G) the payment of franked and mass mail  
 2 costs by the Sergeant at Arms and Doorkeeper.

3 (b) AGENCY CONTRIBUTIONS.—There are authorized  
 4 to be paid from the appropriations account for “Expenses  
 5 of Inquiries and Investigations” of the Senate such sums  
 6 as may be necessary for agency contributions related to  
 7 the compensation of employees of the committee—

8 (1) for the period March 1, 2019 through Sep-  
 9 tember 30, 2019;

10 (2) for the period October 1, 2019 through Sep-  
 11 tember 30, 2020; and

12 (3) for the period October 1, 2020 through  
 13 February 28, 2021.

All right. General Votel, you are recognized for your opening statements.

**STATEMENT OF GENERAL JOSEPH L. VOTEL, USA,  
 COMMANDER, UNITED STATES CENTRAL COMMAND**

General VOTEL. Senator Inhofe, Ranking Member Reed, distinguished Members of the Committee, good morning and thank you for the opportunity to appear before the Senate Armed Services Committee today. I come before you representing the over 80,000 men and women working tirelessly across the Central Command area of responsibility. They represent the very best of our Nation, and I am proud to stand among them as their commander. All of these great Americans have families in communities across our

country that support their servicemembers from near and far, and we are equally proud and appreciative of their service and sacrifice.

I am honored to be joined today by the CENTCOM senior enlisted leader, United States Army Command Sergeant Major Bill Thetford. Command Sergeant Major Thetford has been with me my entire tour at CENTCOM and for the 5 years we served together in other commands before that. He is the most experienced soldier in our outfit, and his support and steady leadership helped us navigate very treacherous waters over the years. He is representative of the people we have across this command and, indeed, throughout the Armed Forces of our Nation. Command Sergeant Major Thetford and his wife Allie will retire after 38 years of service later this spring, and our Nation owes them an incredible debt of gratitude. We could not have been served better.

There is no other region in the world as dynamic, hopeful, challenging, and dangerous as the CENTCOM area of responsibility, made up of the areas we typically refer to as the Levant, the Middle East, and Central and South Asia. It is an area of great contrast and contradiction. It is an area rich in history, culture, and resources, but also an area pulsing with sectarianism, violence, poor governance, corruption, disenfranchisement, profound human suffering, and economic disparity. It is also an area where we retain vital interests, preventing the tax on our Homeland, countering malign and destabilizing influence, containing the proliferation of weapons of mass destruction, and ensuring freedom of navigation and commerce through critical international waterways. It is worth noting that four of the five major competitors or threats identified in the National Defense Strategy, China, Russia, Iran, and violent extremist organizations, reside or are contested in the CENTCOM area of responsibility every day.

In the final 2 weeks of 2018, CENTCOM supported the UN [United Nations] Special Envoy in the establishment of a nascent ceasefire in Yemen, enabled the efforts of the United States Special Representative for Afghanistan, Reconciliation, began planning for the orderly and professional withdrawal under pressure of United States Forces in Syria, while maintaining our coalition efforts to support the Government of Iraq and the Iraqi Security Forces in addressing the remnants of ISIS in that country. We monitored and mitigated the unprofessional acts of Iranian naval forces in international waters and observed the professional mature actions of the United States-advised Lebanese armed forces as they maintained stability along the border with Israel. Those 2 weeks were not an aberration for the command. They were business as usual, as they have been in CENTCOM nearly every day since its inception in the early 1980s.

Today in Afghanistan, the conditions-based South Asia Strategy is working, and we continue to use military ways and means to advance our end state of reconciliation. We recognize this conflict will not be resolved solely by military force, but our military pressure serves as an enabler to a whole-of-government process and more directly supports diplomatic efforts led by Ambassador Khalilzad. While these efforts have had recent promise, our mission has not changed. We will continue our military pressure in support of our national objectives until they are met.

In Syria and Iraq, the unrelenting work of the 79-member Defeat ISIS coalition, the determination and bravery of our Iraqi Security Force and Syrian Democratic Force (SDF) partners, and the support of multiple international government organizations has largely liberated the so-called physical caliphate of ISIS. An area of 34,000 square miles of territory which they once controlled is now reduced to an area less than 20 square miles. The successful partnership with the Syrian Democratic Forces and the Iraqi Security Forces was instrumental in these gains against ISIS.

But it is important to understand that even though this territory has been reclaimed, the fight against ISIS and violent extremists is not over, and our mission has not changed. The coalition's hard-won battlefield gains can only be secured by maintaining a vigilant offensive against the now largely dispersed and disaggregated ISIS that retains leaders, fighters, facilitators, resources, and the profane ideology that fuels their efforts.

As the Defeat ISIS campaign in Syria transitions from liberating territory to enabling local security and addressing the ISIS clandestine insurgency, United States ground forces will depart Syria in a deliberate and coordinated manner while we concurrently consult with allies and partners to implement stabilization efforts. These details are being developed now and will ensure campaign continuity and capitalize on the contributions of the international community to prevent a resurgence of ISIS in Iraq and Syria.

Today in Yemen, a fragile ceasefire in the Port of Houdeidah is a promising, albeit challenging-to-implement step demonstrating the willingness by both sides to negotiate, and which will, hopefully, allow the United Nations to expand efforts to end this humanitarian disaster. Towards this end, CENTCOM supports the international diplomatic efforts and the work of the UN Special Envoy to facilitate the peace process by providing advice and assistance and serving as an interlocutor through our trusted relationships in the region to help ensure transparency, cohesion, and positive momentum. We also remain steadfast in reminding the Saudi-led coalition partners of their obligations under the Law of Armed Conflict and ensuring that the fight in Yemen does not spread across the region sowing more instability and threatening critical infrastructure and United States lives and interests.

It is in the Central Region today and every day: great promise and opportunity mixed with contradiction and conflict.

Let me conclude my remarks where I started with our people and their families. In an era of great change when we consistently ask our people to do more with less, the service and sacrifice of these men and women and their families in support of our Nation is both humbling and inspirational. For over 17 years of sustained conflict across the CENTCOM area of responsibility, our soldiers, sailors, airmen, marines, coast guardsmen, and civilians have answered the call with an unwavering commitment and devotion matched only by the families who support them. We could not have accomplished what we do without all of them, and they deserve the very best capabilities and support we can provide from weapons and communication systems to health care and housing. I ask for continued strong support from Congress and from the American people to provide our service men and women everything they need to ac-



comply with their vital missions and lead healthy, fulfilling lives in continued service to our Nation.

Thank you again for allowing me to represent the men and women of CENTCOM before you today. I look forward to your questions.

[The prepared statement of General Votel follows:]

#### PREPARED STATEMENT BY GENERAL JOSEPH L. VOTEL

##### INTRODUCTION

As 2018 came to a close, U.S. Central Command (CENTCOM) was engaged in critical events and catalysts for change across its area of responsibility (AOR). In the final two weeks of December, CENTCOM supported the UN Special Envoy in the establishment of a fragile cease-fire in Yemen, and enabled the efforts of the United States Special Representative for Afghanistan Reconciliation through military pressure on the Taliban. We began planning for the safe, professional withdrawal under pressure of United States Forces from Syria, while maintaining our Defeat-Islamic State of Iraq and Syria (D-ISIS) efforts and accounting for the formation of a new governmental cabinet in Iraq. We monitored and mitigated the unprofessional acts of Iranian naval forces in international waters that threaten the global commons; which stood in stark contrast to the professional, mature actions of the United States-advised Lebanese Armed Forces as it de-escalated tensions along the border with Israel. While these events appear unconnected, they represent the swirling dynamics of the AOR—each event marking a pivotal point with the potential to impact the stability of the entire region.

Since 2001, in the aftermath of 9/11, CENTCOM has been charged with the responsibility of commanding multiple, often simultaneous combat missions in the Central Region. During that time, confronting terrorism and defeating violent extremist groups was the primary objective of U.S. national military power. Seventeen years later, CENTCOM is still the only geographic combatant command conducting multiple, active combat operations, but the strategic imperatives of a changing world have compelled us to rethink our priorities and assess our readiness for new challenges.

The 2018 National Defense Strategy (NDS) rightly recognized a return to competition between the great powers that now poses a greater long-term challenge to our Nation than the violence of terrorism. We also noted that the National Security Strategy (NSS) directs that “The United States seeks a Middle East that is not a safe haven or breeding ground for jihadist terrorists, not dominated by any power hostile to the United States, and that contributes to a stable global energy market,” and that “We will retain the necessary American military presence in the region to protect the United States and our allies from terrorist attacks and preserve a favorable regional balance of power.” We at CENTCOM understand how global disorder has created a security environment more complex and volatile than we have faced in our Nation’s history. This assessment demands a clear-eyed appraisal of the threats, an acknowledgement of the changing character of warfare, and an understanding that challenges to our national interests will largely be transregional versus regional.

We approach our evolving role at CENTCOM with both humility and agility, acknowledging the priorities outlined in the NSS and NDS, and the fact that we will not be the main effort of our Nation’s scarce resources in perpetuity. We must, therefore, posture ourselves as both the supported and supporting effort toward securing our national interests—many of which are still heavily impacted by activities in the CENTCOM AOR. While CENTCOM has been the primary focus of military assets for nearly two decades, we recognize maintaining an agile posture in the Central Region doesn’t necessarily require large concentrations of military personnel and equipment. Our strategic strength has never rested solely on the volume of materiel we bring to the fight, but rather on the partnerships, alliances and whole-of-government efforts no other country in the world could recreate.

Looking forward, our challenge will be to secure our hard-fought gains, and those of our allies and partners, while posturing for continuing change in the Central Region. We must be ready to compete with China, Russia, and Iran as they challenge us for regional influence and threaten our vital national interests. We must continue disrupting violent extremist organizations and preventing the acquisition or proliferation of weapons of mass destruction so they cannot be used against the U.S. or our allies. Regardless of the challenge or level of resources, CENTCOM is com-

mitted to defending the national interests of the U.S., and those of its partners and allies.

#### OPERATING ENVIRONMENT

*Resolute Support (RS).* Our current military efforts in Afghanistan in support of the South Asia Strategy are conditions-based and focused on two well-defined and complementary missions. First, through Operation Freedom's Sentinel, United States Forces conduct counter-terror missions against al Qaeda, the Islamic State of Iraq and Syria-Khorasan (ISIS-K), and associated groups to prevent their resurgence and ability to plan and execute external attacks. Second, in partnership with NATO allies and operational partner Nations in the Resolute Support Mission, United States Forces advise and assist the Afghan National Defense and Security Forces (ANDSF) in their fight against the Taliban. The ANDSF have demonstrated exceptional resilience through a difficult and sustained fight.

The conditions-based South Asia Strategy is working. We continue to use military ways and means to achieve our end state of reconciliation, recognizing this conflict will not be resolved solely by military force. Our military and enabling missions in Afghanistan are designed to set conditions that will convince the Taliban to negotiate for a lasting peace, and allow Afghans to own the political and diplomatic solutions that will eventually bring an end to the conflict. Consistent, offensive military pressure helped bring about the first cease fires—local and national—between the Taliban and Government of the Islamic Republic of Afghanistan (GIROA) in 17 years, illustrating the Afghan people's weariness of war, and representing our first real opportunity for peace and reconciliation since the war began. While the Taliban continue to demonstrate the capability to mount spectacular attacks and inflict significant casualties on the ANDSF, the 2018 fighting season confirmed that the Taliban cannot win militarily. We recognize it will take a combination of sustained military pressure and diplomacy to bring an end to the hostilities. Our military pressure serves as an enabler to a whole-of-government process, and supports diplomatic efforts led by United States Special Representative for Afghanistan Reconciliation (SRAR), Ambassador Zalmay Khalilzad.

*Operation Inherent Resolve (OIR).* The unrelenting work of the 74-nation D-ISIS Coalition, determination and bravery of our Iraqi Security Force (ISF) and Syrian Democratic Force (SDF) partners, and support of multiple international governmental organizations has pushed the physical caliphate of ISIS to the verge of collapse. As a result, we are adjusting our military posture in Syria, planning and executing a deliberate, safe, and professional withdrawal of personnel and equipment while preserving sufficient power in the region to ensure that we can continue to destroy remnants of ISIS fighters and ensure it does not return. In Iraq, we work with the ISF to consolidate their gains, improve their security capability and help them evolve into the professional and representative force that the Iraqi people deserve.

We are grateful for the partnership of the SDF throughout our D-ISIS mission. A reliable partner since 2014, the SDF suffered tens of thousands of killed and wounded, and its leadership, sacrifice, and determination to drive ISIS from SDF homelands was instrumental in the liberation of the vast majority of ISIS' so-called physical caliphate. Of paramount importance now, the Coalition's hard-won battlefield gains must be secured by continued interagency efforts and mobilizing the international community to prevent a return of the conditions that allowed ISIS to arise.

*Yemen.* Conflict between the Iranian-backed Houthis and Republic of Yemen Government (ROYG) forces, supported by the Saudi-led Coalition (SLC), led to deteriorating humanitarian conditions in Yemen. The UN noted in August 2018 that the Houthis—trained, funded and armed in part by Iran—exacerbated the crisis by restricting food and aid access to civilian populations by controlling or threatening transportation and logistical routes to the city of Ta'izz, and the Ports of Aden and Hudaydah. The impact of conflict on the country and its people is catastrophic, despite best efforts by our own U.S. Agency for International Development (USAID), and other UN agencies and international aid organizations to mitigate humanitarian suffering. UN-brokered consultations in Sweden in December 2018, and the resulting agreement on a prisoner exchange, ceasefire and redeployment of forces in the city and port of Hudaydah, and humanitarian access to Taiz demonstrated promising steps and a willingness on both sides to seek a negotiated settlement. Toward this end, CENTCOM supports the international diplomatic efforts and the work of UN Special Envoy (UNSE) Martin Griffiths to facilitate an end to the conflict, providing knowledge, advice, and serving as an interlocutor through our trusted relationships in the region to help ensure transparency, cohesion, and positive

momentum. We will continue to support our regional partners developing processes and procedures to counter ballistic missiles (CBM) and counter unmanned armed aerial systems (C-UAS) to help mitigate threats to civilian populations and critical infrastructure.

*Iran* exerts its malign influence throughout the region, through its increased—often unprofessional—activities in the Arabian Gulf and Strait of Hormuz, engaging in proxy warfare through its sponsorship of violent extremist organizations (VEOs), and proliferating advanced conventional weapons, including theater ballistic missiles and weaponized unmanned aerial and maritime systems. Operating in the gray zone of competition below open conflict, *Iran* conducts unfettered information and cyber campaigns against its adversaries and actively attempts to influence or obstruct the mechanisms of effective governance and domestic policies of several of its sovereign regional neighbors.

Prolonged conflicts in *Iraq*, *Yemen*, *Syria*, and *Afghanistan* have produced instability and large-scale humanitarian crises within and beyond the CENTCOM AOR, creating millions of displaced persons, stressing fragile economies, opening space for the spread of extremism among disenfranchised peoples, and providing opportunities for adversaries to cultivate influence. Countering instability requires an alliance-based and whole-of-government approach that CENTCOM is uniquely positioned to support. The Department of State, USAID and CENTCOM are partnering to counter the influence of competitors and malign actors by addressing the drivers of instability and creating the economic, political, and security conditions required to reverse these trends. To alleviate suffering, CENTCOM, in partnership with USAID, provides targeted foreign humanitarian assistance to internally displaced persons using our Overseas Disaster, Humanitarian, and Civic Aid appropriated funds. Stabilization and humanitarian assistance activities provide a significant tool to reduce human suffering, promote stability, sustain fragile governmental institutions, and provide critical support countering our competitors' gray zone activities.

While we maintain a strong, cooperative presence with our regional partners in the traditional warfighting domains, there is room for improvement in cooperative ventures with our regional partners in the information and cyber domains. Our competitors do not play by the same rules as the U.S. They have developed and employed asymmetric strategies to use in the information and cyber environment to weaken the U.S. to achieve their strategic objectives. The unconstrained and unregulated nature of their capabilities puts the United States at a disadvantage, while great power competitors like *China* and *Russia*, as well as adversarial regimes like *Iran*, operationalize these strategies—including information theft, media manipulation, and cyber-attack—to strike vulnerable United States assets, disrupt our information systems and those of our allies, and undermine the image of the U.S. in the region and around the world.

Our CENTCOM Partner Network, a secure coalition computer network, improves our capability to exchange crucial cyberspace threat intelligence and operational data with coalition and regional partners. We will pursue more opportunities to enable real-time exchanges of classified information to meet critical coalition collaboration and mission needs. The ability to dynamically share information with mission partners at the speed of relevance provides us a greater advantage against our adversaries.

Across the interagency, CENTCOM pursues whole-of-government solutions to address transregional threats. CENTCOM places increased command emphasis on an organizational approach to ensure interagency integration is a high priority in all planning. For example, CENTCOM supports National Security Council-convened threat finance fusion cells to counter *ISIS* and *Iran*. We also provide personnel to support interagency efforts in our Regional Narcotics Interagency Fusion Cell.

The Defense Threat Reduction Agency's (DTRA) Joint Improvised Threat Defeat Organization (JIDO) provides a best-in-class example of a successful, nimble, and responsive capability in support of the warfighter. CENTCOM relies heavily on the critical, life-saving training, technology, and expertise JIDO provides to safeguard U.S. and allied forces from many of the most dangerous, emerging threats on the battlefield, including improvised explosive devices; unmanned, armed aerial and maritime vehicles; and other improvised threats. JIDO's functions are not replicated in any of the Services, demonstrate enormous value, and are worthy of continued resourcing through DTRA.

#### STRATEGIC IMPORTANCE

The CENTCOM AOR is one of the most complex, diverse regions in the world. Composed of nearly 600 million people dispersed among 20 countries, it is home to three of the world's five major religions, is the most energy-rich region in the world,

and contains three strategic maritime choke points. The Suez Canal, the Bab al Mandeb, and the Strait of Hormuz are major transit points for energy and trade; the ability of commerce to transit these global commons freely being vital for the global economy.

Much like the rest of the world, almost 90 percent of businesses in the Central Region are small-to-medium-size enterprises. They are the key drivers of job creation, employ nearly 66 percent of the labor force, and help diversify their respective country's economies. Contrary to popular belief, not every country in the CENTCOM AOR is rich with oil and natural gas resources, and for those that are, their economies are highly susceptible to changes in the energy market. Strong economies, vibrant commerce, low unemployment rates, and decent standards of living are "must-haves" to promote and maintain stability. Military force cannot create strong economies. It can only help provide safe, secure conditions for them to develop.

There are multiple drivers of instability in the region, ranging from the toxic narrative of sectarianism, to brittle political and economic systems, to disenfranchised and disillusioned peoples. While drivers of instability can be addressed and mitigated through the application of elements of national power, many have roots spanning several generations. In our strategic approach, it is important to acknowledge with a degree of humility that there are some things that are beyond our power to change. Despite those challenges, we recognize the strategic importance of the Central Region to our national interests, and four key reasons why we must remain engaged here to preserve them.

First, we must not allow another attack on our Homeland. The CENTCOM AOR is the world's epicenter for terrorism and VEOs. The 9/11 attacks were based from al Qaeda's safe haven in Afghanistan and served as a wake-up call that terrorism could be exported from anywhere in the world.

Second, we cannot allow VEOs or rogue nations to acquire weapons of mass destruction (WMDs). Our active presence in this region prevents VEOs from coming together toward that purpose and helps prevent the proliferation of WMD materials.

Third, instability is contagious. It does not respect national borders and grows and spreads if left unchecked. A stable Middle East underpins a stable world. In an already volatile region, our steady commitment to our allies and partners provides a force for stability. As the President's National Security Strategy states, we must also "work with partners to neutralize Iran's malign activities in the region."

The fourth is the reemergence of great power competition, the main challenge highlighted in the NDS. China and Russia seek to dominate and influence not just their own geographic regions, but the Central Region as well. Just as great power competitors looked to influence energy and trade in the Middle East following the first World War, China and Russia are working very hard today to reshuffle the balance of power in the CENTCOM AOR, trying to displace the United States from its position of influence. The President's National Security Strategy directs that the United States seeks a Middle East that is "not dominated by any power hostile to the United States."

This is the reality of our world, and of the regional and transregional challenges we have to address in CENTCOM. We recognize the United States is rightly shifting its resources toward Europe and East Asia to balance great power competition, but remain mindful that the CENTCOM AOR represents a geopolitical crossroads and a principal zone for that competition as well. Of the five major threats identified in the NDS, four—competition with China; competition with Russia; Iran's rogue, malign activities; and combatting VEOs—reside or are contested on a significant scale in the CENTCOM AOR every day.

Many observers, and many of our partners and allies as well, hold misperceptions of the focus on great power competition in the NDS. They view the prioritization and alignment of efforts for long-term competition with China and Russia as a wholesale shift in emphasis away from the Middle East and Central Asia regions. However, that view fails to account for the global context of the NDS and how great power competition is not isolated to Europe or Asia, but often takes place in other strategically important regions like the CENTCOM AOR.

Currently, CENTCOM is conducting or supporting military operations with Coalition partners in Afghanistan, Iraq, Syria, and limited counter-terror operations in Yemen. We represent a United States presence with military basing and support in seven countries, have bilateral or multilateral military engagements with nearly a dozen countries, and security cooperation agreements with 16 countries. Across much of the AOR, however, where there is a United States presence, there is almost always an existing or developing presence by China, Russia, or both.

China uses its "One Belt-One Road" initiative as an economic lever to provide access and influence across the Central Region. China invested in Suez Canal development, the port of Haifa in Israel, and Jordan to provide access, relationships and

leverage on the other side of the continent. In the United Arab Emirates, it invested in the Free Trade Zone area and the Khalifa Port to create a regional hub in the Arabian Gulf. China built a naval support base in the country of Djibouti to expand its presence and access to the Red Sea, Suez Canal, and Bab al Mandeb. In Pakistan, China financed and gained access to the Gwadar Port enabling access to the Arabian Sea. In Oman, China is conducting port negotiations to obtain access to trade routes and energy transit corridors. For China, economic power is the primary tool, and while many “United Arab Emirates, it invested in the Free Trade Zone area and the Khalifa Port to create a regional hub in the Arabian Gulf. China built a naval support base in the country of Djibouti to expand its presence and access to the Red Sea, Suez Canal, and Bab al Mandeb. In Pakistan, China financed and gained access to the Gwadar Port enabling access to the Arabian Sea. In Oman, China is conducting port negotiations to obtain access to trade routes and energy transit corridors. For China, economic power is the primary tool, and while many “

Russia is focusing increasing attention to the Middle East, in part due to its geographical proximity, but also to reestablish its image as an influential global power. Russia invests in the Suez Canal development and is a co-member with China in the Shanghai Cooperation Organization. Russia has increased its engagement with and investment in Egypt, including construction of a 48 megawatt nuclear power plant in El Dabba, as well as development of a major trade and investment zone in east Port Said. Russia conducts bilateral and multilateral military exercises and provides economic and security support in more than half a dozen countries in the Central and South Asia (CASA) region, most of whom were part of the former Soviet Union and who remain reliant on Russia for their economic and security needs. Russia seeks to increase its own influence while limiting the influence of others, monopolize energy transit and pipeline routes, and provide a buffer zone against NATO enlargement. In Syria, Russia is establishing a permanent military and economic presence, with the goal of dominating infrastructure and energy commerce there in the coming years.

We also note the important role that nuclear deterrence plays within U.S. strategy, as the number one priority mission of the Department of Defense. It backstops all U.S. military operations and diplomacy across the globe. A robust and modern United States nuclear deterrent helps ensure competition with Russia and China, regardless of where it originates, does not escalate to large-scale war.

The U.S. is able to exercise a great deal of control over its own economy because we exercise a great deal of political, military, and economic power around the world. Where we lose that power and influence, our competitors gain—and we will be more vulnerable at home because of it. Less than 100 years ago the Middle East puzzle came together with the United States influencing key pieces. Today, the puzzle is being remade and China and Russia are seeking new strategic pieces. We must recognize our old pieces may no longer fit, and stay engaged and agile enough to maintain our position as the dominant influence once this new puzzle comes together. In the CASA region, for example, our partner nations lie in close proximity to or share borders with Russia or China. We must realistically acknowledge this tyranny of distance, but continue to engage and compete in innovative ways that help build partnerships, grow our influence, and serve as a balance to the other great powers. The bottom line is simple: If left unchecked, the expanding global reach of China’s economic and military initiatives, as well as Russia’s objective to weaken or subvert Western security structures in the CENTCOM AOR will pose a significant challenge to United States prosperity, security, and regional stability.

As long as terrorism is exportable, as long as the Central Region remains a global supplier of energy, as long as we have allies and partners to whom we are committed, the U.S. cannot afford to cede our role as the dominant regional power. Without a continued strong presence and consistent engagement in the region, we risk our ability to secure the global commons, weaken our network of allies and partners necessary to eliminate potential safe havens for jihadist terrorists, and diminish our ability to maintain a stable global energy market.

## STRATEGIC APPROACH

CENTCOM's mission is to direct and enable military operations and activities with allies and partners to increase regional security and stability in support of enduring U.S. interests. Our strategic approach is founded in three principles: Prepare, Pursue, and Prevail. This approach drives our thinking, gives direction and intent to every level in the command, provides capabilities to our commanders, and creates decision space for military and civilian leadership. Each aspect of our approach enables the next, and collectively contributes to the successful achievement of our goals and objectives. CENTCOM uses these aspects as the cornerstone to advance our operational approach of “by, with, and through.”

We *prepare* by forming enduring coalitions, cultivating relationships with partners and allies, and maintaining security, basing, and overflight agreements, or paving the way for those agreements to be established. It means we deepen our interoperability and expand our regional consultative mechanisms and collaborative planning with our partners, so we can increase their capabilities and our collective capabilities to operate more effectively in a joint and combined environment. We communicate the winning narrative of a free and open international order, national sovereignty, individual freedom and dignity, and the rule of law. We foster meaningful, sustainable, two-way relationships with people who share common interests and common values instead of engaging in the transactional relationships and predatory economic practices of our great power competitors. The alliances and partnerships we forge, rooted in mutual respect, reduce the price we pay for our position of leadership, and provide significant asymmetrical advantages over our geopolitical rivals. These aspects of preparation are crucial, and perhaps even more important than maintaining a large military footprint in the region. While personnel and equipment can be surged in a time of crisis, one cannot surge partnerships, trust, understanding, agreements, and commitment.

*Pursuing* opportunities means we are proactive, always alert for chances to seize the initiative and dictate events on favorable terms. Regardless of whether we are investigating a new partnership or considering a different operational approach, pursuing those openings requires empowerment at the lowest levels, transparency, flat communications, understanding and trust. Surrounding circumstances and shortened decision cycles for action may induce greater risk, which we must underwrite and manage through strong feedback loops between all levels of leadership, including our interagency partners and allies. Not every opportunity pans out, but an opportunity not explored is a potential advantage lost.

*Prevailing* takes on a meaning different than raising a banner or marching in a victory parade. It entails consolidating our gains, securing and stabilizing what we and our partners have fought for. We recognize there are no easy victories to be had in the CENTCOM AOR as ours is a region of historical, protracted struggle. In CENTCOM, prevailing means retaining flexibility and decision space for our leaders, preserving our national interests and those of our allies and partners, and maintaining a favorable balance of power for the U.S.

We operationalize this principle using a “by, with, and through” approach. We conduct operations primarily *by* indigenous partner forces, *with* enabling support from the U.S. and our coalition partners, working *through* U.S. and international authorities and partner agreements. While not yet a doctrine, a strategy, or a formal military program, it is a proven, successful, operational approach that pursues culturally acceptable and durable solutions. It is a way of conducting military activities and operations with reduced direct combat employment of U.S. Forces, while developing and supporting partner capacity and participation. While indigenous forces may not conduct operations according to U.S. pace and doctrine, they take ownership of the fight. Their wins are not only theirs, but ours as well; and fighting for those wins builds legitimacy and resiliency. Currently, CENTCOM successfully applies the “by, with and through” operational approach in Operation Inherent Resolve, assisting our partners to defeat ISIS; in Yemen, using a multilayered Arab/United States approach to counter VEOs; and with Operation Freedom's Sentinel and the NATO-led Resolute Support Mission to defeat VEOs and pressure the Taliban in Afghanistan. This approach is not limited to combat operations, however, as CENTCOM fulfills many peacetime objectives working “by, with, and through” other partner nations.

Employing a “by, with, and through” operational strategy supports the objectives and intent of the NSS and NDS—promoting regional stability and security, defeating terrorist threats to the U.S., and ensuring that common domains remain free and open—while addressing these challenges through a resource-sustainable approach, including strengthening the indigenous capacities of, and improving interoperability with, our regional partners and allies.

While this approach provides CENTCOM the ability to do “more with less,” our ability to act decisively in the region becomes more contingent upon the full commitment of regional partners. We must therefore ensure transparent and contextual communication across our own Government, and among our allies and partners. If we mistakenly or inadvertently signal we are “pulling back” or “refocusing” priorities to address great power competition elsewhere in the world, we risk undermining our trust and credibility with long-standing partners here.

#### REGIONAL OVERVIEW—CENTRAL AND SOUTH ASIA

**Afghanistan** remains home to numerous terrorist organizations that threaten our interests. ISIS-K, in particular, maintains both the intent and the capability to inspire, direct, and conduct external operations, and if left unchecked, will continue to grow as a threat to our Homeland. In support of the South Asia Strategy, Afghanistan became CENTCOM’s main effort. United States support for the mission in Afghanistan evolved into a “by, with and through” operational approach as recognition of the need for domestic legitimacy and ownership increased. This ultimately strengthens the GIROA’s negotiating position toward reconciliation and reintegration.

*Key Challenges:* Years of conflict in Afghanistan have caused large-scale humanitarian crises exacerbated by porous national borders, and provided Iran, Russia, and China opportunities to expand their influence in the region. Russia has attempted to challenge United States influence in Afghanistan under the false pretense of supporting the Taliban’s fight against ISIS-K, while Iran continues to use the Taliban to secure its own interests and to counter the ANDSF’s attempts to improve security conditions across the country. Militants operating out of Pakistan and Afghanistan continue to threaten Afghan stability as well as stoke tensions between Pakistan and India. We look to regional actors such as Pakistan to cease behavior undermining regional stability and play constructive roles in achieving peace in Afghanistan as well as the whole of South Asia. Kabul’s uncertain political situation remains the greatest risk to stability as the GIROA prepares for the 2019 presidential elections, and continues to suffer from weak institutions and a political environment marked by a lack of unity on core issues.

*Key Opportunities:* The potential for a political settlement in Afghanistan is promising. In June, following GIROA’s call for a national ceasefire over Eid al Fitr, the Taliban responded with their own ceasefire, giving Afghans a glimpse of a future without conflict. October’s parliamentary elections were the first run entirely by Afghans, with only limited logistical and security support from the Coalition. Despite Taliban and ISIS-K threats against voters and polling centers, the ANDSF oversaw a significant reduction in violence compared to previous election periods, with over 4 million Afghans participating in the parliamentary elections. Applying lessons learned will be critical to enabling successful presidential elections in 2019.

The Afghan Security Forces Fund appropriation has enabled us to increase the combat capabilities in the Afghan Air Force (AAF). Our security cooperation funds are used for procuring aircraft, training aircrews and maintainers as the AAF transitions from dated Russian platforms to modern United States aircraft. We are assisting the ANDSF in doubling the size of the Afghan Army’s Special Operations Force, currently the most effective combat element against the Taliban and terrorist organizations. In an effort to promote responsible development, we closely monitor ANDSF capability growth to ensure it is necessary, affordable, and sustainable. We continue to pursue opportunities to develop bilateral relationships with CASA nations to promote regional stability and encourage them, and our NATO allies, to contribute financial and advisory support to the GIROA.

*2019 Prognosis:* The South Asia Strategy is working. While the Taliban continue to demonstrate resilience and the capability to inflict significant casualties on the ANDSF, the Coalition’s sustained military, diplomatic, and social pressure will be instrumental in convincing the Taliban that reconciliation is the only path forward.

**Pakistan** presents the United States with challenges and opportunities in the execution of our South Asia Strategy. As a state possessing nuclear weapons that sits at the nexus of Russian, Chinese, Indian, Iranian, and United States geopolitical interests, Pakistan will always be a country of importance to the United States. However, Pakistan’s actions are often a source of frustration to United States regional efforts in Afghanistan. Our posture with Pakistan involves supporting our colleagues at the Department of State as they pursue a diplomatic solution with Islamabad to end the conflict in Afghanistan while ensuring that Pakistan’s equities are acknowledged and addressed in any future agreement.

*Key Challenges:* Pakistan has not taken concrete actions against the safe havens of VEOs inside its borders. Similarly, VEOs located in Afghanistan conduct attacks

inside Pakistan. This cross-border instability and violence generates tension along both sides of the border. The suspension of United States security assistance funds to Pakistan remains in place. Meanwhile, some United States Pakistan military cooperation activities have continued, demonstrating the importance of military cooperation, despite challenges in the bilateral relationship.

*Key Opportunities:* Pakistan has taken positive steps to assist SRAR Ambassador Khalilzad in support of Afghanistan reconciliation by facilitating talks with the Taliban but has avoided taking any concrete or irreversible steps such as arresting or expelling Taliban leaders who do not cooperate with reconciliation efforts. With our strategic focus on reconciliation and regional security, Pakistan has a unique opportunity to make good on its promises of support to United States efforts focused on finding a negotiated settlement to the Afghanistan conflict. If Pakistan plays a positive role in achieving a settlement to the conflict in Afghanistan, the United States will have opportunity and motive to help Pakistan fulfill that role, as peace in the region is the most important mutual priority for the United States and Pakistan.

*2019 Prognosis:* A peaceful resolution in Afghanistan and improved cross-border security between Afghanistan and Pakistan would strengthen the opportunity for mutual trade and increased economic flows not only between them, but also potentially with India and the Central Asian states. China is already partnering with Pakistan for the China-Pakistan Economic Corridor as a central piece of China's "One Belt-One Road" initiative. Central and South Asia cooperation between the United States and China offers opportunities for peaceful dialogue and a chance for the United States to balance China's economic rise and reinforce its commitment to global norms for the benefit all.

**Uzbekistan** and United States partnerships continue to improve, and we are increasingly optimistic that the Government of Uzbekistan is promoting a constructive foreign policy, improving relations with its neighbors and becoming more involved in multilateral exchanges and exercises. Uzbekistan is fully supportive of our South Asia Strategy and a constructive partner in the Afghanistan peace process. Given its large population, strong security forces, central location, and a shared border with Afghanistan, Uzbekistan's willingness to partner with us and its neighbors can help promote stability in the region.

*Key Challenges:* Russia remains the dominant power in Central Asia, and Uzbekistan must balance cooperation with the United States carefully to avoid actions Moscow deems provocative. As we strengthen our partnership with Uzbekistan we must respect this balance, mindful of Uzbekistan's absorptive capacity.

*Key Opportunities:* Uzbekistan is hosting the Central and South Asian armed forces Chief of Staff conference in February, demonstrating its growing role as a regional leader. Our mil-to-mil efforts are focused on improving border security capacity, enhancing counter-narcotic and counter-terrorism capabilities, and assisting the Uzbeks with the potential return of domestic terrorist fighters returning from Iraq, Syria, and Afghanistan. The Uzbeks expressed interest in diversifying their military equipment and provided lists of U.S. systems and equipment they are interested in purchasing. This interest represents a unique opportunity to off-ramp Uzbekistan from Russian equipment and deepen our relationship as we negotiate increased air and land access through the Northern Access corridor.

*2019 Prognosis:* Uzbekistan will continue efforts to increase its capacity, using United States security assistance to maintain a balance between Russian and Chinese influences and to boost its professionalism in the areas of border security, counter-narcotics, counter-terrorism and defense institution building. United States security assistance will help maintain and potentially enhance access in support of United States and coalition forces in Afghanistan.

**Tajikistan** remains a target of both Russian and Chinese overtures. We continue to build our military relationship with Tajikistan, even as Moscow deepens its influence and increases its military posture at its base outside the capital. China's increased security cooperation, focused on border security, is coupled with an aggressive economic lending program. China seeks to minimize instability along their shared border, in its eastern provinces, and protect its economic investment in Tajikistan.

*Key Challenges:* The Government of Tajikistan is concerned with stability in northern Afghanistan and security along the mountainous, 800-mile Afghan border. The inability to secure their border encourages smuggling and has a destabilizing effect on both Tajikistan and Afghanistan. These border concerns provide a strong nexus of mutual interests and we support development of Tajik counter-terrorism, counter-narcotics, and border security capabilities. We are also assisting Tajikistan to counter trans-national threats that impact both Tajikistan and the broader Central Asia region.



**Key Opportunities:** Tajikistan is eager for United States assistance and its modest funding for security services presents an opportunity for CENTCOM to help Tajikistan develop its capabilities and relationships to balance Russian influence. Exercise Regional Cooperation, a multilateral exercise Tajikistan expressed interest hosting in August 2019, will address border security and counter terror issues. Moving forward, CENTCOM will assist Tajikistan's efforts to counter violent extremism and emphasize the need for building stronger defense institutions.

**2019 Prognosis:** Economic investment and border security will continue to characterize China's relationship with Tajikistan. It is likely that both Russia and China will continue to exaggerate the terrorist threat to further entrench and justify their respective security relationships with Tajikistan. Russia will seek to continue to safeguard what it considers its "sphere of influence" in the region and China will continue to take actions it deems necessary to secure its border. United States security assistance for Tajikistan can provide a counter to this great power competition by enabling the Tajiks to maintain their border integrity with Afghanistan while supporting regional stability.

**Kazakhstan** and United States relations continue to be the most mature and forward-thinking in Central Asia, although Russia's proximity influences Kazakhstan's posture. Kazakhstan remains the most significant Central Asian contributor to Afghan stability, engaging in trade, providing electrical power, donating money to the ANDSF fund, providing educational opportunities, supporting programs for Afghan women, and offering technical support and services to the Afghans.

**Key Challenges:** Kazakhstan, like most CASA nations, must carefully balance cooperation with the United States to avoid actions Russia interprets as threatening. As we strengthen our partnership with Kazakhstan, we must respect this balance. The United States should continue assisting the Kazakhstan Ministry of Defense as it focuses on the necessary institutional reforms of its non-commissioned officer corps, training management, human resources administration, and its professional military education system. As we look to off-ramp Central Asian countries from Russian defense equipment, the higher price of United States systems will remain a challenge for nations like Kazakhstan.

**Key Opportunities:** Kazakhstan has expressed interest in working with the United States to improve its logistical, medical, and engineering branches. We will also continue our engagement with the Kazakhstani Peace Keeping Operations (PKO) training center to improve Kazakhstani PKO capabilities and foster regional integration by opening the center to Kazakhstan's neighbors. Exercise Steppe Eagle, an annual trilateral peacekeeping exercise sponsored by the United States, United Kingdom and Kazakhstan, has expanded to include Tajikistan and Uzbekistan. In November 2018, with United States assistance, Kazakhstan deployed a company-level unit to Lebanon on a UN peacekeeping operations mission—a first for any CASA nation.

**2019 Prognosis:** Kazakhstan will continue to use United States security assistance to balance Russian and Chinese influences. United States security assistance enables access for sustainment of United States and coalition forces in Afghanistan. Maintaining mil-to-mil programs, with a focus on defense institution building and professional military education, will position us to maintain our comparative advantage with a country situated on the doorsteps of Russia and China.

**The Kyrgyz Republic** and United States' strained bilateral relations impede security cooperation that would otherwise further military our objectives in Central Asia.

**Key Challenges:** The lack of a status of forces agreement with the Kyrgyz Republic severely limits CENTCOM's level of engagement. Until steps are taken to extend diplomatic protections for United States Military operating in the Kyrgyz Republic, mil-mil exchanges and training are suspended.

**Key Opportunities:** The Office of Military Cooperation in Bishkek and the Montana National Guard through the National Guard State Partnership Program remain postured to renew programs aimed at developing military capabilities specifically in the areas of Field Medicine and Disaster Response, and Humanitarian Assistance as soon as political conditions permit.

**2019 Prognosis:** Any United States security assistance for the Kyrgyz Republic will help the Kyrgyz to maintain their national sovereignty in the face of Russian and Chinese jockeying for influence.

**Turkmenistan** has a UN-recognized policy of "positive neutrality" by which the government balances the demands of the regional powers by not taking sides in international conflict and not entering into alliances or economic organizations, necessitating a subtle and agile approach to Security Cooperation to be successful.

**Key Challenges:** A struggling economy, a rigid political system, and the Turkmen policy of positive neutrality largely limits international cooperation and Turkmenistan's security services.

*Key Opportunities:* We have focused our efforts on English language training, medical engagements and the development of Special Forces with Turkmenistan Ministry of Defense (MOD). We are encouraged by MOD's increased participation in our exchanges and conferences. Turkmenistan has expressed interest in enhancing its disaster response capability and border security, providing additional opportunities for CENTCOM.

*2019 Prognosis:* Turkmenistan remains concerned with the instability in Afghanistan and the potential for the flow of foreign terrorist fighters, therefore assistance will focus on enhancing border security. Maintaining a small, consistent security cooperation portfolio in Turkmenistan has outsized impact and will help counter Russian and Chinese influence.

#### REGIONAL OVERVIEW—GREATER LEVANT

**Iraq's** mil-to-mil relationship with the United States is as strong as it has ever been, and Iraq has both the potential and desire to become a formidable ally in combatting terrorism. The Office of Security Cooperation-Iraq (OSC-I) is conducting programs to enhance professionalization of the ISF, coupled with prudent implementation and oversight of FMF and Foreign Military Sales (FMS). Transforming OSC-I into a permanent Title 22 Security Cooperation Office is key. Our authority for OSC-I to conduct training activities with ISF is more important than ever in the evolution of an ISF that is effective, inclusive, sustainable, affordable, and cements our long-term bilateral partnership.

*Key Challenges:* Reform of the Iraqi Security Forces (ISF) to achieve the goal of "One ISF" remains a challenge. Iraq's Popular Mobilization Forces (PMF) are officially part of the ISF, however, the forces are comprised of disparate groups, some of which are not totally responsive to the direction of the Government of Iraq (GOI), the worst of which are affiliated with Shiite militia groups directed by Iran. Iraq's Ministry of Peshmerga Affairs (MOPA) is largely treated as a less-than-equal organization by the government. While some tensions between the Kurdish Regional Government and Baghdad have eased, challenges with revenue sharing, disputed territory and control of oil resources remain problematic. It is critical the ISF consolidate its gains against ISIS and evolve from a war footing to a steady state, which must be effective, affordable, and protect Iraqi people and their infrastructure from terrorism.

As ISIS continues to build a clandestine insurgency, the GoI must form an effective cabinet and government entities to manage the country and improve economic resilience and quality of life for its people. This includes meeting the needs of Iraq's youthful population who demand better economic opportunities, access to essential services, and an end to endemic corruption in the GoI. Failure by the newly formed government to address the basic needs of Iraqi citizens may facilitate the reemergence of ISIS or other VEOs, which capitalize on public dissatisfaction to increase their support. Iran's meddling in the selection of Iraqi cabinet members, notably the Minister of Defense and the Minister of Interior, has prevented the GoI from addressing pressing national security issues.

*Key Opportunities:* CENTCOM, through OSC-I, is working with our Iraqi partners to re-integrate the GoI with its Arab neighbors. These efforts have paid dividends in reinitiating cooperation between Iraq and countries such as Jordan, Saudi Arabia, Kuwait, Turkey, and Qatar; illustrated by the reopening of shared borders. OSC-I can leverage its authorities to support the ISF's evolution into an effective, sustainable, and affordable force through mil-to-mil relations, security sector reform, security cooperation, while coordinating broad-based reform with regional partners. Key objectives include the further professionalization of the ISF, rebalancing the ISF's force structure to meet future threats, and reforming the ISF's human resources and professional military education systems with increased emphasis on force design, force management, and policy development.

*2019 Prognosis:* Iraq's May 2018 elections resulted in the formation of a new, generally representative government. Newly elected Prime Minister Abd al-Mahdi vowed to improve public services and prioritize reconstruction of areas devastated by the conflict with ISIS. It is likely that Iraq will retool its budget to focus on government goals however, Iraq must also rebuild its security forces, which are exhausted by four years of operations against ISIS.

**Syria's** President Bashar al Assad remains in power with the military support of Russia, Iran, and Lebanese Hezbollah (LH). Despite significant advances, the Syrian regime has insufficient forces to adequately secure recaptured territory. The United States withdrawal from Syria represents the most dynamic shift in the environment since ISIS lost its ability to govern major population centers and fight as a conventional force and could trigger a renewed race for influence, control, and for

some, survival. Turkey's strong national security concerns in Syria and standing as a NATO ally further complicates the battlespace. Israel's legitimate concerns about Iran's increasingly provocative actions in Syria, particularly the transshipment of advanced weapons systems into and through Syria, are driving increasingly forward leaning Israeli military actions. If the major actors and their proxies become embroiled in a competition for influence in Syria, this may create space for ISIS remnants or other terrorist groups to reform or reconstitute. Because the regime was incapable or unwilling to fight ISIS, the responsibility for D-ISIS fighting has been borne by the Coalition and our partnered force, the SDF, whose bravery and determination have been crucial to rolling back ISIS. The intervention of the Coalition in the Syrian conflict blocked Assad's ability to recapture all of northern Syria. As the United States executes a safe, professional withdrawal, we seek to help negotiate a secure future for the people of northeast Syria liberated from ISIS and our partners in the D-ISIS fight.

The international humanitarian community has achieved some success, but the Syrian regime's resistance to allow aid deliveries is largely driven by Assad's use of starvation as a weapon of war. As a result, there are more than 13 million Syrians who require humanitarian assistance, including 5.7 million internally displaced persons and 5.7 million refugees in neighboring countries. While United States humanitarian assistance reaches four million people throughout Syria monthly, security concerns and access constraints limit the reach of aid in some locations. Vulnerable populations in Syria will continue to require humanitarian aid until parties to the conflict reach a political solution.

*Key Challenges:* The civil war, combined with ISIS occupation and the subsequent fight to displace and destroy ISIS has led to vast destruction of infrastructure, degradation of government, lack of basic services, and other humanitarian challenges. Assad's reluctance to negotiate directly with the Syrian opposition, and Moscow's reluctance to force him to do so, indicates significant challenges ahead in forging a political resolution to the conflict and ending this humanitarian crisis. A political resolution is key to the lasting defeat of ISIS, because unless fundamental drivers of domestic instability are addressed, conditions will remain for a resurgence of ISIS, or ISIS-like VEOs.

While CENTCOM's "by, with, and through" partnership with the SDF has been critical to the defeat of ISIS, it has created friction with Turkey, which views the Kurdish People's Protection Units (YPG) elements within the SDF as a terrorist group. Our assistance to the SDF focuses on defeating ISIS, as we have simultaneously sought to include measures to reassure our Turkish allies. In October 2018 the United States and Turkey began conducting combined joint patrols in key locations. CENTCOM will continue to assist the Turkish military in countering VEOs that threaten their border, maintaining our emphasis on the D-ISIS campaign.

The repatriation of ISIS foreign fighters to their home countries to face justice remains a challenge. Both SDF and Iraqi forces are holding hundreds of foreign fighters in prisons or temporary detention facilities, with no single process for prosecution or repatriation. This requires a concerted international effort involving law enforcement, intelligence sharing, and diplomacy.

*Key Opportunities:* The conflict in Syria has led to an increased demand from our regional allies and partners for improved border security as well as improved domestic counter-terrorism capabilities. CENTCOM is able to manage the development of these capabilities which supports our objectives of promoting stability and countering VEOs in the region. The United States withdrawal provides an opportunity to reset our relationship with our Turkish allies as well as an opportunity for us to focus on reinforcing Iraq's consolidation of its gains against ISIS. A strong, enduring partnership with Iraq will serve as stabilizing factor, helping mitigate concerns about long-term United States intentions in the region.

**Jordan** is one of our most committed partners in the Middle East and one of the most critical voices of moderate Islam in the region. We must be careful to not to take their partnership for granted. Jordan's civilian and military leadership exemplifies professionalism and modernization within a region in crisis. Jordan is the only country in the Levant to provide a platform for operations, in addition to unhindered access and overflight essential to United States interests. The Jordan Armed Forces (JAF) are a key contributor to the D-ISIS Coalition and OIR and is a major contributor to efforts to stabilize the region. Continued support to the Government of Jordan (GOJ) and the JAF is critical to ongoing D-ISIS efforts, and preventing the spread of instability in the region.

*Key Challenges:* Jordan currently hosts over 750,000 registered refugees from Syria, Iraq, and elsewhere, straining government resources, services, and infrastructure. The GOJ and the JAF have effectively balanced legitimate security concerns with the humanitarian imperative to care for these refugees, despite the strain on

Jordan's resources. Simultaneously, regional turmoil, falling remittances, and declining tourism have led to rising unemployment and high national debt creating a volatile environment that threatens political stability.

*Key Opportunities:* CENTCOM, in conjunction with interagency partners, uses section 333 and other title 10 funds provided by Congress to build partner capacity and capability in Jordan. These funds and activities are in addition to the total assistance budget of \$1.275 billion annually from the State Department, as agreed upon with the Government of Jordan, that includes at least \$750 million dollars in Economic Support Funds and \$350 million dollars in FMF. In August 2019, Jordan will host nearly two dozen countries, including regional and NATO partners, for exercise Eager Lion, focusing on counter-terror, border security and humanitarian assistance missions.

*2019 Prognosis:* Jordan will face domestic pressure to move towards normalized relations and trade with Syria, but also seeks to avoid the risk of triggering the extensive United States sanctions on Syria. Russia will likely seek to capitalize on its role as a Syrian intermediary to increase its influence in Jordan and the region. Both domestic and external VEOs will remain a security threat, but continued funding from title 10 programs, in addition to FMF and economic support, will enable Jordan to develop critical capabilities and remain a key contributor to coalition efforts.

**Egypt** lies on the western edge of the CENTCOM area of responsibility, an anchor state for the region. The country is an important strategic partner whose location, size, enduring peace treaty with Israel, control of the Suez Canal, and moderate religious and cultural Pan-Arab influences are significant elements that support regional stability. Egypt is geographically positioned to counter the flow of foreign fighters, materiel, and financial support to extremists transiting from Libya through Egypt into the Central Region. The United States-Egypt security relationship is resilient and growing, exemplified by Egypt's formal request to participate in the National Guard State Partnership Program. Egypt supports our overflight requests, provides Suez Canal access affording short notice transits, and trains and deploys peacekeeping troops worldwide. In the spirit of our strong mil-to-mil partnership, in September 2018 we held a joint Defense Resourcing Conference to increase the orientation of United States security assistance to Egypt toward a counter-terrorism and sustainment focus.

*Key Challenges:* ISIS-Sinai continues to conduct attacks against the Egyptian Armed Forces (EAF) to bolster its influence over the local populace through intimidation. The EAF has contained most of the violence in the northeastern Sinai Peninsula and has begun to address societal and economic reforms to defeat ISIS-Sinai and prevent its spread to the Nile Valley.

*Key Opportunities:* Through our collaborative approach with the EAF we continue to see improvement in the security of their maritime and land borders. The EAF have improved their efforts to stem the flow of fighters and illicit material transiting from Libya through Egypt into Israel and the Central Region. Mindful of the complex environment of the Sinai, we continue our support to the Multinational Force and Observers in order to ensure the safety of these forces, allowing this crucial mission in support of the 1979 peace treaty to continue. We see the beginnings of improved interoperability between the EAF, United States, and other partner nations, exemplified in more Egyptian participation in multi-lateral exercises and strategic forums including exercise Bright Star 2018, the second joint military exercise held since 2009. Egypt has expressed plans to broaden its participation in coalition operations and has signed the Communications Interoperability and Security Memorandum of Agreement, allowing Egypt improved access to interoperability enabling acquisitions. We look to strengthen our security cooperation partnership through continued engagement and FMS programs.

*2019 Prognosis:* Our military assistance ensures that the United States remains a military partner of choice and counters Russia's efforts to expand its influence in the region. United States Government aid and support to Egypt is crucial to our strategic partnership. CENTCOM will continue to support the EAF's efforts in the Sinai, and assist them with implementing a whole-of-government strategy that addresses the underlying political, economic, and social conditions that give rise to extremist elements.

**Lebanon** is a multi-confessional democracy that occupies a pivotal geostrategic position in terms of U.S. national security interests. Wedged between a key ally in the region, Israel, and a corridor of Iranian influence running from Tehran through Iraq and Syria, Lebanon has managed to remain relatively stable. Nevertheless, Hezbollah's manipulation of the Lebanese political process thwarts needed reforms while exacerbating sectarian tensions inside Lebanon.

*Key Challenges:* Lebanon faces a confluence of problems. The stagnant economy is worsened by regional conflict and exacerbated by the fact that nearly a quarter of the total population are refugees. Additionally, both Russia and China are increasing their efforts to gain access and influence in the country because of its key location on the Mediterranean and proximity to Syria. Hezbollah holds political clout which gives it a de-facto veto on Lebanese policy decisions, fields an armed militia that does not act on the behest of an elected government and builds popular support by acting as a social service provider—all undermining the role of the legitimate Lebanese Government and armed forces. Hezbollah has also engaged in provocative actions with Israel, risking unpredictable escalatory actions that threaten Israeli security and could undermine Lebanon's stability. Through its Hezbollah proxy, Iran continues to meddle in Lebanon's internal affairs. While the Lebanese Armed Forces (LAF) were able to drive ISIS from all Lebanese territory in 2017, the threat from remnants of ISIS and other extremists crossing into Lebanon from Syria remains present.

*Key Opportunities:* Our efforts to strengthen the LAF are a critical aspect of our policy to promote Lebanese sovereignty and security. The U.S. is the LAF's top security assistance partner. Our modest, consistent, long-term commitment and investments has led to the LAF becoming a successfully modernized, legitimate fighting force. The LAF is innovative, professional, and have proven their capabilities to protect the Lebanese people from internal and external threats through successful counter-VEO operations. It established itself as the most trusted and respected institution in the country, undercutting Hezbollah's claim that its armed militia is necessary to protect Lebanon, while providing a mature, apolitical, stabilizing influence. The even-handed, professional response of the LAF, assisted by the professional mediation of the United Nations Interim Force in Lebanon, was key in de-escalating the Israeli counter-tunnel operation in December 2018.

*2019 Prognosis:* Successful, consistent partnership with the LAF forms the backbone of United States influence in Lebanon, providing a bulwark against growing Russian and Chinese interest in the country, a reliable partner capable of fighting and defeating remnants of ISIS and other extremist groups attempting to regroup in Lebanon. The LAF has the potential to eventually form a deterrent to increased Iranian activity, and a vital counterbalance to Hezbollah influence. While Lebanese security and sovereignty is enhanced every day through our robust relationship with the LAF, Hezbollah continues to risk the stability and security of Lebanon by maintaining an armed militia and advanced weapons outside the authority of the State.

#### REGIONAL OVERVIEW—CENTRAL GULF

**Iran's** unpredictable and reckless behavior remains a threat to our partners, global commerce, and United States vital interests in the Middle East. While supporting the fight against ISIS in Iraq and Syria, Iran foments instability and chaos in the region through the proliferation of advanced weapon technology and a destabilizing ideology. To conceal its culpability, the Iranian regime masks its malign activities through proxies and surrogates enabled by the Iran Threat Network (ITN) in Yemen, Syria, Iraq, and Lebanon. Iran is also attempting to build ground lines of communication through Iraq and Syria into Lebanon to support its proxy Hezbollah. Iran has gained influence within Iraq's armed forces with the formalization of the Popular Mobilization Forces, and also exerted influence in Lebanon, Iraq, and Yemen, oftentimes affecting established sovereign governance.

*Key Challenges:* Iran's military is composed of approximately 700,000 personnel, the largest in the region. Both of its military arms, the Islamic Republic of Iran Armed Forces, and the Islamic Revolutionary Guard Corps (IRGC), are improving their abilities to quickly mobilize and deploy in response to internal and external threats. Iran postures its forces and supports proxies to threaten—or be able to threaten—strategic locations like the Bab al Mandeb and the Strait of Hormuz. With little warning, Iran could impede commercial traffic in these key maritime chokepoints. Iran seeks to gain hegemonic influence through the resulting chaos of its proxies and the threat of force. Iranian surface to air missiles pose a significant threat to United States intelligence, surveillance, and reconnaissance assets operating in international airspace. Iran also has the region's largest ballistic missile force, which continues to increase in capability, range, and lethality. In November 2018, Iran demonstrated its ballistic missile capability, striking ISIS targets in Syria and Kurdish militant targets in Iraq.

*Key Opportunities:* Since the United States withdrawal from the Joint Comprehensive Plan of Action (JCPOA) and the subsequent re-imposition of pre-JCPOA nuclear-related sanctions, Iran has sought to demonstrate its resolve and counter United States pressure while trying to mitigate the impact of sanctions. However,

longstanding vulnerabilities in Tehran's fiscal policy are reducing its ability to alleviate the impact of United States sanctions and Iran's already fragile domestic economy will likely further decline. While Iran's strategy is to sow chaos through its malign activities, CENTCOM will continue to develop means of maintaining order to combat Iran's chaos. Our mil-to-mil relationships help build local credibility in many partner nations, while bi- and multi-lateral efforts—such as maritime exercises and developing integrated ballistic defense—with our regional partners helps create baffles to stifle Iranian ambitions.

*2019 Prognosis:* Iran will continue to seek to expand its political influence and military presence in Iraq, Syria, Lebanon, and Yemen, and to threaten international trade and regional stability throughout the Central Region. Leaders in the IRGC-Qods Force will continue to use surrogates, businesses, and logistics entities to execute direct action, intelligence, influence building, terrorism, and cyber operations against the United States, and our partner nations. Iran intends to expand its regional influence, counter Saudi Arabia, threaten Israel, and maintain a capability to threaten strategic maritime transit routes. Iran will continue to acquire and develop increasingly lethal weapons to raise the cost of direct military conflict, and seek to pursue policies that threaten United States strategic interests and goals throughout the region.

**The Kingdom of Saudi Arabia (KSA)** suffered challenges to its international reputation over the past year but remains a key strategic partner. The ambitious reform agenda set forth by Mohammed bin Salman is meant to modernize and diversify the Saudi economy and encourage foreign direct investment. To date, however, these reforms have met with mixed success.

*Key Challenges:* The conflicts in Yemen, Syria, Iraq and Libya have challenged Saudi Arabia's partners in the region, beset by malign influence driven by experienced and well-funded Iranian proxies. The Gulf Rift, pitting KSA, UAE, Egypt, and Bahrain against Qatar, complicates unified deterrence to Iranian malign activity. The ballistic missile threat and armed UASs emanating from Yemeni territory continue to pose a significant risk, as the Houthis consider civil infrastructure as legitimate military targets. High-profile civilian casualty incidents on behalf of the Coalition in Yemen and international backlash resulting from the murder of Saudi dissident Jamal Kashoggi have damaged Saudi Arabia's international standing.

*Key Opportunities:* The Yemen conflict provided lessons learned on military operations and tactics, adding greater urgency to institutional defense transformation efforts. We continue to share our own experiences and processes in an effort to improve Saudi Arabia's operational performance and reduce civilian casualties. CENTCOM's security cooperation with Saudi Arabia remains a critical link in our efforts to strengthen partners in the region and meet current and future challenges. The work of United States advisors is essential to the success of our mission, and Saudi Arabia underwrites the lion's share of their presence. Helping build Saudi Arabia's security forces reflects our commitment to increase partner capacity, sustain effective defense institutions, increase professionalism, interoperability, and capability in order to deter aggression in the region and protect critical infrastructure.

*2019 Prognosis:* Saudi Arabia plays an important role ensuring regional stability. Despite recent strains, the United States—Saudi Arabia security relationship is resilient and this strategic partnership with the Kingdom is a foundational point of CENTCOM's ability to execute our national defense strategy. Our ongoing relationship with the Kingdom regarding regional basing and access, interoperability, freedom of movement—exemplified by Saudi support for CENTCOM's expansion of the Trans-Arabian Network as a primary distribution route across the Arabian Peninsula—remains critical, and our defense institution-building endeavors represents the operationalization of our “by, with, and through” approach.

Yemen is beset by strife and riven with internal fractures. The civil war continues unabated and the humanitarian crisis worsened in the last year. Saudi Arabia and the UAE continue to lead the coalition supporting the Republic of Yemen Government (ROYG). While some elements of the ROYG are reestablished in Aden, a portion of the ROYG, including President Hadi, remains in Riyadh, Saudi Arabia. The Houthis retain control over Yemen's reestablished in Aden, a portion of the ROYG, including President Hadi, remains in Riyadh, Saudi Arabia. The Houthis retain control over Yemen's reestablished in Aden, a portion of the ROYG, including President Hadi, remains in Riyadh, Saudi Arabia. The Houthis retain control over Yemen's

*Key Challenges:* Terrorist groups like AQAP and ISIS—Yemen continue to maintain a presence in Yemen and focus on attacks against ROYG, SLC, and Houthi targets. The conflict in Yemen opened opportunities for Iran, which continues to provide support to the Houthis aimed at building a proxy force designed to pressure the SLC and expand Iranian regional influence. This support enables Houthis to launch missiles at its neighbors and target ships in the Bab al Mandeb and Red

Sea; threatening Americans and our partners and raising the risk of broader regional conflict. The prolonged conflict deepened the humanitarian crisis, and much of the population faces severe food shortages, a cholera epidemic and other outbreaks of disease.

*Key Opportunities:* Following years of fighting, security sector reconstitution will be a priority, and any peace agreement will require functioning, unified Yemeni security forces in which both the ROYG and Houthis work together to maintain Yemen's stability. Leveraging existing mil-to-mil ties with the ROYG and a supportive relationship with the UNSE, CENTCOM is positioning itself to provide the necessary assistance to conduct security cooperation in Yemen while continuing not to engage in hostilities between the Saudi-led coalition and the Houthis. The Yemeni Coast Guard resumed control of six ports from the SLC in late 2018, with training provided through the Department of State's Export Controls and Related Border Security program. Implementing the existing 505 agreement with Yemen will allow CENTCOM to significantly deepen and broaden assistance and training opportunities.

*2019 Prognosis:* The United States and ROYG will continue to maintain a nascent but increasingly productive mil-to-mil relationship with the goal of enabling Yemeni security forces to secure national borders, defeat VEOs, and respond to existing and emerging threats in order to provide an environment that facilitates the reconstruction of a stable economy and reconstitution of Yemen's Government institutions and civil functions.

**Kuwait** is a key strategic partner for regional security, indispensable facilitator of the D-ISIS campaign, multinational partner on United Nation Security Council, and linchpin of the region in humanitarian, diplomatic, and economic stability. The Government of Kuwait provides tremendous support for United States and Coalition operations. Kuwait hosts the fourth largest presence of United States troops overseas—including CENTCOM's army component, U.S. Army Central. The United States Military presence is viewed as essential to the defense of Kuwait, and Kuwait reimburses the United States for its presence.

*Key Challenges:* Given the large military United States presence in Kuwait, the implementation of the NDS, the evolution of missions in Syria and Afghanistan, and the unknown of potential missions to come, we must ensure we maintain flexibility and clear communications with our strategic Kuwaiti partner.

*Key Opportunities:* Vigilant to numerous regional threats, Kuwait sought resolution to the Gulf Rift dispute, while promoting a regional response to the crises emanating from Iraq, Syria and Yemen. Kuwait continues to play an important role for Iraq's future. Kuwait hosted the International Conference for the Reconstruction of Iraq last February, raising \$30 billion toward Iraq's reconstruction—including \$2 billion dollars in Kuwaiti loans and investments.

*2019 Prognosis:* Kuwait remains a key partner, combat support and logistical hub, and enabler for CENTCOM. Our strong mil-mil relationships with the Kuwaiti military underscores our commitment to the defense of Kuwait. This will also allow United States access to Kuwait ranges and training facilities and enable the United States to realign to the NDS, while simultaneously providing flexibility to surge forces into Kuwait as needed to preserve regional stability and United States interests.

**Bahrain** is a strong security partner and a major non-NATO ally. The Government of Bahrain (GOB) has welcomed the broader effort to confront Iran's destabilization activities in the region. Bahrain is a strong partner in countering threat financing, especially helping curtail Iran's efforts to circumvent financial sanctions. Bahrain has also been part of the GCC-wide effort to rebuild ties with Iraq and provide a counterweight to Iran's influence. Bahrain's strong partnership with the United States is most evident by its hosting of the U.S. Fifth Fleet, the only operating U.S. naval base in the Central Region, and multiple United States command and control facilities located at the Naval Support Activity in Bahrain.

*Key Challenges:* Changes in oil prices have posed a formidable challenge to Bahrain's economy, as over 75 percent of government revenue comes from hydrocarbon sales. Despite the GOB's attempts to shore up its fiscal position by cutting public spending and increasing non-oil revenues, the country continues to confront significant annual fiscal deficits and will consequently continue to rely on its neighbors to provide financial lifelines.

*Key Opportunities:* Bahrain's access, basing, and overflight support to United States and Coalition forces in the region are essential to our force posture. Its contribution to regional security, maritime patrols, intelligence sharing, counter-mine, and counter-piracy efforts are an integral part of the region's overall security. Bahrain continues to pursue military modernization initiatives that will result in a Bahrain Defense Force more able to contribute to and lead regional coalition military

operations. Bahraini Land Force, SOF, and Air Force support to the SLC campaign in Yemen is providing Bahraini forces with experience in expeditionary operations, while ongoing efforts to improve the BDF's capabilities will enable Bahrain to play a more critical role in regional security.

*2019 Prognosis:* The mil-to-mil relationship between Bahrain and the United States remains strong.

**Qatar** is a critical partner in the Arabian Peninsula, providing CENTCOM with invaluable regional access, and hosting approximately 10,000 United States servicemembers and aircraft, and is home to the Combined Air Operations Center, U.S. Special Operations Command Central Forward Headquarters, and the CENTCOM Forward Headquarters. The access, basing, and overflight that Qatar provides would be costly to replicate anywhere else in the region. The Gulf Rift has a detrimental effect on joint training and interoperability between the U.S. and its Gulf Cooperation Council (GCC) partners. Qatar's recent withdrawal from OPEC and lower-level attendance at the December 2018 GCC Summit indicate Qatar is pursuing economic and political policies more independent of Saudi Arabia.

*Key Challenges:* While the Gulf Rift had little direct impact on CENTCOM operations, it has imposed significant restrictions on Qatar's freedom of movement through the closure of land borders and air space. It impacted Qatar's participation in GCC-hosted multilateral exercises, eroded coalition building efforts, and increased Qatari reliance on Iran to overcome the economic and commercial shipping constraints—specifically, Qatar relies heavily on Iranian land, sea, and airspace for transshipment of foodstuffs.

*Key Opportunities:* The Gulf Rift reaffirmed Qatar's commitment to make the United States its primary defense partner. While Qatar has one of the smallest militaries in the region, it is also, per capita, the richest country in the world. Despite its relatively small size, Qatar has been a major contributor to coalition operations throughout the region and against ISIS, and seeks to expand its participation in other regional coalitions. Qatar is the second largest FMS customer in the world with \$26 billion dollars in new cases and is on track to surpass \$40 billion dollars in the next five years with additional FMS purchases. This investment demonstrates a clear desire to partner exclusively with U.S. and NATO allies and become a reliable contributor to coalition operations.

*2019 Prognosis:* Qatar's efforts to expand their military both in size and capacity will result in increased bilateral military engagements between CENTCOM and the Qatari Armed Forces. This will give the U.S. an opportunity to make a positive impact on the military development of a key partner in a turbulent region. Qatar will continue to play a vital and necessary role in the region and has spent nearly \$9 billion dollars on United States-led Coalition basing infrastructure.

**United Arab Emirates (UAE)** is one of the United States' staunchest partners and non-NATO allies in the Central Region. The UAE's strategic location, vast natural resources, willingness to engage VEOs, proven expeditionary capabilities of its military, and drive to be at the forefront of military innovations makes them an ideal partner. The UAE has repeatedly supported United States objectives in both Syria and Afghanistan and has taken a leading role in the fight against terrorism—being among the first countries to join the D-ISIS coalition. It remains active in pursuing many of the coalition's lines of effort, including D-ISIS messaging, stabilization, and assisting in stemming the flow of foreign fighters.

*Key Challenges:* Yemen is the UAE's top near-term security concern. The UAE sees the Huthis as Iranian proxies, paving the way for a new and unwelcome Iranian role in southern Arabia and in the seas surrounding the peninsula. The UAE is a key partner in the SLC in Yemen, conducting offensive operations in cooperation with Yemeni forces around Hudaydah since May 2018.

*Key Opportunities:* The United States and UAE cooperate under a strong bilateral framework to prevent and respond to conflicts and crises, and the UAE has clearly indicated a desire to forge even stronger military relationships with the U.S. The UAE is active in an operational partnership to disrupt terrorist networks and reduce terrorist attacks and is the only member of the Saudi-led Coalition in Yemen to expand its military objectives to include counter-terrorism alongside the U.S. Robust training and exercise programs with the UAE increase the level and quality of cooperation between our nations. The UAE also provides substantial access and is willing to burden-share the costs of basing and infrastructure.

*2019 Prognosis:* The UAE expressed a desire to strengthen our relationship through a nine-point Defense Cooperation Roadmap, which supports our NDS through increased burden sharing in its own defense. A continued robust exercise and engagement program will strengthen our military-to-military relationships, and UAE's purchase of U.S. produced weapon systems will help secure interoperability with U.S. units. We expect the UAE to continue their partnership



to United States efforts in Syria, Yemen, and Afghanistan, in addition to supporting freedom of navigation in the Red Sea.

**Oman** is a bastion of stability in the Central Region. The long-standing relationship between the United States and Oman, based on shared security and stability interests, remains strong—each Service Chief of the Sultan of Oman's Armed Forces a graduate of United States military schools via our International Military Education and Training program. Oman serves as an interlocutor with other GCC members, factions in Yemen, and Iran. Oman faces some political and economic uncertainty due to the eventual leadership transition from Sultan Qaboos, and the continued budgetary dependence on limited hydrocarbon revenues to fuel Omani development and employment.

*Key Challenges:* Oman's economy continues to experience recurring fiscal deficits, growing unemployment, and stagnant growth. Economic diversification is increasingly seen as a national security priority for Oman, as reliance on the hydrocarbon sector and a growing population result in rising unemployment, growing debt, and a diminishing capacity to pay for the costly security apparatus that keeps Oman safe and secure. Progress toward achieving the goal of diversification has been slow. This economic insecurity combined with an untested succession plan to follow Sultan Qaboos' decades of stable rule represent significant challenges.

*Key Opportunities:* Oman's strategic location, outside of the maritime chokepoints of the Bab el Mandeb and Straits of Hormuz, provides CENTCOM with key logistical, operational, and contingency capabilities. The United States and Oman have shared interests in allowing increased United States access to Oman's military and commercial ports and bases as the country looks to modernize its infrastructure and diversify from an oil-based economy.

*2019 Prognosis:* A stronger economy in the Sultanate of Oman will ensure a politically stable country with adequate employment opportunities for its citizens. The United States and Oman will continue to maintain a strong mil-to-mil relationship and Oman will provide crucial access in the form of thousands of aircraft overflights, landings, and dozens of port-calls in Oman. Negotiations for enhanced access to Duqm port offer the prospect of deeper military cooperation. Oman will participate in numerous bi-lateral exercises and training events with U.S. Forces. Oman will continue to develop an FMS portfolio that already includes over \$2.7 billion in open FMS cases, though Omani budgetary constraints may significantly slow new acquisitions in coming years.

#### CONCLUSION

Maintaining our competitive advantage in the Central Region relies on more than simply overmatching those who would challenge us with a higher volume of forces and equipment. CENTCOM's strategic approach has never relied on physical overmatch, but on our people, our strategic partnerships, and the ability to creatively leverage our combined capabilities to achieve our mission. As we operate more and more in the gray zone of competition short of combat, our people and partnerships—based on foundations of respect, trust, and shared values—will continue to be our source of strategic strength and key to maintaining our edge in the region.

The CENTCOM team—our component commands, our combined and joint task forces, our country teams, and all of our interagency partners—more than 90,000 uniformed military and civilian strong, is the engine that drives everything we do toward securing our national interests. They represent America's greatest treasure. In an era of austerity and change when we consistently ask our people to do more with less, the service and sacrifice of these men and women and their families in support of their nation is both humbling and inspirational. For nearly 18 years of sustained conflict across the CENTCOM AOR, our soldiers, sailors, airmen, marines, coast guardsmen, and civilians have answered the call with an unwavering commitment and devotion matched only by the families who support them. We could not accomplish what we do without all of them and they deserve the very best capabilities and support we can provide them, from weapons and communications systems, to healthcare and housing. As CENTCOM continues to fulfill its current missions and evolves to face new challenges, we appreciate the efforts of our civilian leadership at the Department of Defense, the interagency, and especially Members of Congress and their staffs, who work tirelessly to provide our people everything they need to accomplish their vital missions and lead healthy, fulfilling lives in continued service to our Nation.

Chairman INHOFE. Thank you very much, General Votel.

I want to bring up three things that have grown into some controversy, and they should not have, and just very briefly get your opinion on that.

First of all, as we draw down, I had made some statement characterizing what the President's position was in Syria. I was challenged by some not too friendly media on this. I would like to quote what the President actually said initially. He said we will have a slow and highly coordinated drawdown—this is all a quote—and we will be leaving at a proper pace while at the same time continuing to fight ISIS and doing all else that is prudent and necessary. Do you think these are the proper conditions and this is your understanding also of his position?

General VOTEL. In the instructions that I have been given and that we issued down to our organizations in Syria, that represents our approach, a very deliberate approach to how we depart Syria.

Chairman INHOFE. Yes. I think that was certainly our understanding.

Do you believe that the territorial state of ISIS will be eliminated by the time the United States withdrawal is done?

General VOTEL. I do, Chairman.

Chairman INHOFE. What is being done to prevent ISIS from re-emerging at this time?

General VOTEL. Well, we continue to work with our Iraqi Security Force partners and international coalition here to continue to keep pressure on ISIS, and we continue our efforts by, with, and through our partners in Syria and in some cases for them to keep pressure on ISIS as they continue to present threats to us. We should expect that they will attempt to attack us and continue to regenerate themselves, and we will continue to put pressure on them to prevent that.

Chairman INHOFE. Very good.

The second area that could be subject to some misinterpretation has to do with Yemen. I am concerned that disengaging our partners in Yemen will undermine Israel, bolster Iran, and increase human suffering. In your assessment, what are the costs of disengagement from our partners in Yemen?

General VOTEL. Certainly it is a very significant humanitarian disaster in Yemen. But I do believe departing from our partners there removes the leverage that we have to continue to influence them, which I think we have used in a positive manner, and I think it further endangers Americans in the region.

Chairman INHOFE. Yes. I appreciate that.

Then the third one has to do with the IMET [International Military Education and Training] program. I have always been very partial to that. Primarily my activity has been in Africa. It has been so successful not just in Africa but around the world that we see China and Russia both, particularly China, trying to beat us to the punch in the IMET program, recognizing that some of what are middle officers are getting training in a country that they are wed forever. We have seen this happen. But the thing that is disturbing right now is China is starting to do the same thing. What do you see as far as the benefits of IMET? Is China moving in on us?

General VOTEL. Thank you.

Mr. Chairman, I think China is opportunistic, and they are going to look for places that they can step in where we or others may create voids.

To your comments on IMET, I think IMET, International Military Education Training, funding dollar for dollar is perhaps one of the best tools that the Department of Defense, Department of State can wield in building our partnerships throughout the region. Typically the people who take advantage of these resources and come to our schools in the United States often rise to positions of leadership in their countries. They do not forget the experience they had in our military schools, and most importantly, they do not forget the American people. I think this is an extraordinarily wise investment for us to continue to make.

Chairman INHOFE. I sure agree with that. You are probably aware that in Africa, China has invited at one meeting 50 of the leaders of the 52 nations in Africa to China, wining, dining, and all this trying to move in on that program. It is one we have to all be very sensitive to because they realize the benefits that we have received from that program.

Senator Reed?

Senator REED. Thank you very much, Mr. Chairman.

First, General Votel, let me join you in recognizing the Sergeant Major. Thank you for your service, Sergeant Major. Generals only become generals if they listen to their first sergeants and sergeant majors.

[Laughter.]

Senator REED. General Votel, thank you again for your extraordinary service in so many different ways.

When General McKenzie was here, he stated that ISIS probably still is more capable than al Qaeda in Iraq at its peak, suggesting it is well positioned to reemerge if pressure on the group is relieved. You point out a staged withdrawal from Syria almost, in effect, lessens some of the pressure that is on ISIS.

Do you concur with the General that there will be some renewed vigor with respect to ISIS?

General VOTEL. I do agree, Senator.

Senator REED. We are trying as an alternative approach to at least posit the idea that we can conduct air strikes from Iraq and we can have forces in Iraq. Is that the fallback position?

General VOTEL. Senator, right now, we are working through a variety of planning scenarios for how we would potentially continue to maintain pressure on ISIS as we withdraw out of Syria. I think that is probably a discussion more appropriate for the closed session, but we certainly are looking at all options for how we might do that.

Senator REED. Again, this might be something that you can touch upon later, but there have been some indications that the SDF, given the announcement, which was rather sudden, of our plans to pull out, have made approaches to the Assad regime to work out kind of an understanding of how they might cooperate or at least tolerate each other. Is that something that has been—

General VOTEL. Senator, I think something we have learned in our experience there, certainly in my experience there, that all

these parties talk to each other all the time. We do expect that that is occurring.

Senator REED. Turning to Afghanistan, there are two major functions. One is train and equip the Afghan forces and counterterrorism. If we withdraw, presumably the first elements that will go are the train and equip, and the last elements would be counterterrorism because we have threats in the region. Is that a fair summary of sort of the process?

General VOTEL. Senator, again, I think this is probably that would be better discussed in a closed session. But I think we have a more sophisticated way of looking at that. We understand the importance of both of those missions.

Senator REED. Turning then to the situation of Afghanistan again, if we were to withdraw—and there is mounting pressure and mounting evidence that that is a path that might be pursued—we still provide the Afghan Security Forces about \$4 billion a year in sustenance. If we were to withdraw our forces, we would still have to maintain the \$4 billion a year contribution or those Afghan forces would disintegrate. Is that an accurate assessment?

General VOTEL. There certainly would need to be continued support to the Afghan forces. The amounts certainly we would have to look at. But, yes, I think that is accurate, Senator. Again, that money there without us I think does make it challenging.

Senator REED. Indeed, because I think one of the things we provide with the presence is to a degree at least the money is being spent appropriately. I think the experience we have had elsewhere is if we just send money, it gets to places that we do not want it to go. Again, I think as you are withdrawing, this has to be a very, very careful thought out second order effects, third order effects. Indeed, the issue is such a complicated multinational, multifactor and analysis. We have not yet gotten the Government of Afghanistan in the negotiations. They are still on the sidelines. That is correct?

General VOTEL. That is what Ambassador Khalilzad has reported, Senator.

Senator REED. Long term, I think our instincts—and we have been dealing with this for 17 years—is that unless there is some type of regional buy-in, which would include Pakistan, Iran to a degree, China because of its influence, Russia because of its influence, the Stans because of their influence, the likelihood of something stable is probably minimal. Is that accurate?

General VOTEL. Absolutely. A key part of the strategy has been the regionalization. I would add, Senator, that Pakistan in my estimation has played a more helpful role, a more constructive role in helping us move forward towards this objective.

Senator REED. Just one quick question. We were able to identify through great staff work by both sides that the Governments of Saudi Arabia and UAE [United Arab Emirates] owe the United States \$331 million for refueling. Have you received a definite commitment that they are going to repay that money they owe us?

General VOTEL. Senator, we are working through that. Both those governments have acknowledged the bills that we have provided to them, have indicated to us that they will meet the payment schedule in accordance with the ACSA [Acquisition and

Cross-Serving Agreement], and we have teams from CENTCOM, from AFCENT [United States Air Forces Central Command], from DLA [Defense Logistics Agency] that are working to resolve that satisfactorily.

Senator REED. You have looked at other beneficiaries in your command to ensure that there are not other areas where they are deficient in paying?

General VOTEL. We have, Senator.

Senator REED. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Senator WICKER?

Senator WICKER. Mr. Chairman, I want to associate myself not only with your opening statement but with the very fine opening statement of the ranking Democrat on this Committee and particularly thank Senator Reed for pointing out the cost of getting it wrong as we withdraw from both Syria and Afghanistan.

I want to enter into the record at this point, Mr. Chairman, an op-ed that appeared in the "Washington Post" on January 29 by Ambassador Ryan Crocker, entitled "I Was Ambassador to Afghanistan. This Deal is a Surrender."

Chairman INHOFE. Without objection.

[The information referred to follows:]

"I WAS AMBASSADOR TO AFGHANISTAN. THIS DEAL IS SURRENDER."

January 2002. I arrive in Kabul to reopen the United States Embassy. Destruction is everywhere. Kabul airport is closed, its runways cratered and littered with destroyed aircraft. The drive south from the military base at Bagram is through a wasteland. Nothing grows. No structures stand. In the city itself, entire blocks have been reduced to rubble, recalling images of Berlin in 1945.

More than two decades of almost constant war left a terrible legacy. The damage was not only to the physical infrastructure. The Afghan people had suffered enormously through the civil war that began in the late 1970s and the tyranny of the Taliban that followed. None had suffered more than Afghan women and girls.

After the United States invasion in October 2001 ousted the Taliban for harboring the al Qaeda planners of the 9/11 terrorist attack, the human toll from the Taliban rule is why the United States' initial assistance efforts focused on people rather than things.

I remember taking our first congressional visitor, Joe Biden (D-Del.), who was then Chairman of the Senate Foreign Relations Committee, to visit a girls school that we had helped to open. A first-grade class that Biden visited had students in a range of ages, from 6 to 12. The older girls had reached school age when the Taliban was in power, so they had been denied an education. They weren't embarrassed now to be in a class with children half their age—they were just happy to be learning.

At the end of Taliban rule, roughly 900,000 children were in school, all of them boys. When I left Afghanistan as ambassador in 2012, there were 8 million students, 40 percent of them girls.

We also encouraged Afghan women to play their rightful roles in business, in the legislature, elsewhere in government and in the military, and they did. The implicit message was that if you step forward, we've got your back. It was a time when American interests and American values were in harmony. I hosted receptions to recognize Afghan women of courage. Through the U.S. Agency for International Development, we funded efforts to establish shelters for women fleeing spousal or other familial abuse—a reminder that in Afghanistan's male-dominated society, it wasn't only the Taliban who threatened women's safety.

Now the United States is *negotiating* directly with the Taliban. A framework agreement was announced on Monday calling for a cease-fire that could lead to the full withdrawal of U.S. troops. The Taliban would commit to not harboring terrorist organizations that could threaten United States security. In other words, the Taliban promised no 9/11 replay.

The framework was reached without the involvement of the Afghan Government. The Taliban has said all along that it refuses to negotiate with the government, considering the government the illegitimate puppet of the United States occupation. By acceding to this Taliban demand, we have ourselves delegitimized the government we claim to support.

This current process bears an unfortunate resemblance to the Paris peace talks during the Vietnam War. Then, as now, it was clear that by going to the table we were surrendering; we were just negotiating the terms of our surrender. The Taliban will offer any number of commitments, knowing that when we are gone and the Taliban is back, we will have no means of enforcing any of them.

It does not have to go like this. The United States could announce that talks won't proceed beyond the framework, to matters of substance, without the full inclusion of the Afghan Government. Right now, the inclusion of the Afghans is only theoretical. We could also note that unless some other solution is found, United States troops will remain in Afghanistan as long as the current government wants them, protecting the United States' national security interests and defending core values, such as women's rights, that we have fostered there since 2001.

President Barack Obama proved in Iraq that the United States cannot end a war by withdrawing its forces—the battle space is simply left to our adversaries. In Afghanistan, President Trump has a choice.

Senator WICKER. General, thank you for your service.

Just to follow up on a couple points that Senator Reed made. With regard to the \$4 billion a year contribution, you are not quite sure that it would still be that amount, but it is close to that amount that we would still be obligated to pay. We would still need to contribute, and we would not have the oversight on the ground that we have now.

General VOTEL. That would be correct if we departed, Senator.

Senator WICKER. I think also Senator Reed pointed out that this agreement with regard to the Taliban in Afghanistan has been made without the participation of the Government of Afghanistan. That is correct. Is it not?

General VOTEL. Senator, the work of Ambassador Khalilzad—first of all, there have been no agreements that have actually been finalized.

Senator WICKER. There has been a framework agreement.

General VOTEL. His work is creating a framework for continuing discussions moving forward here. Ambassador Khalilzad's efforts are done with the knowledge of the Government of Afghanistan. They are aware that we are doing this, and they have supported our efforts to get this process started. Ultimately, we need to get to a Taliban-Afghanistan discussion. Only they will be able to resolve the key issues involved in the dispute.

Senator WICKER. In the op-ed that I have entered into the record, Ambassador Crocker points out the framework was reached without the involvement of the Afghan Government. He goes on to say that the Taliban has said all along that it refuses to negotiate with the government, considering the government the illegitimate puppet of the United States occupation. His opinion is by acceding to this Taliban demand, we have ourselves de-legitimized the government we claim to support.

He goes on to say this current process bears an unfortunate resemblance to the Paris Peace Talks during the Vietnam War. Then, as now, it was clear that by going to the table, we were surrendering.

Further, Ambassador Crocker says the United States could announce that talks will not proceed beyond the framework to matters of substance without the full inclusion of the Afghan Govern-

ment. Right now, the inclusion of the Afghans is only theoretical. I think you have touched on that, General.

We could also note that unless some other solution is found, the United States troops will remain in Afghanistan as long as the current government wants them. The current Government of Afghanistan wants us to continue our presence there. Is that right, General Votel?

General VOTEL. That is my understanding, Senator.

Senator WICKER. Then the Ambassador concludes, President Barack Obama proved in Iraq that the United States cannot end a war by withdrawing its forces. The battle space is simply left to our adversaries.

I have asked you a question or two about specifics. Have you read this op-ed before? I have read to you extensively from it. Would you respond to that for the benefit of the Committee?

General VOTEL. Senator, I have read Ambassador Crocker's editorial. I know Ambassador Crocker. I deeply respect him. He is certainly one of our leading experts on the region here and a keen observer of what is happening out there.

From my position as the CENTCOM Commander, in my discussions with Ambassador Khalilzad and with General Miller on the ground here, I would characterize where we are in the process as very, very early in the process. As I said, Ambassador Khalilzad has attempted to create a framework by which we can move forward with discussions that would certainly involve the Government of Afghanistan. We clearly recognize that they have to be part of the solution and must be in the negotiation aspects of this. We cannot do that on their behalf. But, I do recognize also that the Government of Afghanistan is being consulted as Ambassador Khalilzad does his work. They are being kept informed of this and are aware of the work that we are doing to move forward on these talks.

Senator WICKER. Well, let me just say I appreciate your answer. I hope that turns out to be true.

I just want it to be said that the concerns in this city are bipartisan concerns based on advice and counsel that we receive from people who have been involved in this for a long, long time and who understand how important it is for us to get this right.

Thank you, sir.

Chairman INHOFE. Thank you, Senator Wicker.

Senator Reed is presiding for the next 20 minutes or so.

Senator Shaheen?

Senator SHAHEEN. Thank you, Mr. Chairman.

Thank you, General Votel, for your many years of service to this country.

I heard former Afghanistan Commander Nicholson being interviewed this morning, and he was asked about the circumstances under which we should withdraw from Afghanistan. He talked about the fact that it should be conditions-based. It should not be based on an arbitrary timeline or numbers of troops that we want to leave there.

Have you and General Miller been given conditions whereby we should withdraw troops from Afghanistan? If so, what are those conditions?

General VOTEL. Senator, I think some of that discussion is best left for a different forum here. But, certainly General Miller and I speak very frequently about the ongoing situation in Afghanistan and the circumstances that we are trying to create to support Ambassador Khalilzad and to move forward with the reconciliation process.

Senator SHAHEEN. I share the concerns that have been raised by Senators Reed and Wicker about what is happening right now in Afghanistan and particularly the framework that is being put in place without the engagement of the Afghan Government.

Can you tell me how the framework addresses the rights of women in Afghanistan, given the horrific treatment by the Taliban of women during the years in which they were in control?

General VOTEL. Senator, I think that perhaps is a question best posed for Ambassador Khalilzad at this particular point. I do agree that the progress that has been made in Afghanistan with women and improving their ability to be part of the fabric of life in Afghanistan is an important one that has to be incorporated in this, and I would envision that this would be part of the more detailed discussions that will take place between the Taliban and the Government of Afghanistan. But, certainly we acknowledge that, and we see the goodness that has brought to the country of Afghanistan.

Senator SHAHEEN. I would point out that we have actually passed legislation in this Congress that says women should be at the negotiating table when conflicts are being resolved around the world. Is it your understanding that is a basis on which we are looking at negotiations?

General VOTEL. Certainly, again, as Ambassador Khalilzad and our diplomats work with the Government of Afghanistan on that, I would imagine they are emphasizing that legislation.

Senator SHAHEEN. To move to Syria, there is the report of a new DOD [Department of Defense] Inspector General report relative to ISIS. The report says that the command organization for ISIS is intact, and its fighters are battle-hardened. That is a quote from the report. It goes on to say that within a year, United States military commanders told the IG [Inspector General] that ISIS would be resurgent in Syria.

Can you talk about how we can prevent ISIS from becoming resurgent if we have no troops in Syria and if Iran and Russia and Assad are in control in Syria?

General VOTEL. Well, Senator, as I mentioned in my opening comments, that is an aspect of the ongoing planning that we are pursuing right now. The answer to the question is that we do have to keep pressure on this network. It is a resilient network. It does have certain components that are still left in it. Although they are dispersed and disaggregated, they have the capability of coming back together if we do not. There are a variety of different things that I would be happy to talk about, some of the things under consideration as we get into the closed session here. I will not speculate publicly here about things that we might do, but there certainly are different ways that we could do this working with partners, working with our own capabilities to continue to keep pressure on this network, which I think is absolutely vital.



Senator SHAHEEN. You do agree with the Inspector General that ISIS is a scourge that is latent in both Syria and Iraq and it has the potential to resurge if not addressed.

General VOTEL. I do agree.

Senator SHAHEEN. Thank you.

As I know you are aware, when we provide or sell United States weapons to end users, there are requirements which prohibit the transfer of any of those weapons to third parties without prior authorization from the United States Government. In legislation that we passed relative to Yemen, there are requirements for us to certify how the Saudis are using weapons. So far, we have not gotten authoritative certification of how those weapons are being used. There is, again, a recent CNN report that suggests that weapons that have been provided to UAE and to Saudi Arabia have wound up in the hands of Houthis, that they have been traded and been used on both sides of that conflict.

Can you talk about what DOD is doing to address that?

General VOTEL. Senator, I am aware of the references that you are making to that. We have not authorized Saudi Arabia or the Emirates to retransfer any of this equipment to other parties on the ground in Yemen. As you are well aware, when we do provide equipment, whether it comes government to government or commercially provided, that the recipients do have to agree to certain stipulations on the use of those. We do have monitoring and enforcement mechanisms that sometimes go through the Department of State if it is commercially provided, through the Department of Defense if it is government to government provided and requires us to conduct surveys. It requires us to conduct inventories of this type of equipment so we know where it is. There are processes in place with this.

I would also highlight that in some of these cases, again, I think we have to look more closely at the allegations in this particular situation to find out what happened. As we have seen in Iraq in the past where we saw our partners overrun, we have seen American equipment provided to them lost in the course of a fight end up in the hands of our adversaries out there. I think we will have to examine that better.

But, to your point of our responsibilities in terms of ensuring proper end use of the materials, we absolutely get that and emphasize that with our partners all the time.

Senator SHAHEEN. Thank you.

Thank you, Mr. Chairman.

Senator REED [presiding]. On behalf of the Chairman, let me recognize Senator Cotton.

Senator COTTON. Thank you, General, for appearing to testify one last time. I know it breaks your heart that this will be your last time to testify. Most importantly, thank you for your many years of service and thanks to your whole team for their service as well.

We have heard a lot about what might happen in the future against the Islamic State in Syria and Iraq, but I do not think we have heard yet just a simple answer about how the fight is going. Can you tell us how the fight is going against the Islamic State right now?

General VOTEL. In Syria, as you know, we are focused on completing the liberation of the physical caliphate.

Senator COTTON. Where in Syria are you doing that right now? General VOTEL. In the southern Euphrates Valley, up against the border with Iraq right now. That fight is progressing as we envisioned it. As I mentioned in my opening comments, it is limited to a relatively small area. It is very dense. It is dense urban terrain. Certainly there is a lot of pressure on ISIS in there. The area is laden with extreme explosive hazards that pose significant threats to our partners on the ground. They are having to proceed very closely.

I would add, Senator, that there is a civilian component to this. There are families of fighters. There are civilians left in the town. There are refugees that are attempting to depart this area. What we have seen, as we have kind of closed into this last area here, is our Syrian Democratic Force partners with coalition assistance moving very deliberately, fully recognizing the situation on the ground and making sure they do not exacerbate this any more than it is. But we remain confident that we will finish this aspect of it.

When we get done with this, we should expect that we will do what you would remember as back clearance, going back and reclearing areas, removing explosive hazards, instituting local security, and then continuing to keep pressure on the remnants of the network that have gone to ground and are operating in a much more insurgent aspect.

In Iraq, that is the case. We do see ISIS operating in a guerilla or an insurgent fashion. They are at a level where, for the most part, the Iraqi Security Forces with the assistance of the coalition are able to address those threats. That will be important to continue to do that in the future.

In Iraq and Syria, that is where we are with the current fight right now, Senator.

Senator COTTON. In Syria, I have heard it said that we have taken back about 99 percent of what was once the territorial caliphate. Is that number correct?

General VOTEL. That is right. We are down to about 20 square miles that they still control.

Senator COTTON. I have also heard estimates of about 20,000 to 30,000 Islamic State fighters remain. Do they remain in that 1 percent of territory, or is that only a fraction—

General VOTEL. No. Those fighters are geographically dispersed across Syria, across the open areas of—

Senator COTTON. Just some are dug in in the defense in that 1 percent. Others, as you say, are spread out conducting insurgency or guerilla type attacks.

General VOTEL. There are 1,000 to 1,500 fighters that are left down in this small area right now that we are fighting over, but the remainder have dispersed and are disaggregated in a variety of different areas and for the most part have gone to ground.

Senator COTTON. In Iraq and very soon, we hope, throughout Syria as well, as you talk about countering that insurgency or the guerilla tactics, the back clearance, could you give the American people a little bit of a sense of what our troops in Iraq are doing? Is it more like the Rangers that you once led, kicking down the

doors and shooting bad guys? Are we providing them intelligence, logistic aerial support?

General VOTEL. The technique that we have used in both Iraq and Syria is what we refer to as by, with, and through. We have relied on our partners, the Iraqi Security Force and the Syrian Democratic Force, to do the fighting. Our job has been to enable them with our fires, with our ISR [Intelligence, Surveillance, and Reconnaissance], with our advice. Sometimes we do employ our fighters in support of them and directly engage the enemy, but our people are not actually, as you suggest, kicking in doors in this case.

By, with, and through puts the emphasis on our partners to do this, and then we enable them with our capabilities to do this. This has been, I think, a very effective approach over the last several years. I think in the end, our partners own what is left behind. We do not. They own it. They own the security. They own the responsibility for this. This has been a different approach for us, but it is one that I think has worked very well for us.

Senator COTTON. Thank you.

One final question about the implications for the future. Syrian Democratic Forces currently are detaining several hundred ISIS fighters. Is that correct?

General VOTEL. That is correct.

Senator COTTON. We will not get into any more details in the open setting here about the exact numbers or locations. But is it safe to assume that some of those are what ISIS leaders would call just cannon fodder, troops to be thrown into the maw, but some are like Khalid Sheikh Mohammed, terrorist masterminds, or Ibrahim al Asiri, master bomb makers, who pose a serious threat to the United States?

General VOTEL. I think that is accurate, Senator. They come from all aspects of ISIS.

Senator COTTON. What is going to happen to those detainees, especially those extremely dangerous detainees, in the future if the United States is not present in Syria?

General VOTEL. Well, Senator, for those that we characterize as foreign terrorist fighters, our focus needs to be on returning them to the countries of origin. That is the work of our partners in the Department of State, Department of Justice, and others who are working with their counterparts in these countries of origin to make sure they have the evidence, the details, and we can make arrangements. Our responsibility at this time is to make sure that the Syrian Democratic Forces continue to treat detainees in accordance with our values, with the Law of Armed Conflict, and then to facilitate the movement of these fighters back to their countries.

Senator COTTON. Thank you, General. I hope we can do that with most of them. I would observe there is a lot of empty bed space at Guantanamo Bay.

Senator REED. Thank you.

On behalf of Chairman Inhofe, let me recognize Senator Heinrich.

Senator HEINRICH. Welcome, General Votel.

A moment ago, in describing by, with, and through, you mentioned partners left behind, and I want to ask about one of those

partners. As our troops withdraw from Syria, what efforts are being made to ensure the safety and security of our Kurdish allies?

General VOTEL. Well, certainly this is a key aspect of the ongoing planning right now, Senator. Of the many tasks that we have of defeating ISIS and withdrawing our forces, certainly we add to that list the protection of Turkey and making sure that they do not have threats that would emanate from them and, I would say, the added task of making sure that we protect those who have fought with us. A key aspect of our ongoing planning efforts right now, both at the diplomatic and military level, is to address that very issue and make sure that those that have fought with us, that have helped us accomplish our mission are safeguarded as we depart Syria.

Senator HEINRICH. I agree with you that that should be a priority. I am asking what are those specific plans.

General VOTEL. Senator, I think it would probably be more appropriate for us to talk about what is under consideration in a closed session right now. But we certainly are looking at a variety of different options.

Senator HEINRICH. I would be happy to do that.

I worry that there is a lot of lip service right now about making good on our promises to the Kurds, and it seems that we are short on plans. I hope that that is not accurate. I certainly hope that we have a plan for how to deconflict Turkey and the Kurds because I think the consequences could be morally terrible if we do not.

Do you believe that currently the efforts in this area are adequate?

General VOTEL. I do right now. I think we have the leadership up and down the chain of command both in the Department of Defense and the Department of State fully aligned in our approach as we work through what is arguably a very complex problem here. But I think we are very well aligned and we are very focused on exactly the challenge that you have outlined, Senator.

Senator HEINRICH. I look forward to hearing more about that in a closed setting.

General VOTEL, on February 3rd, President Trump announced that we would keep troops in Iraq to, quote, watch over Iran. Has our military focus there shifted from ISIS to Iran?

General VOTEL. It has not, Senator.

Senator HEINRICH. Glad to hear that.

I am concerned with the response in Iraq. As you probably know, Iraqi President Salih responded very quickly saying that the President and the United States did not ask Iraq about this. Are you at all concerned that Iraq will now be skeptical of our motivations for being there, and how will that perception affect our ability to relocate United States troops from Syria to Iraq?

General VOTEL. Senator, this is not particularly newfound. I think the Government of Iraq understands the relationship or the view that we have on Iran and understands our concerns with Iran and the variety of destabilizing activities that they conduct around the region. But having said that, our military mission on the ground remains very focused on the reason that the Government of Iraq asked us to come there, and that is focusing on the defeat

of ISIS and now preventing the resurgence of that particular organization.

Senator HEINRICH. Let me pivot just a little bit to Russia. General Votel, as you know, on January 30th, Russia pledged to support Iraq in its fight against ISIS in preparation for the United States' withdrawal from Syria. What is your current perception of Russian influence in Iraq?

General VOTEL. I think right now, Russia has limited influence in the country of Iraq.

Senator HEINRICH. Do we have plans or a strategy for countering that Russian influence once withdrawal from Syria is complete?

General VOTEL. Well, I do not have any specific military tasks that are related to that, Senator. But what I would highlight is that one of the most effective tools that we have is being good, reliable partners on the ground, and that is what we intend to do and that has always been our approach with the country of Iraq, focused on what they have asked us to do and then being very reliable partners to them.

Senator HEINRICH. Chairman, I am going to yield the remainder of my time.

Senator REED. Thank you, Senator Heinrich.

On behalf of Chairman Inhofe, Senator Scott, please.

Senator SCOTT. Thanks for all your hard work. Thank you for your service.

I met the other day with some opposition leaders from Syria, and while they expressed some concern about exactly how the withdrawal would happen, they did ask what the ability would be to do a no-fly zone afterwards which they thought would have a positive impact of keeping Turkey in place. Have you considered that as a doable?

General VOTEL. Again, we are looking at a variety of options that I will be happy to talk about in a closed session right here. I would not characterize what we are looking at right now as a no-fly zone.

Senator SCOTT. Why do you believe Russia has continued to be involved in Syria? What is their strategic advantage for them to be involved? Is it just to cause problems for us, or is there a strategic interest they have?

General VOTEL. Russia does have some long-term interests that they have had in Syria that go back some ways. But certainly part of their motivation is by making sure they have warm water access into the Mediterranean and the access that that provides. They are interested in preserving that. They are interested in preserving a regime that is friendly and supportive to their motives and interests. I also believe that they share an interest in trying to subvert our influence and interests in the region. I do think they see that as an opportunity for them, and I think they are attempting to exploit that.

Senator SCOTT. After President Trump made the announcement that we would do a withdrawal, have you seen Turkey take different action on the ground? Is there anything they are doing that causes you concern?

General VOTEL. Well, Senator, I think we probably can talk a little bit more about that in the closed session. But in general, what

I would tell you is we have seen all actors begin to posture themselves for what might come, and we have seen that on all sides.

Senator SCOTT. Thank you.

I am finished, Senator Reed.

Senator REED. Thank you, Senator Scott. We are not used to such subtle and penetrating questions. Thank you.

[Laughter.]

Senator REED. Senator Jones, on behalf of Senator Inhofe.

Senator JONES. Thank you, Senator Reed.

Thank you, General, for your service. I echo that and also for all of the team that is behind you. I am well aware that your success is only as good as the success of those that serve with you. I use that term appropriately as opposed to the chain of command below you. They serve with you. I appreciate all the folks sitting behind you and all of those that are still over there.

I want to follow up briefly with kind of a question that Senator Shaheen asked about the CNN report of our military equipment somehow getting into the hands of others, but I want to come at it in a little bit different way.

Last year, you stated that due to political considerations, cost, or delivery speed, some of our partners are seeking alternate sources of military equipment from near-peer competitors like Russia and China. When our partners go elsewhere, it reduces our interoperability and challenges our ability to incorporate their contributions into theater efforts.

I think it is critical that we align our practices with what is necessary to achieve these goals, as you alluded to, and we want our partners to come to us. Particularly I am concerned when they are going to communist China, communist Russia to get that because we are seeing around the world the influence of those countries.

My question is, does this challenge persist today, and if so, could you please talk a little bit more about those challenges or barriers that exist to our partners coming to us for equipment and what steps you believe we need to take in order to keep them coming to us rather than communist Russia and communist China?

General VOTEL. Senator, thank you.

To some extent, they do continue to exist today. I certainly recognize that our foreign military sales, foreign military funding process must be a deliberative one. We should make very deliberate decisions about the things that we sell to people, and that has to go through a process.

I am concerned that the process is lengthy and is not as responsive as our partners require on the ground. I am very much in support of trying to look at how we make those processes more responsive to the needs that they have on the ground. I think we should always strive for that. There are a lot of steps that we go through to provide equipment to people. Some of them are within the Department of Defense, some of them within the Department of State, and certainly some over here in Congress. To the extent that we can have a more rapid process to answer the requirements of our partners, I think that would be beneficial. In some cases, if we are not going to provide things to them, we should be very honest with them up front and tell them we are not going to. I think it is always better to give them a yes or a no answer than it is to string

them along because I think that leads to more frustration for our partners and it does cause them to go do other things.

I also think a key part of this is our work on the ground beforehand with our partners. This is within the military here, is making sure that the things that they are asking meet the needs of each of their countries in their own defense. We should try to steer them away from just buying things that they cannot maintain, they cannot sustain, they cannot maintain long term, and we should be focused on the equipment that they can and equipment that can be integrated with us and other partners in the region to provide a more formidable deterrent effect or a defense, if needed.

Senator JONES. Great. Thank you, sir.

With regard to the Iran nuclear deal, it looks like we are out. How will United States withdrawal from the Iran nuclear deal affect our posture in the CENTCOM area of responsibility?

General VOTEL. Well, I do not know that withdrawal from the Iran deal will specifically impact our posture. Our posture will be more driven by the National Defense Strategy than it will be by a decision to depart from the JCPOA [Joint Common Plan of Action].

I would just add that as I look across the region, Iran does continue to present concerns to me. It is the major destabilizing factor in the region. While the nuclear weapons program is one aspect of the threat that they presented, their facilitation of ballistic missiles, of unmanned aerial systems, of other lethal materials to their proxies in Yemen, in Syria, in Iraq, other places here, I think this should give us very, very significant cause. Their continued efforts to exercise control over critical waterways I think should give us continued cause here.

Iran continues to present threats to us across the region, and as we look at implementing the National Defense Strategy—and I agree with the focus on great power competition—my best advice back up through my chain of command will be to ensure that we do retain sufficient capabilities and sufficient response capabilities to deal with the threats that remain in the CENTCOM area of responsibility.

Senator JONES. Great. Well, thank you, sir. Thank you very much.

Senator REED. Thank you.

On behalf of Chairman Inhofe, Senator Hawley please.

Senator HAWLEY. Thank you very much.

General, thank you for being here. Thank you again for your service.

I want to stay on that same topic about the National Defense Strategy and Iran and just explore some of the tensions that the National Defense Strategy creates for your area of operation.

Can I just ask you, in your judgment, are we in a position to remove, draw down forces, move forces from your area of operation to Asia or Europe in accord with the National Defense Strategy's priorities on great power competition with China and Russia? Are we in a position to do that and also engage, if necessary, Iran should that nation provoke a conflict with us or should they continue to accelerate further their uranium enrichment program?

General VOTEL. Senator, the National Defense Strategy necessarily puts focus on the United States regaining its competitive advantage against great powers, Russia and China in this particular case. I agree with that, and we are absolutely supportive of that from a CENTCOM standpoint. We do recognize that that will necessitate some change in our posture in the region. As we go through the discussions and the planning aspects of that with the Joint Staff, with OSD [Office of the Secretary of Defense], and certainly with the services, we will seek to maintain the capabilities that we need to and then ensure that we have the right response capabilities to address threats as they present themselves in this area.

Senator HAWLEY. Let me just ask you a little bit more about that. The National Defense Strategy calls for more efficient ways of operating in the greater Middle East, in your area of operational authority, the idea being again to enable us to maintain the focus on Iran and terrorists there and also to shift attention towards a great power conflict.

Can you tell me about your plans to make operations in your area of responsibility more efficient? What does that mean? What does that look like? Can you give us a tangible sense of it?

General VOTEL. Certainly. One of the areas where we can continue to be more efficient is how we operate along our bureaucratic combatant commander seams. With me, I share a boundary with EUCOM to the north. I share one with AFRICOM to the west, and with INDOPACOM to the east. I think it is extraordinarily important as we look at managing resources that we look at positioning and employing these resources in a way that they can be of the maximum utility to multiple combatant commands. Today we actually do that with some of our resources in the region.

You might be aware, for example, that AFRICOM supports us with basing that we require for our activities in the Arabian Peninsula, and the resources that we have there benefit both General Waldhauser in his command and they benefit me. I think there are some smarter ways of doing this.

Certainly the Department's focus on dynamic force employment where we exercise strategic predictability but operational unpredictability I think is a good concept of this where we are able to move resources in a more agile fashion into areas where we see opportunities with this. I think this is another area that we need to continue to focus on.

Senator HAWLEY. In this same vein, we have heard some and I have read some about light attack aircraft and security force assistance brigades. Can you give me your sense about the progress on those initiatives and what else you might propose in that vein?

General VOTEL. On both of those initiatives, the security force assistance brigades—you know, my service, the Army, I think did us a significant service by establishing this organization. What this essentially did—we talked about by, with, and through, but what this really allowed us to do is it gave us a purpose-built organization that was specifically focused on this type of advising and the type of relationship we wanted to have with our indigenous partners on the ground. Over the deployment of the first security force assistance brigade last year in Afghanistan, we saw significant im-



provement in our ability to do that, a higher level of capability, a much more focused organization, and I think we helped the Army preserve its readiness frankly. We did not take a brigade, break it apart just to pull the leaders out to do advise and assist. We actually had a purpose-built organization that did that. I think this is a very positive thing.

The light attack aircraft. Being able to train our partners in terms of employing those things I think reduces the burden on us, and it provides self-sufficiency for them. It does it without creating a significant logistical burden. Whether it is A-29's that we see with the Lebanese armed forces or A-29's we see with the Afghan security air force, these I think are good investments. In both cases we have seen those resources be directly responsible to their forces on the ground. It is nascent. It is growing. We have to continue to support this, but I think this is exactly the direction we need to go to really enable our partners.

Senator HAWLEY. Last question. You are satisfied, General. I mean, you think that those programs, for example, are on track. You think that we are making good progress in both of those initiatives.

General VOTEL. I do. I think both of those are excellent programs.

Senator HAWLEY. Thank you very much.

Thank you, Mr. Chairman.

Senator REED. Thank you.

On behalf of Chairman Inhofe, Senator Peters, please.

Senator PETERS. Thank you.

Thank you, General Votel. Thank you for your testimony here today and your many years of distinguished service.

General, in your written testimony, you described Jordan as, quote, one of our most committed partners in the Middle East and one of the most critical voices of moderate Islam in the region. Your testimony goes on to discuss the role that Jordan plays in hosting over 750,000 refugees from Syria, Iraq, and elsewhere and Jordan's contributions to the fight against ISIS and Jordan's role in hosting Exercise Eagle Lion, which includes nearly 2 dozen countries training in the counterterrorism mission.

Today in the Senate, we are debating S. 1, Strengthening America's Security in the Middle East. It includes a United States-Jordan Defense Cooperation Extension Act. The premise of the legislation is that Jordan is playing a critical role in addressing the humanitarian crisis in Syria and the fight against ISIS and, therefore, extends our defense cooperation agreement.

Could you describe and talk a little bit more about the contributions that Jordan is making, what are some of the challenges Jordan faces in making these contributions, and why this extension is important?

General VOTEL. Thank you, Senator. I would just share everything that you just said there about what a great partner they are.

Certainly Jordan is not a rich country. They face economic challenges by virtue of where they are. His Majesty is working through that aspect with his parliament right now and with the international community, and I think we should continue to be supportive of that.

As you have said, given the chance to say no, they say yes every time to everything that we seek.

I would share with you, Senator, the last week I was in Jordan. I had an opportunity to visit the border, up along the border between Jordan and Syria, and I had an opportunity to witness the investments that our country has made in their border security initiatives: equipment, training, command and control for this. What I witnessed there I think would make any Member of Congress or, indeed, any American very proud to see. It was extraordinarily professional. It was very effective. They had very good situational awareness and understanding of what was happening along their border, and everything that they were doing was sustainable. They have been doing it for several years and with the prospect of continuing to do it in the future. These are the kinds of investments that we need to be making in these very good partners right here like Jordan.

Senator PETERS. Thank you, General.

Today in this bill, it also includes the Caesar Syria Civilian Protection Act. It is a bill named after a defector from the Syrian army who shed light on Assad's atrocities, revealing photographs of torture and significant human rights abuses that I know you are very aware of. The legislation imposes sanctions on individuals who support Assad's regime in Syria by providing financial and material or technological support. This includes sanctions on those who provide aircraft or spare aircraft parts for military purposes, sanctions on those who collaborate with mercenaries, military contractors, paramilitary forces operating on behalf of Syria, Russia, or Iran, and sanctions those who help the Government of Syria maintain or expand its production of natural gas and petroleum.

Your written testimony describes the Assad regime's use of starvation as a weapon of war by denying humanitarian aid to be delivered where it is critically needed.

My question to you, General, is to what extent do you believe that imposing additional sanctions on the Assad regime, including limiting access to aircraft and aircraft spare parts, will degrade Assad's ability to attack innocent civilians and exert pressure in a positive direction towards improving the horrible humanitarian situation that we have there.

General VOTEL. Senator, my belief is history speaks for itself here with the Assad regime, and we should continue to keep the maximum amount of pressure on them to prevent them from appropriating the atrocities that they have in the past on their own people. I am supportive of all measures in that regard.

Senator PETERS. The last question, General. Last week, the Committee held a hearing on the threats posed by Russia and China. You have answered some questions related to what we heard, as to how we need to have more efficient use of resources in the Middle East. What came up was the possibility of a review of the use of aircraft like the B-1 and the F-22 in Afghanistan where those platforms might be better focused on dealing with our near-peer competitors.

My question to you is—I have worked to extend and support A-10's operating and to make sure that they have the wing replacements so that A-10 aircraft can continue to operate. To what ex-

tent is the A-10 necessary for you to conduct your mission in places particularly if we look at moving B-1's and F-22's out of theater?

General VOTEL. Well, Senator, I do not think you are going to find any Army guys or infantrymen that are going to argue against the A-10. It is an incredibly responsive capability that has, I think, served us extraordinarily well in the past. I know it is an old airplane, and so I share some concerns about its sustainability. But certainly it has definitely proven its worth to us, and we will continue to require that type of support, some type of very responsive, close air support capability well into the future.

Senator PETERS. So you believe Congress should continue to support that program in your estimation?

General VOTEL. I think we should continue to support that program, and then we should be looking at other programs that would provide those capabilities in the future.

Senator PETERS. Appreciate it. Thank you, General.

Chairman INHOFE [presiding]. Thank you, Senator Peters.

Senator Rounds?

Senator ROUNDS. Thank you, Mr. Chairman.

General, first of all, thank you for your service. Thank you to your team as well.

The National Defense Strategy makes clear that the Department's focus is preparing to deter and win, if necessary, great power conflict with China and Russia. But we have also got several partners in the region as I think Senator Peters has just mentioned. Jordan is a great ally. So is Israel.

Israel has reportedly agreed to allow a Chinese Government-connected firm, Shanghai International Port Group, to run commercial operations at the Israeli Port of Haifa. This port reportedly periodically hosts joint United States-Israeli naval drills and visits from American vessels. From a U.S. military perspective, do you have concerns regarding this deal? If this deal goes forward, might it impact decisions to have the U.S. Navy vessels visit the port?

General VOTEL. Senator, Israel resides outside of the CENTCOM area of responsibility. So with regard to that, General Scaparrotti would probably be the best one to answer that question.

But I would share with you, as I look at the region in which I do have military responsibilities, in the Gulf, in and around the straits, particularly the Bab-el-Mandeb and these areas, I am concerned about the increasing presence of Chinese maritime activity in the region and their continued outreach to different partners there to secure military access that is likely linked to their economic objectives, their One Belt One Road aspects that they propagate around the world but, in particular, in the area in which I have military responsibility. I deeply share your concern.

The United States and a number of our partners have long provided maritime security in this area. Frankly, I think China has been a free rider in this and taken advantage of that, and now we see them beginning to develop their own infrastructure in here principally for their own purposes, not for the purposes of broader regional security in the region. I am concerned about that.

Senator ROUNDS. In terms of how we separate out the different areas of responsibility—and I respect the fact that you have spe-

cific areas. Most certainly activity communication with our ally Israel is a part of that responsibility, though. Can you share with regard to how this impacts your ability and does it? Or is it simply a matter of we are aware of it and we will allow other individuals responsible in other areas of responsibility to handle it?

General VOTEL. Senator, as I remarked earlier, we pay particular attention to our bureaucratic, geographic seams out here. General Scaparrotti and myself and our respective staffs are very closely aligned with this. With his support, we maintain a close relationship with Israel. As we have recognized, many of their security threats reside within the military area in which I have responsibility. I think this is another aspect of how we cooperate across our combatant command boundaries here, sharing responsibility. I absolutely understand what you are saying, and I am very confident that the mechanisms that we have in place are helping us address the concerns that all parties have in the region.

Senator ROUNDS. Let me go to another area of bureaucracy. Much has been written and said about the need to streamline DOD's acquisition processes. Can you comment on the process and the amount of time that it takes to fill validated requirements in the CENTCOM area of operations? Do you believe that we must reform the acquisition process to more quickly fill the urgent and operational needs of our warfighters?

General VOTEL. Senator, I absolutely agree we should continue to do everything that we can to address the needs of the warfighters and try to do it as fast as we can. I am aware of a number of initiatives that are underway to address that, whether it is rapid prototyping or other things that we can do. Our view in CENTCOM, as we confront emerging threats here, is that we have tried to be supportive of the services bringing in capabilities, trying them out, recognizing some of these will fail. They will not succeed the way they are. But in the hands of our soldiers, sailors, airmen, and marines on the ground, they will begin to provide very direct feedback that will help these programs move along quicker.

From a CENTCOM standpoint, what we are principally concerned about is making sure that we have a system in place where we can bring things forward. We can rapidly test them. We can get them in the hands of our people. They can provide feedback. That goes back into the commercial or the industrial base. They make the improvements and then bring us the improved product out there that we can use. That to me is extraordinarily important in an area like CENTCOM.

Senator ROUNDS. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Rounds.

Senator King?

Senator KING. Thank you, Mr. Chairman.

General, were you aware of the President's intention to order the withdrawal of our troops from Syria before that was publicly announced?

General VOTEL. I was not aware of the specific announcement. Certainly we are aware that he had expressed a desire and intent in the past to depart Syria.

Senator KING. You were not consulted before that decision was announced.

General VOTEL. We were not. I was not consulted.

Senator KING. You mentioned in your testimony that—you used the word “remnant” with regard to ISIS. Can you give us a better number than remnant? What are we talking about here? Senator Cotton mentioned 20,000 to 30,000 fighters scattered in various places around the world. Is that accurate?

General VOTEL. I think that is approximately what the intelligence community has estimated that is left behind. I think we would generally share with that. That includes people of a variety of different characters. It includes fighters. It includes supporters. It includes facilitators within that.

Senator KING. How about in Syria and Iraq? What number would you put that?

General VOTEL. I think in general from what I have seen, that is about the number that I have seen.

Senator KING. Twenty to thirty thousand.

General VOTEL. Yes, but Senator, this is probably a low to moderate confidence number.

Senator KING. Is it a low estimate? I am sorry. You threw me with that. Do you think it is a higher number?

General VOTEL. I think we do not fully know.

Senator KING. You do not have a precise number.

General VOTEL. We do not have it with any specific accuracy. It is always going to be a range. The number is always going to be a range.

Senator KING. One of my concerns about the withdrawal with that many ISIS fighters still in the area is that they will just wait us out. The President announces a withdrawal. The saying I have heard is the Americans have the watches, but we have the time. Are they just going to wait and hunker down for a couple years or a couple of months and then resuscitate their efforts? If you were their military commander, would that not be what you would do, say these guys are leaving, we will just bide our time?

General VOTEL. Well, certainly, Senator. But our approach here, as I mentioned in my opening comments, is as we look to withdraw from Syria, we are in a very deliberate planning process for how we will work with the international community, with our partners on the ground with the rest of the coalition to ensure that we can keep pressure on this organization to prevent exactly what you are talking about.

Senator KING. I think it is very important. Perhaps you can share with the Committee in closed session what the strategy is for maintaining that pressure and how success is defined that will allow us to withdraw.

Let me move on with regard to, again, the withdrawal. Senator Heinrich mentioned the danger to the Kurds. I sincerely hope that in your exit interview with your successor, which will take place very soon if not already, that you emphasize the importance of protecting the Kurds. If they are slaughtered by the Turks within the reasonable proximity of our leaving, it will be a stain on the honor of this country that will persist not only in terms of honor but also in terms of our ability to attract allies to assist us in future

projects of this kind. That is my biggest fear about what is going on now, and I believe the Turks are waiting.

General VOTEL. Senator, again, I think this is a key task that we are looking at right now and that is the protection of those who have fought valiantly with us and ensuring that they remain safe as our diplomats and United Nations and others pursue a political solution here in Syria.

Senator KING. I certainly hope that is of the highest priority.

You mentioned Iran and listed a whole series of malign activities in the region. Which would you prefer? The current malign Iran or a malign Iran with nuclear weapons?

General VOTEL. Certainly I think an Iran with nuclear weapons poses a more enduring and serious threat to us long term. Our approach to them does need to make sure that we deny all paths for them to get to a nuclear weapon.

Senator KING. Well, unfortunately, we have just abrogated an agreement that did just that, but we can discuss that in another setting.

Final question on Afghanistan. I do not understand that we are negotiating unilaterally with the Taliban and not involving the Government of Afghanistan. I do not understand how that is going to get us to a final result of the Government of Afghanistan if we give away things they are not willing to give away.

General VOTEL. Again, Senator, I think the way I would characterize Ambassador Khalilzad's efforts is he is at the beginning of process here to put together a framework that will allow the Afghans and Taliban to come together at some particular point to conduct some negotiations. All of this is being done with the knowledge of the Government of Afghanistan. They understand what he is doing. I cannot speak for the exact process itself since that is Ambassador Khalilzad's. But I do know that he is in frequent consultation with the Government of Afghanistan to ensure that they are best informed on the approaches that he is taking to continue to get this framework in place.

Senator KING. Good. I hope that is the case. Thank you. I appreciate it. Thank you, General.

Chairman INHOFE. Thank you, Senator King.

As a reminder, you made several references as to a different setting for some of the answers to your questions. We will be having a closed meeting at 2:15 in the Visitor Center. So you have that opportunity.

Senator Sullivan?

Senator SULLIVAN. Thank you, Mr. Chairman.

General, good to see you again. I want to thank you and Sergeant Major for your outstanding service to our Nation and very, very much appreciated.

I wanted to dive in a little bit more. We have had this discussion I think on both sides of this idea as we are refining our force posture in the region, this notion of having a robust counterterrorism force that can still focus on U.S. interests, whether it is the rise of ISIS, whether it is the rise again of al Qaeda, whether it is the malign activities of Iran. I think, unfortunately, some of my colleagues like to look a blind eye. I am going to ask you a couple questions about that.

But what is that concept of—you know, this is something the President has talked about, but your predecessor, a general who I happen to have a lot of respect for, General Abizaid, has talked a lot about this idea of a raid force component, robust CT [Counter Terrorism] element in the Middle East that can continue to focus on our key strategic interests. How would that work, and are you thinking through that, whether it is in Iraq, whether it is in other parts of the Middle East? Do we have the capability not only to go after our counterterrorism goals but, say, for example, control the airspace in northern Syria, which a number of us think is important even if we are not on the ground there?

General VOTEL. Senator, I believe that we do, and we are in fact thinking through the different ways that we would continue to address our enduring concern about violent extremist organizations operating in this region who harbor interests in coming against the Homeland.

Senator SULLIVAN. That is our overriding national interest.

General VOTEL. It is. As we look at all of the activities that we are conducting across the region, I think safeguarding that particular national interest has to be among the very top things that we are doing. There are a variety of different approaches that we can take to this. Certainly the by, with, and through approach using partners on the ground, enabling them to keep pressure on them is one way of doing this. In some instances, it may require us to have some of our capabilities forward in different locations to ensure that we can do that.

Senator SULLIVAN. Are we looking at those options right now to make sure—

General VOTEL. We actually are looking at a variety of different options for how we might address this.

Senator SULLIVAN. Are you confident we can address this, not only given your role as CENTCOM Commander, but your previous role as SOCOM [U.S. Special Operations Command] Commander?

General VOTEL. I am supremely confident in both our SOF [U.S. Special Operations Forces] and conventional forces in the ability to meet the missions that our Nation has in this area and in others.

Senator SULLIVAN. Let me talk about Iran a little bit. You know, my colleague from Maine, who I consider a good friend and deeply respect—he mentioned the Iran nuclear deal. The Iran nuclear deal essentially gave Iran the freedom to be on the verge of becoming a nuclear nation within 10 years anyway. We always forget that. That is a short time span in the Middle East. That was the agreement.

You know, General Dempsey, when he was Chairman of the Joint Chiefs, testified in front of this Committee that when the Iranians were supplying—the Quds Force and others were supplying sophisticated IEDs [Improvised Explosive Devices] to the Iraqi Shitite militias, they were responsible for the killing and wounding of over 2,000 American soldiers, airmen, and marines. Do you agree with that assessment?

General VOTEL. I do agree that Iran facilitated equipment to organizations that caused casualties on Americans.

Senator SULLIVAN. Massive casualties.

General VOTEL. Massive casualties.

Senator SULLIVAN. It often gets forgotten that Iranians were, in my view, directly responsible for killing and wounding over 2,000 American soldiers and other military members on the ground in Iraq. Is that not correct?

General VOTEL. That is correct, Senator.

Senator SULLIVAN. One of the big selling points of the Iran nuclear deal was that it was going to moderate Iranian activities. This was sold by Secretary of State John Kerry and even President Obama. Have they moderated their malign activities in Syria?

General VOTEL. Senator, they have not.

Senator SULLIVAN. No. It has gotten worse. Is that not true, General?

General VOTEL. It is my observation that during the time that the agreement was in place, we did not see a modification to their behavior.

Senator SULLIVAN. How about with regard to Yemen? A lot of my colleagues on both sides of the aisle forget who started the war in Yemen. It was not the Saudis. Was it?

General VOTEL. Well—

Senator SULLIVAN. The Houthis backed by the Iranians?

General VOTEL. The Saudis were concerned about the presence of an Iranian-backed organization along their southern border.

Senator SULLIVAN. With regard to Israel, they [Iran] certainly have not moderated their malign activities. Have they? Iran?

General VOTEL. I think if you talk to the Israelis, they certainly would agree with that.

Senator SULLIVAN. Let me ask one final question with regard to—Secretary Pompeo gave a speech in Cairo that was laying out what I thought was a very well articulated, robust counter-Iran strategy. How are you looking as the CENTCOM Commander to execute this strategy, which I think is one of the most important things we can be doing in the Middle East?

General VOTEL. Well, Senator, I have responsibility for helping put together the military global campaign plan for Iran. As I look at that, I look at a variety of different things that we have to do as part of that. We have to assure our partners. We have to challenge Iran in the areas where they are trying to exert their malign influence. We have to be prepared to deter them. We have to be prepared to delay and respond to their activities in the region. As I look at the planning that we are doing against that, those are the types of things that I am trying to incorporate into a comprehensive plan to address the threat of Iran.

Senator SULLIVAN. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Sullivan.

Senator DUCKWORTH?

Senator DUCKWORTH. Thank you, Mr. Chairman.

Thank you, General, for being here. I also want to recognize that your Command Sergeant Major is here. Sergeant Major Thetford, thank you for all of your years of work as well on behalf of our Nation.

General, I want to go back to a theme that you have talked about a lot in terms of relationship building and setting the groundwork with our partners beforehand in the region and the like. You and



I touched a little bit on some of the programs that exist that allow us to do that, to build these habitual relationships. I know that the Ranking Member had talked about IMET programs.

I would like to touch on the State Partnership for Peace programs. This is a program where, when I was serving, from the time I was a second lieutenant, I had a partner nation in Illinois' case, Poland, that we trained and worked with. I grew up in the military along with my Polish counterpart from being young second lieutenants all the way up through our command time. That developed a relationship and an understanding of how that worked.

Can you speak a little bit about the different types of U.S.-funded military exchange programs that you see implemented in the CENTCOM region? Talk about the values of those programs contributing to our warfighting capabilities.

General VOTEL. Thank you. Senator, let me just start and talk about the State Partnership program. This is an excellent program. We have four or five States that are partnered with countries across our region, and in almost every case, these are deeply valued programs by our partners in the region and I believe by the States that orchestrate them. We get a lot of benefit out of that, not just in the countries in the region, but again by people from those countries coming back to America to participate in exercises to build the relationships back here. I think this is an extraordinary program. It is long-term. It is enduring, and I think it serves us particularly well.

You have already talked about the impact of IMET. This is an extraordinarily important program. I will not belabor that.

I also think that the program of exercises that we continue to orchestrate across the region are extraordinarily important in terms of building interoperability, in terms of building readiness, and in terms of building reliability in our partners. As we have continued to move forward, I think this will be again continuing investments that we will want to make.

For example, with Egypt, we have restarted the Bright Star exercise, but we have changed it more to deal with the contemporary threats that we are dealing with and that Egypt is dealing with in the terrorism realm as opposed to perhaps the sweeping tank battles of the past. That is not what we are doing.

I think through our exercise programs, we have the ability to make these very specific to the needs of the region and address it.

I would add one final program that I think is extraordinarily valuable, and it is our combined maritime force where we invite different partners in the region, some from outside of the region to come in and participate as part of our combined maritime forces operating in the Gulf and in the waters of the region. These are extraordinarily important. We see countries like Pakistan who step forward, provide significant resources in this, and provide leadership to these organizations. This allows us to make sure that we share the burden, we leverage the capabilities that everybody brings, and it adds to a much more collective approach to security in the region.

Those are just four key programs of probably several others that could be discussed as well.

Senator DUCKWORTH. Thank you, General.

That last point speaks a little bit to my logistical officer heart. When I look at a map of the CENTCOM region, I cannot help but wonder how your J-4 is able to transport people, equipment, and supplies throughout the theater especially in light of great power competition and the changing environment as it is. It becomes even more salient when I think about the potential for Iranians to close the Strait of Hormuz and restrict movement in the Arabian Gulf.

Going back to the exercises you just mentioned, do you regularly exercise against this threat, and how confident are you that our logistical supply chain will not be gravely impacted, should conflict with the Iranians escalate in the region?

General VOTEL. Certainly we do. I mean, one of the principal concerns we have is the mining of the straits and the impact that that would have. We do regular mining exercises and counter-mining exercises in the maritime environment here. We have a big exercise planned later this fall with a number of different countries that will come in. But this is certainly something that we are focused on.

You are really hitting on the resiliency of our logistics networks in the region, and I do think that our command, our components out there, and our partners have really begun to address this. Certainly you are familiar with the northern distribution network that kind of goes up through the Central Asian states. That has been important for us. We continue to exercise that. It certainly does have some influence from Russia and that. It is a more difficult network to orchestrate, but it is not impossible. We do continue to move materials across that area.

Across the Arabian Peninsula, we have what we refer to as the Trans-Arabian Network that links a variety of ports and cities and airports not only in the Arabian Gulf but down in the Gulf of Oman and over to the Red Sea. It gives us extreme resiliency in terms of how we can move material, men, forces into the region to respond to capabilities.

We are very much focused on that. In fact, as we look at implementing the National Defense Strategy, what that might mean for CENTCOM, our focus on these logistic networks and our ability to have agreements, basing, and other things in here I think become even more important than they already have. We have tried to prioritize that and we will continue to do that as we move forward.

Senator DUCKWORTH. Thank you. Vitally important, indeed.

Thank you, Mr. Chairman.

Chairman INHOFE. Senator Ernst?

Senator ERNST. Thank you, Mr. Chair.

First, Sergeant Major, thank you for your wonderful years of service and commitment to our great United States. We certainly appreciate that.

Major Votel—Major Votel—many years ago, a number of your colleagues and your soldiers believed that you would become a great leader. I have to say, General, that they were correct all those years ago. Thank you so much for your wonderful service. I appreciate that.

One of our most effective resources for building partnerships and capacity, while maintaining the pressure that we have on those violent extremist organizations, is done obviously through our special

operators, and you are intimately familiar with that. How do you see the role of our special operators evolving across the CENTCOM AOR [Area of Responsibility] with regard to counterterrorism and capacity building, as well as the role more broadly nested within the National Defense Strategy? If you can talk a little bit about that role, how we are developing them.

General VOTEL. Thank you.

So, Senator, as you suggest, the special operations forces will continue to play a key role in the CENTCOM area of responsibility as we confront violent extremism here. They have developed a level of expertise and proficiency in this that is certainly unmatched anywhere else. We will depend on that.

I would add this, that one of the things I am most proud of as CENTCOM Commander and as a former SOCOM Commander, is how well our special operations forces and our conventional forces are integrated in the areas in which we operate. In many cases, it is almost indistinguishable. There is very little concern with who gets the credit or who is calling the shots here. It is an extraordinarily collaborative environment between all of our forces on the ground.

This will be essential as we move forward. As you know, our special operations capabilities are limited. They are in great demand not just in CENTCOM but in other areas. That will be brought out as we fully implement the National Defense Strategy. Reliance on our conventional forces beginning to do some of these things and to develop the same methodologies that our special operators have developed over the course of many years will become very, very important as we move forward.

Senator ERNST. General, as we are drawing down the number of troops that we have, whether it is Syria, Afghanistan, elsewhere, we do continue to maintain, train, advise, assist, and at times accompany missions. Do you see that continuing forward as a force multiplier with partners in that region? What more can we do in that area?

General VOTEL. I do, Senator. I think this idea, by, with and through, and focused on training, advising, assisting, enabling our partners is a proven method for us, and I think it works extraordinarily well in this particular region. I do see that moving forward.

Going forward, it will be important for us to maintain these relationships. The relationships that we depend on in this region are not those that can be put together in the course of a crisis. They have to be developed and they have to be nurtured over time. As Admiral McRaven often reminded us when he was the SOCOM Commander, you cannot surge trust in times of crisis. That has to be done in advance. I think the lifeblood of what we do out here will be the development of resilient, trustful relationships across our region.

Senator ERNST. I appreciate that. I appreciate the comments made by my colleagues as well about the State Partnership programs, the IMET programs, and so on. Those are very, very important in developing that level of trust.

Just very briefly, because I am running out of time, General, of course, we do have some other big players in the region. We see

Russia, of course, in Syria. We see China's investments in Pakistan. Where else do you assess that China and Russia are involved in that AOR, and what is the extent of that and what are their intentions from your perspective?

General VOTEL. Thanks.

Well, starting with Russia, certainly Russia has extraordinary interests in the Central Asian states, these being former Soviet republics. They maintain a long-term relationship there. This will always continue to be something that we will have to contend with in this particular region. We have seen in the past Russia working with countries like Egypt and others to potentially fill in voids there. We have to be mindful of those relationships as well.

When you look at China, I think their motivations are principally driven by their economic objectives, again really driven by the One Belt One Road approach that they are taking to link trade routes back to China. I think the thing we have to continue to be watchful of is their developing relationships with other partners across the region, particularly in the maritime environment, in the countries that are along the waterways in the region, whether they are some of the Gulf states or whether they are some that are on the African continent, but which certainly give them very good access into the CENTCOM waters here. These are the areas I think that we will have to pay attention to in the future.

Senator ERNST. Absolutely. They have a long game, and we do need to pay attention.

My time has expired, but General, my best to you and your beautiful family. Thank you so very much.

General VOTEL. Thank you, Senator.

Chairman INHOFE. Thank you, Senator Ernst.

Senator Blumenthal?

Senator BLUMENTHAL. Thank you, Mr. Chairman.

I join my colleagues in thanking you for your service and thanks for your very forthright and helpful answers today.

I want to come back to a line of questioning that Senator Reed began about the \$331 million that we are owed by the Saudis for aerial refueling. Have we made a demand to the Saudis that they pay that money?

General VOTEL. Senator, we have presented all those bills to the Saudi-led coalition. They have them there, in receipt of them. They acknowledge that. We are working through to ensure that the products that we have given to them are—they understand what that is and they will be able to respond to us. They have given us every indication that they intend to meet the requirements for reimbursement that we have asked for.

Senator BLUMENTHAL. There is no question in your mind, is there, that that \$331 million is owed to our country?

General VOTEL. That is reimbursement for fuel that we have provided for them, and it is reimbursement for the flight hours associated with the aircraft that provided that fuel.

Senator BLUMENTHAL. When will they make that payment of reimbursement?

General VOTEL. We expect that, in terms of the flying hours—bills have been presented to both Saudi Arabia and to the Emirates—for flying hours we will see responses as early as March and

then likely for the fuel, by the May time frame. The ACSA requires that they provide reimbursement within 90 days of notification.

Senator BLUMENTHAL. These are U.S. taxpayer dollars that they owe us, to put it most simply. Correct?

General VOTEL. Yes, Senator.

Senator BLUMENTHAL. You mentioned—I may have misheard you—that there is the possibility of other instances where they or other countries owe us for similar kinds of expenses?

General VOTEL. I do not think we have identified any other than that. I think the question was have we looked more broadly across the region to ensure that we do not have this problem with others, and we are in the process of doing that, Senator.

Senator BLUMENTHAL. You are reviewing—

General VOTEL. Exactly to make sure that we have not had an oversight on this.

Senator BLUMENTHAL. Have you found any indications that there have been other failures to repay?

General VOTEL. I have not been notified of any thus far, Senator.

Senator BLUMENTHAL. I would like to ask you about the special operators, and Senator Ernst asked you a number of questions. Can they operate as effectively from bases in Iraq as they can from where they are located now?

General VOTEL. Senator, I think our special operators are extraordinarily capable. You know, in the beginning of our operations in both Iraq and Syria, there was a time when we did not have anybody on the ground, and yet we were able to have a relationship with our partners on the ground in Syria and we were able to do that from remote locations. We do that in other places. They are extraordinarily innovative, and so we will look at all options that we can use here.

Senator BLUMENTHAL. I guess my question, just to rephrase it, was not whether they can operate at all, but whether they can operate as effectively if they are based remotely. Are they not more effective if they are, in effect, in the combat area where they are supposed to operate?

General VOTEL. Well, Senator, I would agree with you that it is always best to be with your partner and to be sharing everything that they are experiencing. I think that is optimum. But certainly I think we have demonstrated in a variety of different areas here that through a remote location, we can achieve the objectives that we are focused on.

Senator BLUMENTHAL. Well, knowing how skilled and effective our special operators are, I have no doubt that they can operate from very remote locations. But I take it you would agree with me that the optimum situation, from the standpoint of military impact, would be to have them actually on the ground where they are supposed to do their work.

General VOTEL. Yes, Senator, I would agree. I think it is always best to be with your partners.

Senator BLUMENTHAL. Thank you.

Thanks very much, Mr. Chairman.

Chairman INHOFE. Thanks very much, Senator Blumenthal.

Senator PERDUE?

Senator PERDUE. Thank you, Mr. Chairman.

General, thank you for your career and dedication and sacrifices. Sergeant Major, thank you for 38 years. Do not ever think it was ever taken for granted. It will never be forgotten. God bless you.

General, in your AOR, you have all five threats, if you assume and believe that North Korea and Iran have a particularly good relationship, in across at least three domains, probably four domains. The question I have is relative to what China and Russia are doing longer term, particularly as we think about our future in Afghanistan, what China has done in the China-Pakistan economic corridor is basically handcuffing Pakistan. As you said earlier, Pakistan is a major player in determining the long-term future of Afghanistan. I would argue that India, as well as the Stans and other players in the region, are because of the Pashtun problem. But this debt problem is up to—I think it is \$23 billion now. It could go to \$62 billion, and there are \$90 billion committed there in that effort. That is huge in terms of Pakistan.

What I am concerned about is what Pakistan is also representing to China with regard to what China has done with their BRI [Belt and Road Initiative] across that area. You just mentioned the maritime interest with Gwadar and Hambantota. Hambantota is just south of Colombo in Sri Lanka, and they have already foreclosed on their partner there. It is a proprietary debt situation. They have done the same thing in Gwadar and 31 other places around the coast of Africa. You just mentioned that.

The question is, how are we as a military—I understand this is a diplomatic issue as well. How are you in the military dealing with China's effort to develop this string of pearls, particularly in the perspective that Russia with Vladiky and Tartus, with China in Djibouti, in this area as we consider our future in both Iraq, Syria, and Afghanistan? How are we addressing that China and Russia threat relative to their permanent strategy in that area as it relates to our NDS?

General VOTEL. Thanks, Senator. I think you highlighted a real challenge for us. I think as we look at great power competition, I think we have to recognize—and I believe we do—that the threat of Russia or that China poses to us is not limited to a particular geographic area but, in fact, it is global with these partners. As we look at our plans to compete with these partners to pursue our national interests, we have to look in all areas where we do this, to include the CENTCOM area of responsibility. There will be things that we can do in CENTCOM that can contribute to a broader campaign to compete with China and Russia. I think as we look at this, we have to look for opportunities where we can do that and how we integrate into a broader plan.

More specifically though, what I would tell you—I think one of the most important things—and I mentioned this a little bit earlier—for us to do is to continue to be seen by our partners in the region as a valued partner. You know, as I look at the recent Iraqi elections, I have noted the presence of United States and coalition forces on the ground was not an election issue there. I think that is because of the manner in which we presented ourselves. It was the manner in which we conducted our activities there. I think preserving our relationships and continuing to be seen as reliable partners is perhaps one of the best defenses that we have against

the influence of great power actors, particularly in the CENTCOM region. To the extent that we can continue to do that in the future, I think that will continue to be a key factor in CENTCOM as we move forward.

Senator PERDUE. Well, I think after 17 years, we have certainly earned that right, and I hope we will continue to do that relative to getting our allies to help us in that region. Specifically, you mentioned the parliament there in Iraq.

I have a question about a specific garrison, the al-Tanf Garrison in southern Syria. We have had a request from Prime Minister Netanyahu to consider keeping a permanent presence there because of where it is strategically located on the supply route between Iran and Hezbollah. There is a 34-mile exclusion area there. What are the rules of engagement that we currently have with our garrison there, and is this currently being considered as a longer-term installation?

General VOTEL. Well, this is a key part of the ongoing planning that we have going here. I will not comment publicly about what we might do there. But we certainly understand the impact of that.

Our reason for being at al-Tanf is principally driven by our Defeat ISIS mission. That is what brought us there. That is what kept us there. We continue to confront it. It is located in an area where we do see routine traffic from ISIS as they move from the middle of the Euphrates Valley to the western part of the country. It is a very good operational location from that standpoint.

It does have the derivative value of being along a principal line of access, line of communication that Iran and her proxies would like to exploit. While that is not our mission, we do recognize the indirect impact that we have with that.

As we move forward, Senator, the disposition of al-Tanf will certainly be something that we will consider very, very carefully as we look at our overall withdrawal plans from Syria.

Senator PERDUE. Thank you, sir.

Thank you.

Chairman INHOFE. Thank you, Senator Perdue.

Senator Warren?

Senator WARREN. Thank you, Mr. Chairman.

Thank you, General Votel, for being here. I appreciated the chance to meet with you last week.

As you know, I have serious concerns about our support to the Saudi-led coalition and its military campaign in Yemen. At a hearing like this last year, I asked you if the United States Government knew where the coalition jets went and what targets they bombed after receiving fuel from U.S. tankers. You said that CENTCOM does not track that information.

In late December, "The New York Times" reported that American military personnel assigned to the coalition's headquarters in Saudi Arabia readily had access to a, quote, database that detailed every air strike, warplane target, munitions used, and a brief description of the attack. End quote.

Let me just ask you, does this database exist?

General VOTEL. Today we do have a database that does have that information, and we have the ability to see that.

Senator WARREN. CENTCOM has access to this database?

General VOTEL. We do have access to it today.

Senator WARREN. Okay. You know, this is troubling information because it suggests that we could determine retroactively if coalition warplanes that bombed civilians did so with American assistance. You know, there is clear evidence that we enable and support the Saudi-led coalition in Yemen. Until recently, we refueled their jets. We provide military advice and intelligence support. We continue to sell them American-made bombs, bombs that public reports indicate kill Yemeni civilians. We provide their air force with sustainment and logistics support for their American-made fighters.

I am asking you questions. I want to ask some questions about the details of the help we give the Saudis because they continue to conduct bombing runs. They continue to perpetuate one of the worst manmade humanitarian disasters in the modern era. During this civil war, more than 85,000 children under the age of 5 have starved to death, and tens of thousands of civilians have been killed. This military engagement is not authorized. We need to end U.S. support for this war now.

Let me ask you about detainee abuse. Section 1274 of the Fiscal Year 2019 NDAA required the Secretary of Defense to review whether members of the armed forces or coalition partners of the United States abused or witnessed abuse of detainees during operations in Yemen. DOD submitted this report to Congress last month and in the unclassified summary concluded that, quote, DOD has determined that DOD personnel have neither observed nor been complicit in any cruel, inhuman, or degrading treatment of detainees in Yemen. End quote.

Can you just say a brief word—I just have a little bit of time—about how DOD reached this conclusion?

General VOTEL. We principally derived that based on discussions and reports from the people that we do have on the ground and what they have seen. We, obviously, take this very seriously, Senator, and our individuals that are in positions where they might see some of this are under the obligation to report this. I do routinely receive reports, many of them unsubstantiated, not just linked to Yemen but to other areas in which we operate where our people have received a report of abuse and we have a reporting mechanism for that. We do take that extraordinarily seriously.

Senator WARREN. Okay, but this report says neither observed nor been complicit in any cruel, inhuman, or degrading treatment.

The Associated Press, Human Rights Watch, Amnesty International, and the United Nations all conducted their own investigations and came to a very different conclusion. They determined that our Emirati partners oversaw a network of detention centers that regularly engaged in torture and other abuse.

Now, does DOD find these independent investigations credible?

General VOTEL. Well, we certainly take all of these independent investigations seriously, Senator. But I think what I am saying to you is that we have no observations of our own from our people that have actually seen this.

Senator WARREN. Fair enough. Then let me ask it this way. Has DOD reached any conclusions about whether or not our Emirati



partners are engaging in detainee abuse when DOD personnel are not present?

General VOTEL. I have not reached any kind of conclusion that they are conducting these activities. Certainly in our interaction with all of our partners, in this conflict and across the region, we continue to emphasize the obligations under the Law of Armed Conflict and the proper detention and treatment of detainees across the board.

Senator WARREN. Well, I appreciate your walking me through your assessment of these independent reports, but I remain very concerned about abuses in the region. Turning a blind eye is not acceptable, and I am going to keep asking questions on this. Thank you.

General VOTEL. Senator, I am in receipt of your letter, and we will provide a response to you. Thank you.

Senator WARREN. Thank you.

Chairman INHOFE. Thank you, Senator Warren.

Senator Blackburn?

Senator BLACKBURN. Thank you, Mr. Chairman.

Thank you, General, for your time and to your team who is with you. We appreciate your service and your time.

I do have some questions I want to ask you this afternoon when we are in closed session dealing with the NDS and the competition with Russia and China and maintaining the right balance in the Middle East, but also being aware of the competition that is there. I think you are so right. As you have said in your comments, this is something we cannot lose sight of.

Let me go to Syria. I will tell you that I think the administration really has sent some mixed messages about the terms of United States withdrawal from Syria and whether there is protection for the Syrian Kurds, whether there is the total defeat of ISIS or the establishment of a safe zone with Turkey, and what is a prerequisite.

Senator Duckworth and I just recently sent a letter pertaining to the Kurds because Nashville has the largest Kurdish population in the United States. It is for this reason, in addition to their partnership in the global coalition to defeat ISIS, that protection of the Kurds is very important to me and to a lot of Tennesseans. I believe that any withdrawal from Syria must be conditions-based, and clearly there has to be a plan to protect the Kurds. Any plan to protect the Kurds must clearly outline our expectations of Turkey.

I would like to just hear from you. The withdrawal from Syria—is it calendar-based? Is it conditions-based? If it is conditions-based, what are those conditions going to be there on the ground? What has been communicated to the Turks, and what has been communicated to the Kurds?

General VOTEL. Thank you, Senator. I look forward to talking a little bit more about this with you in the closed session.

But I would just say I do not consider this to be either time-based or conditions-based. The fact is the President made a decision and we are going to execute his orders here to withdraw forces from Syria. As we do that, we are going to do that in a very deliberate manner. We are going to do that in conjunction with our cam-

paign plan, and we are going to consider things like protection of our partners, the Kurds. We are going to consider the concerns that Turkey has along their border. We are going to consider how we keep pressure on ISIS. All of that is taking place right now. I am not under pressure to be out by a specific date, and I have not had any specific conditions put upon me. I look at this as an additional task within the confines of the current campaign plan that we are operating, and that is how we are approaching it.

Senator BLACKBURN. In the January 16th attack, we lost a chief warrant officer, Jonathan Farmer, who was a Fort Campbell soldier. I will tell you in Montgomery County, Tennessee and Clarksville, Fort Campbell, it was noted with great sorrow by so many that are there at the post.

One of the questions that comes up from Tennesseans who are involved in defense of our Nation is did we underestimate the power and the threat of ISIS in Syria.

General VOTEL. Senator, I do not think we do. I think those of us who have had the opportunity to be involved in this for a long time develop a respect for our enemies. We do not agree with the things that they are doing, but we certainly have to respect the capabilities that they bring. We have always recognized that ISIS is a savvy organization and they will look for ways to harm us, to hurt us in the conduct of our normal operations or certainly in the conduct of operations that we have coming up as we get ready to depart Syria. I do not think we underestimate their capabilities to exact a toll against us.

Senator BLACKBURN. I appreciate that.

I have got a couple of questions on Yemen. I will save those for the afternoon. I yield back my time.

Chairman INHOFE. Thank you, Senator Blackburn.

Senator Kaine?

Senator KAINE. Thank you, Mr. Chair.

Mr. Chair, am I to interpret after 6 years on the Committee anything negative from the fact that I have been moved to a chair without my own microphone?

[Laughter.]

Senator KAINE. General Votel, thank you for your great service. You are a wonderful public servant, and we are going to miss you on the Committee.

I want to ask you about an interview that President Trump gave on Face the Nation on February 3rd, a couple of comments that he made dealing with Iran. He indicated one of the reasons I want to keep it—"it" referring to an airbase in Iran—is because I want to be looking a little bit—I am sorry—an airbase in Iraq—is because I want to be looking a little bit at Iran because Iran is a real problem. He was asked a question by Margaret Brennan. He said, no, because I want to be able to watch Iran.

I am on the Armed Services and the Foreign Relations Committee, and I have not had a briefing either in open or classified in either committee during my time in the Senate suggesting that we are currently in Iraq primarily to watch Iran. My understanding is that we are in Iraq right now to help Iraq defeat ISIS. Is that your understanding as well?

General VOTEL. That is exactly my understanding, Senator.

Senator Kaine. As far as you know, there is not a change in the definition of the mission, at least as far as the Pentagon is concerned?

General Votel. I have no additional tasks that have been given to me with regard to that.

Senator Kaine. If the United States were to change its definition of the mission in Iraq to be a mission about watching Iran, would it not be pretty important to have Iraq agree that that would be the focus of the mission if we were to be having troops in their country to carry out such a mission?

General Votel. Senator, we are in Iraq at the invitation of the government. So, yes, I agree.

Senator Kaine. We were invited in in the summer of 2014 to help them defeat ISIS. Correct?

General Votel. That is right, Senator.

Senator Kaine. Mr. Chair, I would like to put into the record an article from the "New York Times" this morning, "Trump's Plan for United States Forces in Iraq Met with Unified Rejection in Baghdad." General Votel mentioned that one of the great things about the recent elections in Iraq was United States presence was not a political issue, but the recent statements of the President, quote, the problem for Mr. Trump was that the unity was a collective rejection of his proposal and added momentum to propose legislation that could hamper American troops' ability to operate in Iraq. I would like to put this in the record.

Chairman Inhofe. Without objection.

[The information referred to follows:]

TRUMP'S PLAN FOR UNITED STATES FORCES IN IRAQ MET WITH UNIFIED REJECTION IN BAGHDAD

President Trump's unexpected announcement that he wanted American troops in Iraq to stay there to "watch Iran" achieved a previously unattainable goal on Monday: unity in the Iraqi political establishment.

The problem for Mr. Trump was that the unity was a collective rejection of his proposal, and added momentum to proposed legislation that could hamper American troops' ability to operate in Iraq. The measure, which is now being drafted, would limit American troop movements and activities in Iraq.

Mr. Trump's remarks, made in *an interview that aired Sunday* on CBS's "Face the Nation," reverberated through Iraq late Sunday and were rejected by all corners of the government, even by some of the United States' staunchest allies, including President Barham Salih, a Kurd.

"Don't overburden Iraq with your own issues," said Mr. Salih, who was speaking Monday in Baghdad at the Al Rafidain Forum, which brings to get her Iraqis, regional figures and international experts to discuss policy challenges.

"The U.S. is a major power, but do not pursue your own policy priorities, we live here," Mr. Salih said, addressing his comments to the American administration.

Mr. Salih's comments were mild compared with those from Iraqi Parliament members and political leaders who have long felt that the United States has been disrespectful of Iraq's sovereignty.

On Monday, some called on Parliament to act quickly to push out the Americans. One of the more extreme statements came from the military spokesman for the Hezbollah Brigades, an Iraqi armed group that now has a political arm (and which is not directly connected to Lebanon's Hezbollah), who said that Mr. Trump's comments made the "American forces legitimate targets for the Iraqi resistance." Over all, the incident lays bare that the American presence in Iraq is on thin ice and that United States military and political leaders have little room to maneuver.

American diplomats and military officials in Washington and in Baghdad scrambled on Monday to contain the political fallout in Iraq from Mr. Trump's assertion that American troops would remain there to monitor any nefarious activities by neighboring Iran.

One saving grace that might have helped mitigate the Iraqi outrage, one American official said, was that the Iraqi Parliament was not in session, perhaps sparing Washington even greater fury.

"Our troops are in Iraq to ensure the enduring defeat of ISIS," a senior administration official said on Monday, in a conference call with reporters ahead of a meeting this week in Washington with representatives of the nearly 80 countries that belong to the coalition fighting the Islamic State in Syria, Iraq and several other countries where the organization has offshoots.

Mr. Trump seemed to have stepped on a diplomatic hornet's nest inadvertently, American diplomats and military experts said, when he discussed the nature of the sprawling Al Asad Air Base in western Iraq, which he visited in late December and referred to on Sunday, and where American troops operate with Iraqi permission. He suggested Americans could use the base to carry out surveillance of Iran.

"We have a base in Iraq and the base is a fantastic edifice," Mr. Trump said in the CBS interview. "I was there recently, and I couldn't believe the money that was spent on these massive runways."

American military and intelligence officials expressed bafflement at Mr. Trump's claim that United States forces at Al Asad, or at most any other Iraqi base, could take a leading role in monitoring Iran's nuclear program or other suspicious activities.

Such intelligence collection is typically conducted by a combination of American spy satellites, electronic intercepts collected by the National Security Agency and possibly covert operations by C.I.A. spies.

Mr. Trump's visit to Al Asad in December provoked similar anger from Iraqi politicians, some of whom *called it an arrogant affront* that recalled American behavior dating back to the 2003 invasion and what followed: the abuses at Abu Ghraib prison; incidents with civilian casualties; and widespread sectarian violence.

The decision that upset the broadest spectrum of Iraqis was the departure of American troops from the country once the status of forces agreement, which set the terms for United States forces in Iraq, expired in 2011. Although American troops had little choice but to leave the country after the expiration—and though Iraq's leaders *played a large role in their exit*—many Iraqis now describe the departure as an abandonment and part of what led to the growth of the Islamic State and continued fighting on Iraqi soil.

"It will not be forgotten what happened after the American withdrawal," said Jowad al-Musawi, a member of Parliament from the bloc allied with Moktada al-Sadr, a Shiite leader. "It will not be forgotten that America would at any moment leave you alone to confront war or terrorism."

With the Islamic State's territory in Iraq and Syria dwindling to just a sliver, many Iraqis are not sure what American forces are doing and where they are now based. They are fearful that Iraq will become the turf for a conflict between the United States and Iran, and they recognize that many *Iraqis rely on Iran*, which in recent years has been an ally, supplying some of southern Iraq's electricity and supporting Iraq when the Islamic State invaded in 2014.

"We strongly reject having Iraq be a place for settling regional or international scores or a place to provoke neighboring states," said a Twitter statement from Ammar al-Hakim, a Shiite leader in Parliament and part of a revered religious family in Iraq.

"Making our land into a place to attack neighboring states is a threat to our national interests and our Iraqi security," he added. "Iraq will not allow this."

There are about 5,200 American troops in Iraq, training and advising Iraqi troops and helping them carry out counterterrorism missions inside the country. But the United States military has a fluid number of soldiers and military contractors in the country, and for security reasons it does not give exact numbers or acknowledge all the locations where those forces are stationed.

The United States has quietly been negotiating with Iraq for weeks to allow American Special Forces and support troops now operating in Syria to shift to bases in Iraq and strike the Islamic State from there.

In just the last two weeks, an unverified incident has worsened fears of those who would rather not see the American military return to Iraq: a Kurdish politician announced he had just come back from a trip with an American colonel to see three bases previously used by American troops near the Iranian border and that the plan was for troops to return to them.

The Iraqi authorities have not confirmed the politician's story. But those close to the Iranians were alarmed and concluded that either it was a form of psychological warfare, designed to unnerve Iran, or that the Americans really were coming back with the goal of using Iraq as a base for monitoring or even attacking Iran.

Some senior American officers and diplomats expressed fears on Monday that Mr. Trump's comments could undercut the delicate negotiations in Iraq and weaken the United States' ability to respond to the Islamic State's remnants in Syria and Iraq, where they *remain a dangerous presence*—although far smaller and less lethal than in the past.

But other analysts, both Iraqi and Western, said that the often tumultuous relationship—between Baghdad and Washington would survive this upset.

“The Iraqis know that ISIS will take years to defeat, so they also know the United States-Iraq military partnership will probably outlast this United States presidency,” said Michael Knights, a senior fellow at the Washington Institute for Near East Policy.

Wathiq al-Hashimi, head of the Iraqi Strategic Studies Group, a think tank in Baghdad, noted that despite all the heated statements, “my analysis is that this will not escalate into a confrontation,” he said.

“Iran will not risk hitting the American forces and America does not want to hit Iran because both sides understand that Iraq's role is to calm the situation and bridge relations,” between the United States and Iran, Mr. al-Hashimi added.

Senator Kaine. Second, General Votel, President Trump said as follows: I am going to trust the intelligence that I am putting there, but I will say this. My intelligence people, if they said, in fact, Iran is a wonderful kindergarten, I disagree with them 100 percent.

Are you aware of a single United States intelligence official of any position who has told President Trump that Iran is a kindergarten?

General Votel. No, Senator, I am not aware of that.

Senator Kaine. Nor am I. I have been, again, on this Committee and the Foreign Relations. Over the last years, we have heard open and classified testimony again and again and again about dangers that Iran poses. We have not heard a single intelligence official say Iran is a kindergarten. We have had General Dunford and Secretary Mattis before us saying that the Iran nuclear deal was in America's national interests and that Iran was complying with the deal. The House heard testimony in open session last week from a variety of intelligence officials saying that Iran was still complying with the nuclear deal that the United States unilaterally withdrew from.

I worry—and I am not asking you this question—that the President hears testimony like that and equates it with officials saying Iran is like a kindergarten, which I find completely illogical.

Third, President Trump said this. When I came in as President of the United States, my first year, I went to the Pentagon 2 weeks after I came in, a short time after, because I wanted to know what is going on with Iran. We were in so many locations in the Middle East in huge difficulty. Every single one of them was caused by the number one terrorist nation in the world, which is Iran.

We did not go into Afghanistan with United States military forces in 2001 because of Iran. Did we, General Votel?

General Votel. No, Senator, we did not.

Senator Kaine. We did not go into Iraq in March of 2002 because of Iran. Did we, General Votel?

General Votel. We did not, Senator.

Senator Kaine. We did not go into Iraq in August of 2014 because of Iran. Did we, General Votel?

General Votel. We did not, Senator.

Senator Kaine. In terms of where our troops are positioned in the Middle East overwhelming now, there are some in Syria also

fighting ISIS, not Iran. The places where United States troops are in your AOR—we are not there because of Iran.

When the President says this, we are in the Middle East because of Iran, it causes me great concern. Together with other statements made by this President, other members of the administration, I worry that the President is thinking about military action against Iran is something that would be a good idea.

Let me just put this on the record. In the current state of affairs, I think it would be a horrible idea. I think it would be a horrible idea. In classified, I am going to ask you a few questions about, what planning has been done and what could potentially be a legal rationale for such a thing. But to think that we are in the Middle East because of Iran when in these three areas we are clearly not there because of Iran causes me grave concern.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Kaine.

Senator McSally?

Senator MCSALLY. Thank you, Mr. Chairman.

Good to see you, General Votel. Thanks to you for your service and your sacrifice over the years.

A very extensive testimony on a lot of issues. As someone, like many of you and those with you today, who has been to your region many times, six deployments in my time in uniform, it is a very complex region, as you have talked about. I appreciate in your testimony with the National Defense Strategy bringing us back home as to why are we there and what are our vital national interests in the region because our longer-term threats per the NDS are more of the great state competition and potential conflict.

But many of us—many of you—we have spent our entire military careers deploying to the Middle East. This is all we know. Right? This is all we know, is dealing with Desert Storm and Northern Watch and Southern Watch and then OEF [Operation Enduring Freedom] and OIF [Operation Iraqi Freedom]. We have invested so much into this, as you know, a lot of blood and treasure, a lot of sacrifice.

It is part of our nature I think to just give us a little more time, just give us a little more resources and we can fix the situation. I am particularly thinking about Afghanistan. It is just our nature—right—that we want to just—we are almost there. We are almost going to have this where we want it to be.

But I think it is very important—and I appreciate that the administration and as you testified today—we kind of come back to what are we doing there. What are our vital national interests in the Middle East? There has been tremendous drain on our military over the last 30 years in that region, and we got to get back to the core of we have to make sure there is no safe haven for jihadists and terrorists that are going to kill Americans, and we have got to make sure that there is not a hostile power in the region. That is in your testimony. Right?

That is a generational fight against terrorism. It started before us. It is going to continue on. We have got to make sure there is no safe haven in any of these countries. You squeeze them in one place, they will go to another place. We will find them in other re-

gions, as you know. Then we want to make sure there is not a hostile power, which is Iran right now.

I just want to bring it kind of back home. I think it is hard for us, those who serve, because we are like what are we doing there. We want to make sure—we got to build more schools. I think there have been a lot of mistakes over the years. We got to build more schools in America. We do not necessarily need to bring some of these countries to be thriving 21st century democracies. We may hope that happens for them, but that is not our vital national interest. It is to keep America safe.

As we are thinking of that and as you have testified about that, when you look at Afghanistan and when you look at still the safe haven they have in Pakistan—last time I was there, 3 years ago, there were 12 different terrorist organizations there. Our military's hands were tied. They were not able to go after a lot of the terrorist organizations. How can we now, moving forward with everything you have talked about today, in accordance with the National Defense Strategy, make sure that we achieve that mission in Afghanistan? What does that look like to keep America safe and focusing on our drawdown there while we still make sure that we keep America safe and it is not a safe haven for terrorism?

General VOTEL. Senator, thank you very much.

I think when I look at what winning or what prevailing in Afghanistan looks like, it looks like two things to me. It looks like a negotiated settlement, and it looks like safeguarding our national interests. I think as you have very clearly said here, we have to stay focused on those particular things. All our efforts at this point need to be focused on those particular objectives and passed to those objectives. I think that is certainly my approach on this, and I believe it is the approach of General Miller, our commander on the ground as well, as we try to support this.

I think the strategy that we have in place is the right one focused on this. We have got to stay focused on that. I think we will meet our requirements if we can get a negotiated settlement that addresses the instability of that region, and we can continue to safeguard our national interests.

Senator MCSALLY. Great. Thanks.

Then on to Iran, again this is the largest state sponsor of terror. This is the one that has malign activity in the region, great destabilization, killing of American troops. What is the focus there as we are keeping our eye on the ball of this region and the National Defense Strategy? Because this is the biggest threat. You talked a lot about working with partnerships, but what else can we do and what else are you doing in order to counter that threat?

General VOTEL. Certainly I think one of the most important things we do is continue to build partnerships and begin to build interoperability across the region. You know, whether we look at integrated air and missile defense to ensure that we can address the increasing ballistic missile capability that is coming out of Iran, that is an important aspect that we do or whether we address maritime security issues that allow not just the United States but the countries of the region to better patrol their own waters and prevent the movement of illicit goods and weapons and other things through there, I think these are the types of things that we can do.

They are very attainable to us as we move forward to not only optimize the capabilities that we remain in place, but more importantly make sure that our partners are bearing the burden and taking responsibility for their own security as well.

Senator MCSALLY. Exactly. Thanks.

I am out of time. I want to say I am grateful for Senator Peters' statements about the A-10 warthog as well. I do not think we should be using fifth generation fighters to chase around jihadists on Mopeds. We got to make sure that we have the right tools for that mission while we are using our next generation to deal with the larger threats that are out there. I found a new wingman here for fighting for the A-10.

Thank you, Mr. Chair. I appreciate it. I yield back.

Chairman INHOFE. Thank you, Senator.

We will recess the meeting till we get back together at 2:15. That is going to be in the Visitor Center, room 217. Thank you very much for a long meeting and for your answers. We will reconvene at 2:15 in the Visitor Center, and we will recess this meeting. Thank you very much.

[Whereupon, at 11:42 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR TOM COTTON

##### ISRAEL MOVE FROM EUCOM TO CENTCOM

1. Senator COTTON. General Votel, what are the possible benefits and challenges with a move of Israel from EUCOM AOR to CENTCOM AOR?

General VOTEL. Were the Department to review moving Israel from EUCOM AOR to CENTCOM AOR, we would DOD need to assess the effect on: existing United States-Israel security cooperation architecture; adequacy of resources and posture to assist in Israel in Israel defense; and opportunities as well challenges in DOD support to diplomacy.

---

#### QUESTIONS SUBMITTED BY SENATOR MIKE ROUNDS

##### SPECIAL FEDERAL AVIATION REGULATIONS (SFARS)

2. Senator ROUNDS. General Votel, has the DOD studied how SFARs might be restricting the DOD's ability to acquire qualified aviation support services in the CENTCOM AOR?

General VOTEL. I would defer to United States Transportation Command (USTRANSCOM) to answer this question.

3. Senator ROUNDS. General Votel, how do SFAR restrictions affect competition for aviation support services contracts within the CENTCOM AOR?

General VOTEL. I would defer to United States Transportation Command (USTRANSCOM) to answer this question.

4. Senator ROUNDS. General Votel, does the inability of foreign pilots and air crews to obtain security clearances increase the operational risk of sensitive DOD missions?

General VOTEL. No, our command and control structure has flexibility which allows us to compartmentalize sensitive information when joint flight operations are required.

5. Senator ROUNDS. General Votel, does the DOD have a central point of contact to engage with the FAA on the SFAR issue?

General VOTEL. I would defer to United States Transportation Command (USTRANSCOM) to answer this question.



6. Senator ROUNDS. General Votel, what is the current process for applying a DOD “state use” designation to aircraft operated by commercial U.S. air carriers and would applying “state use” designations more frequently be more advantageous than relying on foreign air carriers?

General VOTEL. I would defer to United States Transportation Command (USTRANSCOM) to answer this question.

---

QUESTIONS SUBMITTED BY SENATOR MARSHA BLACKBURN

YEMEN

7. Senator BLACKBURN. General Votel, exactly what types of support are we providing to the Saudi-led coalition in Yemen?

General VOTEL. [Deleted.]

8. Senator BLACKBURN. General Votel, how would you characterize the focus of United States intelligence support and military advice? Would you characterize that support as defensive in nature?

General VOTEL. [Deleted.]

9. Senator BLACKBURN. General Votel, if the United States ceased providing intelligence support and military advice to the Saudi-led coalition, how do you assess that this might affect the Saudi-led campaign in Yemen? How do you assess that this would impact Saudi and Emirati cooperation against terrorist threats more broadly?

General VOTEL. [Deleted.]

10. Senator BLACKBURN. General Votel, to what extent have the Saudi and Emiratis assisted us against al Qaeda in the Arabian Peninsula and ISIS in Yemen up until this point? To what extent have the Emiratis assisted us in Afghanistan? Can you update us on overall progress?

General VOTEL. [Deleted.]

---

QUESTIONS SUBMITTED BY SENATOR MAZIE HIRONO

EFFECT OF OPERATIONS IN THE AREA OF RESPONSIBILITY

11. Senator HIRONO. General Votel, you testified before the SASC in 2018 regarding the situation in the CENTCOM Area of Responsibility and stated that “Our success over the last year is largely due to the unyielding support of our allies, tremendous cooperation with our interagency partners, provision of additional authorities, and the continued faith of the American people in our military. However, despite the great strides we have made, there is much work left to do.” At that time, you identified regional challenges to include: terrorism, violent conflicts, nuclear and ballistic missile threats, humanitarian crisis, and radical violent ideologies. Where do you feel the U.S. stands today with regards to those “strides” and the remaining work that you mentioned in your 2018 testimony?

General VOTEL. [Deleted.]

REMOVAL OF TROOPS FROM SYRIA

12. Senator HIRONO. General Votel, on December 18, 2018, President Trump ordered the withdrawal of 2,000 American troops from Syria, seemingly marking the end of the United States campaign aimed at vanquishing the Islamic State (ISIS). This decision has received criticism from both parties as well as from many U.S. Military leaders. Former Defense Secretary Mattis and other top national security officials argued that a withdrawal would, essentially, surrender Western influence in Syria to Russia and Iran who are the chief benefactors of Syrian President Bashar al-Assad. What is your assessment of the impact of this decision both currently and in the future?

General VOTEL. United States military forces in Syria are working by, with, and through our coalition and Syrian Democratic Force partners to defeat ISIS. The withdrawal of United States Forces does not change that mission. We will continue to work with allies and partners to ensure the enduring defeat of ISIS’s so-called physical caliphate; however, the decision does create difficulties in maintaining our relationship in its current form with the Coalition. President Bashar-al Assad will remain in power with the support of Russia and Iran but has insufficient forces to secure Syrian territory once held by ISIS. As we execute the safe and professional

withdrawal of United States military forces from Northeast Syria, a multi-lateral whole-of-government approach supporting stabilization efforts in Northeast Syria will help prevent an ISIS resurgence. We are cognizant that military efforts alone are insufficient to enable stabilization, but the military does have unique capabilities that can be brought to bear during stabilization. Only through the United Nations Security Council Resolution (UNSCR) 2254 process can a political settlement to the Syrian Civil War be accomplished, resulting in a Syrian Government that is representative of the will of the Syrian people and can address the underlying issues that allowed ISIS to rise.

13. Senator HIRONO. General Votel, since President Trump's withdrawal announcement, what actions have the Syrian regime, Russian, and Iranian-backed forces taken?

General VOTEL. [Deleted.]

14. Senator HIRONO. General Votel, what are the strategic implications of these moves regarding the stability of Syria and the larger Middle East?

General VOTEL. Syria is a microcosm of the region where several state and non-state actors, with different objectives, are vying for access and influence to achieve their desired end states. Without a sustained effort put behind United Nations Security Council Resolution (UNSCR) 2254, there will not be a political resolution to the Syrian Civil War and the establishment of a government representative of the will of the Syrian people that is able to address the underlying issues leading to the rise of violent extremist organizations. Lack of security and stability in Syria will result in a safe haven for Violent Extremist Organizations like ISIS and al Qaeda, and the continued humanitarian crisis that will further impact Syria's neighbors as refugees continue to surge across uncontrolled borders, thereby stressing their limited resources. Syria as a safe haven for Violent Extremist Organizations drives a deeper need for continued support to the Iraqi Security Forces to ensure security and stability of Iraq.

15. Senator HIRONO. General Votel, with the President's stated objectives of permanently destroying ISIS, ensuring our Kurdish allies are protected and containing Iran, what would be an appropriate timeline for withdrawal of United States troops from Syria?

General VOTEL. The withdrawal of United States Forces must be conditions based. We will need to continue providing training and advice to our local counterterrorism partners, including the Syrian Defense Force/Syrian Arab Coalition (SDF/SAC), as they deal with the remnants of ISIS that have organized into smaller cells, as the SDF/SAC transitions from the conventional fight to defeat ISIS to one of Counter Insurgency and Counter Terrorism. There is also the requirement for a negotiated policy with Turkey to help prevent North Eastern Syria from becoming an ISIS safe haven.

#### FRAMEWORK FOR AGREEMENT WITH THE TALIBAN

16. Senator HIRONO. General Votel, in your opinion, has the proper groundwork for withdrawal of United States Forces been established in Afghanistan to ensure that the gains that have been made in the past 17 years will not be put in jeopardy?

General VOTEL. The Department of State has the lead for negotiations with the Taliban. The Department of Defense continues to support the United States Special Representative for Afghan Reconciliation. USCENTCOM also continues to conduct prudent planning to address all eventualities in Afghanistan. That being said, United States Force presence remains conditions-based, and no force withdrawals will occur until the Government of Afghanistan and the Taliban have reconciled and agreed to measurable steps to govern and provide security for the Afghan people and are committed to preventing attacks against the United States Homeland.

#### EFFECTS OF THE GREAT POWER COMPETITORS

17. Senator HIRONO. General Votel, we continue to hear of the resurgence of the great power competition in your area of responsibility. Specifically, with China developing long-term, steady economic growth and increased military posture and Russia continuing to cultivate its relationship with the regime of Syrian President Bashar Assad. What are the risks that increased Russian and Chinese investment and influence have in your area of responsibility, both in the short- and long-term?

General VOTEL. [Deleted.]

18. Senator HIRONO. General Votel, last year, President Trump suspended nearly \$3 billion in security assistance to Pakistan for failing to rein in terrorist groups there. As a result, Pakistan has turned to China to bolster their Navy and improve local Pakistani infrastructure through the China-Pakistan Economic Corridor (CPEC), valued at \$62 billion. Has the decision to withdraw United States assistance impacted your operations in the region? If so, how?

General VOTEL. No, the withdrawal of security assistance money has not impacted USCENTCOM's operations in the region.

---

QUESTIONS SUBMITTED BY SENATOR TIM KAINE

USE OF 2002 AUMF

19. Senator KAINE. During your testimony you said that United States Forces are in Iraq at the "invitation of the Government of Iraq." Is the Administration relying upon the 2002 AUMF—which was a war declaration against the Iraqi regime of Saddam Hussein—as the sole legal authority for any United States Military operations in Iraq or elsewhere in the CENTCOM Area of Responsibility?

General VOTEL. No. The authority for our presence in Iraq and our continued military operations against ISIS remains unchanged from that as articulated by the previous and current Administration. As we are conducting military activities in Iraq with the consent and at the invitation of the Government of Iraq and as a matter of domestic law, pursuant to the 2001 and 2002 AUMFs (among other authorities).

---

QUESTIONS SUBMITTED BY SENATOR DOUG JONES

ISIS IN SYRIA

20. Senator JONES. Previously, you've stated "given the many forces driving change and uncertainty in the region, United States commitment to the CENTCOM area of responsibility is more important now than ever. Recent experience has shown that a precipitous withdrawal of support, before conditions for stabilization have been set, can lead to catastrophic results." Do you believe we have definitively defeated ISIS in Syria, and how do we go about ensuring that victory over ISIS is enduring?

General VOTEL. The territorial defeat of ISIS in Syria is a significant milestone in the global effort to defeat ISIS, but it does not represent the enduring defeat of ISIS in Iraq, Syria and elsewhere. In Syria, this cannot be achieved unless the underlying conditions that allowed ISIS to rise in the first place are addressed and resolved. The mechanism to address those issues is United Nations Security Council Resolution (UNSCR) 2254. This process was designed to bring about a political settlement to the Syrian Civil War and establish a government that is representative of the will of the Syrian people. Supporting local efforts, through a Global Coalition, that sustain the military gains and promote regional security and stability is an approach to ensuring victory over ISIS is enduring. A sustained relationship with Syrian Democratic Forces (SDF) and continuing to build up the capacity of the Iraqi Security Forces are two ways we can militarily support the enduring defeat of ISIS regionally. This cannot be overstated; we must address the disposition and de-radicalization of the thousands of ISIS fighters in the custody of the SDF and the tens of thousands of unrepentant ISIS family members segregated in camps. This massive at-risk population could easily become the core of a resurgent ISIS or other violent extremist organization with global reach. Dealing with this industrial-scale issue requires a non-military led interagency approach and extensive participation by countries of origin.

NEGOTIATIONS WITH TALIBAN

21. Senator JONES. Last week, Special Representative for Afghanistan Reconciliation, Zalmay Khalilzad, announced an agreement in principle with the Taliban on 2 major points; 1) the Taliban promises Afghanistan's territory will not be used by international terrorist groups, and 2) the United States agrees to withdraw its forces. How do you think the Taliban can go about fulfilling this agreement?

General VOTEL. [Deleted.]

NEGOTIATIONS WITH TALIBAN

22. Senator JONES. Do you believe the United States should wait for successful negotiations between the Afghan Government and the Taliban before withdrawing?

General VOTEL. Our primary focus of operations in Afghanistan is to support Ambassador Khalizaid's negotiation efforts for a Peace Settlement. Therefore, any force withdrawal should support that process. The primary objective of the South Asia Strategy is to seek a political settlement to the Afghanistan War. The negotiations are in the nascent stage of framework development and it is my judgement that the U.S. should allow the negotiations to mature before a large-scale withdrawal.

#### U.S. WEAPONS TRACKING

23. Senator JONES. On February 5, 2019, there was a report that American-made weapons have made their way into the hands of al Qaeda-linked fighters and Iranian-backed rebels in Yemen. It's my understanding that legitimate purchasers of United States weapons must seek U.S. permission before transferring those weapons to third parties. The news report says that there is a Defense Department investigation into the issue. When and how did the Defense Department learn about this situation and what can you tell us about the status of the investigation?

General VOTEL. We have seen the news report in question, and we take allegations of unauthorized transfers of U.S.-origin military equipment seriously. My understanding is that the Department of State is leading an investigation to determine whether United States weapons or other defense articles have been transferred to unauthorized end users in Yemen and has reached out to both Saudi Arabia and the UAE in order to obtain more information regarding these allegations. As such, USCENTCOM stands ready to assist, but I would refer you to the State Department for the status of their inquiries into the validity of the news report's claims.

#### DETAINEES IN SYRIA

24. Senator JONES. On February 5, 2019, it was reported that the number of foreign terrorist fighters detained by the Syrian Defense Force is now more than 800, and that on February 4 the State Department called on other nations to repatriate and prosecute their citizens. So far, very few countries have been willing to do so. What is the plan for these detainees after the U.S. withdraws, in the event their home countries refuse to take them back?

General VOTEL. We continue working to support the Department of State is lead effort on this difficult challenge. The key to the long term stability of the region is ensuring these fighters do not get unexpectedly released only to return to the battlefield in Iraq or Syria or slip back into their home countries. We are working closely with the Syrian Democratic Forces to support their efforts to have nations repatriate and prosecute their citizens. While we continue to face challenges there has been some progress but more is needed. This situation would be further complicated if a military incursion by Turkey occurred.

**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**THURSDAY, FEBRUARY 7, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**UNITED STATES AFRICA COMMAND AND UNITED  
STATES SOUTHERN COMMAND**

The Committee met, pursuant to notice, at 10:16 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee Members present: Senators Inhofe, Wicker, Cotton, Rounds, Ernst, Sullivan, Perdue, McSally, Scott, Blackburn, Hawley, Reed, Shaheen, Gillibrand, Blumenthal, Kaine, King, Peters, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR MIKE ROUNDS**

Senator ROUNDS. The Committee will come to order.

Good morning. On behalf of Chairman Inhofe, he has indicated that he wants to start these on time, and asked if we would begin with opening statements. He should be here shortly.

The Committee meets today to receive testimony on United States Africa Command and Southern Command. I welcome our witnesses and thank them for their service: General Thomas Waldhauser, Commander, United States Africa Command; Admiral Craig Faller, Commander of United States Southern Command.

General Waldhauser, this is likely your last hearing before this Committee. I want to thank you for your nearly 43 years of dedicated service to this Nation.

It's also fitting to note that 12 years ago yesterday, February 6th, 2007, President George W. Bush directed the creation of United States Africa Command. It was the right decision, and AFRICOM continues to play a vital role in the defense of our Nation.

This Committee's top priority is to ensure the effective implementation of the National Defense Strategy (NDS), which identifies competition with China and Russia as the central challenge to United States prosperity and security. Both AFRICOM and SOUTHCOM should be viewed as key fronts in our global campaign to compete with China and Russia. In both of your areas of responsibility, China and Russia are increasingly active, using eco-

conomic and military means to expand their influence and challenge United States interests.

While, on behalf of the Chairman, we agree with the need to prioritize our efforts against China and Russia, we cannot take pressure off of terrorist groups like ISIS and al Qaeda. Despite operational setbacks, these groups continue to control territory in Africa and still pose a very real threat to United States interests and our partners.

Lastly, while the challenges in your areas of responsibility are on the rise, both of your commands have long suffered from resource shortfalls. We look forward to you to explain how these shortfalls increase risk to your forces and impact your ability to execute the National Defense Strategy.

Want to remind our Members that Admiral Fallor and General Waldhauser will be available at SVC-217, immediately following the open hearing that we're in today, to discuss any classified matters that may come up today.

With that, Ranking Member.

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Thank you very much, Senator Rounds.

Let me join you in thanking our witnesses for appearing today to provide an update on our security situation and the U.S. military activities in your respected areas of responsibility. Both of you are leading commands during very challenging times, and we thank you for your continued service. Please also extend our gratitude to the men and women under your command for their outstanding service and dedication. Let me join Senator Rounds, General Waldhauser, in thanking you for your distinguished service to the Nation in the Marine Corps.

I'm very concerned about the growing Chinese and Russian influence in both Latin America and Africa. China is leveraging its economic might and influence to gain access to ports and loaning large sums of money for infrastructure projects, many of which are not economically viable and will leave these countries beholden to Beijing. Russia is engaging in massive disinformation campaigns to undermine United States influence and propping up authoritarian regimes in both regions. Both of you are tasked to counter Russia and Chinese influence with limited funds, equipment, and people, as many of the Department's resources are being diverted to the INDOPACOM and EUCOM AORs [Areas of Responsibility]. I would like to hear how this implementation of the National Defense Strategy has affected the resources that you have to counter Russian and Chinese influence in these critical regions, as well as any additional resources you might need for this vital task.

In Africa, as in South and Central America, we are working with local and international partners to advance our shared security goals. However, the complex and often interlocking challenges to stability will not be solved by military means alone. Indeed, many significant issues, including rapid population growth, demographic changes, famine, and migration, are long term and multidimensional in nature and require whole-of-government policies that take an equally long-term view of investment and engagement in the region.

In December, the administration announced a new United States strategy for Africa that highlighted the importance of the region to the United States economic interests and the growing competition with China and Russia throughout the continent. However, the administration has repeatedly submitted budgets that slash critical aid dollars and reduced engagement across the AOR. General Waldhauser, I hope you will discuss the importance of long-term engagement in Africa and the types of investment we should be prioritizing to best position ourselves for strategic competition in your AOR.

Admiral Faller, you also have a difficult problem set. Narcotraf-ficking has flooded central and South America with illicit funds that exacerbate rampant corruption, especially among police forces. Poor economic conditions and a lack of citizen security has led to a humanitarian crisis that forces families to flee to look for better living conditions. Authoritarian governments propped up with Russian and Chinese support are undermining democratic values and destabilizing the region.

Despite all of these problems, I do want to note that there are some bright spots. We have several capable partners in the region, such as Colombia, Peru, and Argentina, who are willing to work with us and are now net exporters of peace and security.

On a final note, Venezuela is an unfolding crisis. I am hopeful that there will be a peaceful and democratic transition in Venezuela led by the Venezuelan people and supported by the international community. It has been terrible to watch the starvation of the Venezuelan people and the destruction of the Venezuelan economy by Maduro and his regime. Current efforts to support interim President Juan Guaido are being led by the State Department and Treasury. Congress must be consulted if there is any military planning action beyond the current planning for the evacuation of U.S. citizens and embassy personnel. I know the events on the ground are changing day by day, and it is impossible to tell what event or set of events will trigger Maduro's departure. I'd like to hear any updates you might have on what you expect in the weeks to come.

Again, thank you, to our witnesses.

Senator Rounds, thank you.

Senator ROUNDS. Thank you, Senator Reed.

General Waldhauser, would you care to begin with your opening statement? Your full statement will be made a part of the record.

**STATEMENT OF GENERAL THOMAS D. WALDHAUSER, USMC,  
COMMANDER, UNITED STATES AFRICA COMMAND**

General WALDHAUSER. Thank you very much, Senator Rounds. I appreciate it.

Senator Rounds, Ranking Member Reed, distinguished Members of the Committee, thank you for the opportunity to update you on the efforts of United States Africa Command. I am honored to be here this morning with Admiral Faller to discuss many of the similar challenges we face in both the AFRICOM and SOUTHCOM areas of responsibility.

I would like to begin this morning by remembering the soldier we lost on the continent during operations in Somalia this past year. I offer my sincere condolences to the family of Staff Sergeant

Alexander Conrad, United States Army. We honor his commitment, service, dedication to duty, and dedication to our country.

We also honor the sacrifice of our African partners, who paid the ultimate price across the continent this year, as well, to bring security, stability, and prosperity to Africa.

Additionally this morning, I would like to thank our families, servicemembers, and civilian workforce, especially those who serve on the continent, oftentimes in remote locations, for their professionalism and commitment to AFRICOM's mission.

2019 marks the beginning of AFRICOM's second decade as a combatant command. As we enter this period, we have adapted our strategy for Africa based on updated national guidance, which includes the President's 2017 National Security Strategy and the 2018 Secretary of Defense National Defense Strategy. These documents have shaped the focus of the armed services, outlining broad guidance to enhance readiness for high-end combat while instructing the combatant commands, among other things, to strengthen alliances and attract new partners.

The recently released United States Strategy Towards Africa, the Department of Defense Strategy for Africa, and the National Strategy for Counterterrorism refocused our whole-of-government approach in the era of great-power competition to advance United States influence and maintain strategic access not only in Africa, but around the globe.

Taken comprehensively, the overall United States strategic interests in Africa are very clear: prevent the undermining of our alliances or destabilization of African nations, counter violent extremist organizations, decrease the potential for Africa to become a failed continent, protect United States citizens and the Homeland, and advance American influence, including economic opportunities and transactions.

To underscore the strategy for disrupting extremists, we remain committed to synchronizing our kinetic authorities. Persistent pressure on al-Shabaab, ISIS, and al Qaeda-associated groups remains necessary to prevent this destabilization of African nations. United States strategic interests on the continent cannot be solely advanced through the use of military force alone. As such, AFRICOM utilizes the military tool, in concert with diplomacy and development efforts, to help negate the drivers of conflict and create opportunity.

In Somalia, we work closely with the Ambassador, now permanently stationed in Mogadishu alongside with the USAID Mission Director, to help the Somalis assume responsibility for their own security and own prosperity.

In Libya, our counterterrorism commitment supports the United States Chargé, who works closely with the international community to prevent civil conflict and facilitate the political reconciliation process.

Additionally, our engagements, exercises, and activities throughout Africa are designed to increase United States influence, strengthen local security, and ensure our status as the preferred security partner. For example, in East Africa, our programs continue to modernize partner security forces, as in Ethiopia, Kenya,



and Uganda, who also export security and contribute forces to the African Union mission in Somalia.

In North Africa, we have seen significant return on investment with Tunisia and Morocco, demonstrating the capacity to absorb advanced United States programs and to lead security-related exercises and operations.

In the Western Sahel and Lake Chad region, AFRICOM provides training, advice, and assistance to the western African nations, which make up the G5 Sahel organization, as well as those who make up the Multinational Joint Task Force, working to contain violent extremism and secure the borders of the Lake Chad Basin countries.

Our partner networks and influence ensure U.S. access for United States Forces in times of crisis to protect our personnel and facilities on the continent, such as in Djibouti, a location which has strategic significance to multiple combatant commands.

In conclusion, the most important use of the military tool on the African continent is where our engagements emphasize relationships and capacity-building. I am proud to lead a team of professionals who have built a—strong and trusting relationships with our African partners, United States interagency, and the international community to foster security, stability, and prosperity in Africa.

On behalf of the servicemembers, the civilian employees, and families of United States Africa Command, thank you for your support. Thank you for the opportunity to be with you here this morning. I look forward to your questions.

[The prepared statement of General Waldhauser follows:]

#### PREPARED STATEMENT BY GENERAL THOMAS D. WALDHAUSER

##### INTRODUCTION

Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, I am honored to represent the men and women of United States Africa Command and share with you their accomplishments over the past year. Since I last updated the Committee, the new National Security, Defense, and Military Strategies, the United States Strategy Toward Africa, the National Strategy for Counterterrorism, the Department of Defense Strategy for Africa, and a new United States Africa Command Strategy and Campaign Plan have shaped our efforts on the continent. Each of these foundational documents acknowledges and underscores the strategic importance of Africa and the command's mission: *United States Africa Command, with partners, strengthens security forces, counters transnational threats, and conducts crisis response in order to advance United States national interests and promote security, stability, and prosperity.*

Africa is an enduring interest for the United States, and security is a prerequisite for economic growth and development. As a partner-based command, United States Africa Command assists African nations in building capable and professional militaries subordinate to elected civilian authority and respectful of human rights, the laws of armed conflict, and international humanitarian law. By making deliberate investments in defense institutions, the United States can assist African partners in meeting the basic conditions needed for good governance, economic development, and stability.

During 2018, United States Africa Command commemorated its tenth year as a geographic combatant command, reaffirming Africa's importance to the United States global strategy for defending and ensuring the economic well-being of the U.S. Homeland. Our network continues to focus on shared goals of a secure, stable, and prosperous Africa, which benefits not only our African partners and the United States, but also the international community.

Headquarters United States Africa Command employs a team of military, civilian, interagency, and contract professionals to fulfill the mission. Moreover, United

States Africa Command is supported by families who bring with them the spirit of community and teamwork, without which the command could not succeed. United States Africa Command has partnerships with the Department of State, United States Agency for International Development (USAID), and other interagency organizations who all work towards providing stability and prosperity on the continent. Globally, we collaborate with our European allies, the United Nations, the African Union and regional mechanisms, the European Union, non-governmental organizations, and other groups to pursue stability and security in Africa.

By employing a partner-centric approach, United States Africa Command complies with the specific direction in the National Defense Strategy to “support relationships to address significant terrorist threats in Africa.” To address this directive, United States Africa Command builds on two strategic principles. First, very few, if any, of Africa’s challenges can be resolved using only military force. Consequently, United States Africa Command emphasizes military support to diplomacy and development efforts. Our activities directly complement Department of State and USAID efforts to reduce the spread of harmful ideologies, strengthen governments who protect their citizens and foster security and economic successes.

Second, persistent pressure on terrorist networks—whether it be operational, financial, or political—is necessary to prevent the destabilization of our African partner nations. Our principal means for applying pressure is working through our African and with our international partners, increasing their security capabilities and, only when necessary, using kinetic force. Ultimately, our use of military force in Africa, for example in Libya and Somalia, supports the host government’s effort to provide the security and economic growth required for long-term stability and prosperity.

By design, United States Africa Command military assistance and activities occur in partnership with the host government and within overlapping regional and global mandates. In Somalia, the command supports the Federal Government of Somalia, while operating in support of African Union and United Nations mandates. In the fight against Boko Haram and ISIS–West Africa (WA), we operate with partners in the African Union-endorsed Multinational Joint Task Force, which was established under the auspices of the Lake Chad Basin Commission. In the Sahel, we partner with five national governments and within the overlapping mandates of the G–5 Sahel and the United Nations. In Libya, our activities support the UN-led political reconciliation process and the UN-recognized Government of National Accord. Even when we operate unilaterally, those actions are firmly embedded in international law and international legitimacy.

United States Africa Command also plays a significant role in advancing the priorities outlined in the National Security and Defense Strategies, which emphasize the rise of China and Russia as key competitors. United States Africa Command has also observed increased engagement of non-traditional security actors, such as Qatar, Saudi Arabia, Turkey, and the United Arab Emirates, as both challenges and opportunities to our mission. United States Africa Command strives to ensure the United States remains the partner of choice, in Africa, by maintaining our high standards of professionalism, demonstrating commitment to addressing their security needs, and providing high-quality equipment.

Targeted investments in innovative, cost-effective, and sustainable approaches are common practices within Africa, and United States Africa Command endeavors to maximize the returns on our investments. For example, our strategy in Somalia features a distinct set of Advise, Assist, and Accompany authorities in support of the Federal Government of Somalia and the African Union Mission in Somalia (AMISOM) to provide the opportunity for the Somali National Security Forces to successfully assume security responsibilities. This carefully tailored level of operational support reduces risk to U.S. personnel and is a cost-effective way to further advance U.S. security interests.

Each day, we have approximately 7,000 personnel conducting their assigned tasks on the African continent. These include U.S. uniformed personnel, Department of Defense civilians, and contractors of all Services, career fields, and specialties working to address global security challenges and maintain strategic access and influence. These personnel perform duties in countries such as Cameroon, Djibouti, Kenya, Niger, and Somalia. Over the course of 2018, the command and our component commands conducted numerous engagements, exercises, security cooperation events, and operations across the continent. These activities strengthen mutually beneficial networks between the U.S. and partners and enhance the capability of partner nation defense forces to provide effective and legitimate security.

## STRATEGIC ENVIRONMENT

For scale, Africa is over three times larger than the United States. The United States Africa Command Area of Responsibility encompasses 53 countries with a population of 1.3 billion. By 2050, this figure is forecasted to almost double to over 2.54 billion, with one out of every four people on the planet living on the African continent. Additionally, the continent faces a large and growing youth population as Africa is home to 21 of the 22 countries in the world with the youngest average populations. Forty-one percent of Africans are under the age of 15, while 60 percent of the total population is under the age of 24. Economic development, leading to employment, is necessary in order to assist in preventing conflict, as Africa needs to add approximately 20 million jobs each year to keep pace with the growing population.

The lack of economic and educational opportunities, a large, disenfranchised youth population, and inadequate natural resources are potential drivers of extremism, which, when coupled with authoritarian, corrupt, or ineffective governments, contribute to persistent instability. According to the Fund For Peace's 2018 Fragility State Index, 33 of the 50 countries most at risk of becoming unstable are in Africa. This includes seven of the top ten most fragile states. According to the United Nations Development Programme's Human Development Index, 32 African countries are listed in the "Low Human Development" categories of health, education, security, and employment.

United States Africa Command employs the broad-reaching Diplomacy, Development, and Defense approach to foster interagency efforts and help negate the drivers of conflict and extremism. With the Department of State and USAID, United States Africa Command supports programs and initiatives fostering political reconciliation and elections in countries such as Libya. Our diplomatic and development partners work with African partners to provide jobs, food, clean water, and education, such as in Ethiopia and Nigeria, helping to counter incentives offered by violent extremists organizations (VEOs) or criminal networks.

In Africa, VEOs remain a serious threat to the shared interests of our partners, allies, and the United States. These VEOs and criminal networks prey upon disenfranchised populations, creating a cycle of recruitment and allowing extremist ideology to fester. Extremist networks also exploit criminal networks for the illicit transport of narcotics, weapons, and persons. VEOs cultivate and encourage an environment of distrust, despair, and hopelessness to undermine governments, allowing for the expansion of their radical ideology.

Over the next decade, Africa will be shaped by the increased presence of external actors and the effects of environmental change. The United States welcomes those partners pursuing helpful and constructive interests in Africa to develop its economic, infrastructure, humanitarian, and security sectors. However, with emerging markets and a growing consumer class, external actors often employ exploitative tactics and "debt trap" diplomacy to garner undue influence.

Over the past decade, China has injected considerable amounts of financing into the continent, including offering key loans to strategically-located countries, like Djibouti, Senegal, and Angola. Chinese interests include gaining greater access to Africa's mineral and other natural resources, opening markets, and accessing naval ports. In the short term, the complete financial packages can make China appear to be an attractive partner for African nations. For example, African nations who become signatories to China's Belt and Road Initiative (the BRI) receive promises of development, defense, and cultural investments in their countries, further enhancing China's influence while challenging our own partnerships in Africa.

African leaders are growing increasingly wary of their business ventures with China. For example, the Nairobi-Mombasa Railway in Kenya has met with criticism for its high price and the relatively low number of African workers in dispatcher and locomotive driver positions, relative to Chinese workers. While Chinese officials say their business agreements come with no strings attached, construction work on the continent is often carried out by Chinese companies and Chinese workers failing to boost local employment. African countries, which can access financing through China's state-owned banks, often commit to contracts that can lead to debt-equity swap arrangements when debt obligations are unfulfilled. For Kenya, which financed 90 percent of the total \$3.6 billion railway project from China in 2014, loan repayment rates are scheduled to triple in 2019 per the conditions of the loan agreement risking this scenario.

Russia is also a growing challenge and has taken a more militaristic approach in Africa. By employing oligarch-funded, quasi-mercenary military advisors, particularly in countries where leaders seek unchallenged autocratic rule, Russian interests gain access to natural resources on favorable terms. Some African leaders readily

embrace this type of support and use it to consolidate their power and authority. This is occurring in the Central African Republic where elected leaders mortgage mineral rights—for a fraction of their worth—to secure Russian weapons. Russia also garners additional support at the United Nations and gains more customers for its military arms sales.

Russia is more deliberate in Libya as they invoke Qaddafi-era relationships and debts to obtain economic and military contracts. These agreements are aimed at accessing Libya's vast oil market, reviving arms sales, and gaining access to coastal territories on the Mediterranean Sea, providing Russia closer access to Europe's southern border.

Consequently, the cross-border and global nature of Chinese and Russian actions and influence in Africa necessitates collaboration between United States Africa Command, United States European Command, United States Central Command, and United States Indo-Pacific Command, amplifying the global complexity of this issue.

The second emergent challenge in Africa is the effect of environmental change on African security. A large number of Africans make their living on the land, whether they grow crops or raise livestock, and many live at a subsistence level. Settled farmers and nomadic herdsman are increasingly engaged in land-use disputes, which are emerging as major driver of conflict in central Mali, through the Middle Belt Region of Nigeria, in South Sudan, and into the Central African Republic. More people are competing for less arable land, while both modern state institutions and customary institutions are failing or have failed to regulate this competition.

Poor land-use policies, changing weather patterns, rising temperatures, and dramatic shifts in rainfall contribute to drought, famine, migration, and resource competition. In the greater Sahel region, the Sahara Desert has expanded southward by over 10 percent since the 1920s, reducing the amount of productive land. Due to changes in weather patterns aggravated by poor resource management, Lake Chad has contracted 90 percent since the 1960s, significantly decreasing the region's largest source of fresh water. The reduction in arable land for crops and grazing land for livestock has created strong competition between the region's farmers and herders who migrate across borders searching for usable land. As each group seeks land for its own purposes, violent conflict can ensue. Armed groups and criminal networks exploit this situation, leading to human trafficking, slavery, and more violence.

Environmental degradation and the overuse of natural resources exacerbate weak or ineffective governments who are unable to respond and cope with their already serious, on-going political, economic, and social challenges. United States Africa Command and our partners are investing to build the capability and capacity of governance, infrastructure, and defense institutions, so African Governments can mitigate the effects of environmental degradation. This can be accomplished with, for example, sustainable electric grids, viable water treatment facilities, environmentally-sound agricultural developments, and professional security forces.

Despite the challenges on the continent, Africans are eager and receptive to work with the United States to advance common strategic interests. Africa's future depends on urgent action to address the needs of growing populations, mitigate the influence of harmful activities, and combat the effects of environmental change. United States Africa Command's role within the Diplomacy, Development, and Defense construct supports partner efforts to enable economic growth and prosperity by providing a stable security environment.

#### UNITED STATES AFRICA COMMAND STRATEGIC APPROACH

The successful advancement of United States interests in Africa is best achieved with stable nations on the continent. Accountable governments, well-trained and disciplined militaries with a respect for the rule of law and human rights, and growing economies are cornerstones to this stability. Over the past year, consistent with the updated national strategies, United States Africa Command revised our strategic approach to effectively strengthen our African partners by evolving our security cooperation from a focus on crisis response to capability and capacity building against our new strategic priorities: state fragility, increased involvement of China and Russia, VEO expansion, and threats to United States access and influence.

The United States Africa Command strategy prioritizes five objectives: 1) African Partners contribute to regional security, 2) threats from VEOs and transnational criminal organizations (TCOs) are reduced to a level manageable by internal security forces, 3) U.S. access and influence are ensured, 4) United States Africa Command sets the theater by aligning forces, authorities, capabilities, footprints, and agreements, and 5) U.S. personnel and facilities are protected. These objectives nest

within the foundational strategies and provide the framework for the revised five-year focus in the United States Africa Command Campaign Plan and the United States Africa Command Theater Posture Plan.

#### *Foundational Strategies*

For United States Africa Command, the 2018 National Defense Strategy underscore the importance of our African Partners, European, and international alliances to build partner capabilities and capacity in order to create a more secure, stable, and prosperous continent. Furthermore, the strategies emphasize the protection of the American people, Homeland, and the American way of life.

The National Defense Strategy focuses on Great Power Competition and expanding the use of lethality, partnering, and process reform. Additionally, the National Defense Strategy continues to emphasize the threat posed by VEOs to the United States Homeland, our allies, and our African Partners. Much like the National Defense Strategy, United States Africa Command links VEOs to instability in Africa. Hence, the importance of alliances and partnerships is amplified in the command's strategy and campaign plan and in the command's response to regional crises, whether humanitarian or security related.

Two other key foundational documents provide the policy guidance to synchronize United States Africa Command efforts with that of the whole of the United States Government. First, the Department of Defense Strategy for Africa mandates United States Africa Command strengthen African security forces and develop institutions at the national and regional levels. United States Africa Command's focus on security cooperation is a key component in the United States whole-of-government approach. Moreover, by seeking low-cost and resource-sustainable security solutions, the Department of Defense Strategy for Africa framework sets the conditions for United States Africa Command to adapt to current and emergent challenges in Africa.

Next, the National Strategy for Counterterrorism emphasizes the use of all instruments of American power, with a focus on non-military capabilities. The strategy's framework encourages working with a wide-range of partners in both the public and private sectors (e.g., technology, financial institutions) and allied governments to encourage counterterrorism burden-sharing. Information sharing, counter-finance, reintegration of returning foreign fighters, and counter-messaging promote positive narratives to increase partner awareness and strengthen partner capability to address the broader counterterrorism challenges within Africa. These foundational strategies are synchronized with the United States Africa Command Strategy and Campaign Plan, promoting a consistent approach, over time, to strengthen relationships and enhance the capability of our African partners.

In December 2018, the President signed the United States Strategy Toward Africa, which focuses on economic partnerships to build self-reliance among our African partners in the era of great power competition with external actors, such as China and Russia. This strategy aims to advance trade and commercial ties with key African states to increase United States and African prosperity. Doing so helps to protect the United States from cross-border health and security threats, and supports African states' progress toward stability and citizen-responsive governance. The strategy also prioritizes foreign assistance to help our African partners achieve sustained economic growth and self-reliance to combat transnational threats. Ultimately, the United States Africa Command Strategy seeks to strengthen partnerships to increase United States influence, protect United States personnel and facilities, and ensure access, as specifically directed in the United States Strategy Toward Africa.

#### *United States Africa Command Campaign Plan*

Based on the National Security and Defense Strategies, and as indicated in our mission statement, the revised United States Africa Command Campaign Plan provides the command, and our component commands, strategic direction to advance our strategic goals on the continent. It does so in a burden-sharing and balanced approach, accounting for the increased presence of external actors, namely China and Russia, and the continued threat posed by VEOs.

To achieve the United States Africa Command Campaign Plan objectives, the command emphasizes six approaches: 1) Strengthen Partner Networks; 2) Enhance Partner Capability; 3) Develop Security in Somalia; 4) Contain Instability in Libya; 5) Support Partners in Sahel and the Lake Chad Region; and 6) Set the Theater to facilitate United States Africa Command day-to-day activities, crisis response, and contingency operations.

### *Strengthen Partner Networks*

United States Africa Command strives to further United States, allied, and partner interests and access to mitigate destabilizing influences on the continent. The Strengthen Partner Network approach is the primary effort in which the command seeks to establish new partnerships with countries and organizations, strengthen existing relationships through enhanced communication and synchronization, and counter the activities of external actors such as China and Russia. This approach focuses on maintaining the United States as the preferred security partner in Africa.

For example, in April 2018, United States Naval Forces Africa conducted Exercise Lightning Handshake with the Royal Moroccan Navy and Air Force. This was the most sophisticated bilateral exercise the United States conducted with an African partner. It included a United States Carrier Strike Group executing close air support and naval surface fire support missions at the Tan Tan live fire range in Morocco.

### *Enhance Partner Capability*

This approach is applied continent-wide and includes building African partner capability focused on defense institution building, countering illicit trafficking, maritime security, counter-improvised explosive devices (IED) efforts, humanitarian assistance, infectious disease control, and counter-VEO efforts. Engagements and exercises, managed by United States Africa Command and its component commands, strengthen key partnerships and improve partner capabilities. Since challenges in Africa intersect the activities of a multitude of United States Government agencies and international organizations, United States Africa Command maintains a broad group of federal, allied, and partner command liaisons to coordinate our capability-building efforts. One of those mechanisms is our Multilateral Planning Group, tri-chaired by the United States, France, and the United Kingdom, where we are able to discuss and synchronize our efforts on the continent.

### *Develop Security in Somalia*

This approach supports not only AMISOM and Somali Security Forces, but also the United Nations, European Union, African Union, and other allies and partners contributing to the international effort to counter al-Shabaab and ISIS-Somalia. Anchored by the AMISOM Troop Contributing Countries of Burundi, Djibouti, Ethiopia, Kenya, and Uganda, this approach allows for creating the opportunity to build the capability, capacity, and willingness of the Somali Security Forces. The approach centers on security cooperation, engagements, and exercises, as well as Advise, Assist, and Accompany authorities, to strengthen the Somali Security Forces. Taken in concert with the Enhance Partner Capability approach, the effort also addresses the capacity-building needs of the Troop Contributing Countries. The cumulative effects of the two approaches aim to support Somalia and the Somali Security Forces as they work to achieve regional stability and to support the vision of the Federal Government of Somalia.

### *Contain Instability in Libya*

This approach guides the command's efforts to contain instability brought on by the lack of a unifying government and the presence of VEOs in Libya, which include ISIS-Libya and al-Qaeda in the Lands of the Islamic Maghreb (AQIM). The approach is focused on using the military tool to advance diplomacy, conduct operations to degrade VEOs, improve the security architecture of the Libyan Government of National Accord, and, once a political reconciliation is achieved, strengthen the national security forces of a recognized Libyan Government. United States Africa Command, working with the Libya External Office of the United States Embassy to Libya, conducts engagements with Libyan political and military leaders to bolster relationships and maintain progress toward reconciliation. United States Africa Command stands firmly with and supports the efforts of the United Nations as it leads the political reconciliation process, the immediate next step for Libyan stability.

### *Support Partners in the Sahel and Lake Chad Regions*

In West Africa, roughly the size of the continental United States, this approach provides capabilities and support to counter-VEO operations, primarily against Boko Haram, Jama'at Nusrat al-Islam wal Muslimin (JNIM), ISIS-Greater Sahara, and ISIS-West Africa. The command's efforts support the Multinational Joint Task Force countries of Benin, Cameroon, Chad, Niger, and Nigeria, and the G5 Sahel Joint Force countries of Burkina Faso, Chad, Mali, Mauritania, and Niger. To support the Multinational Joint Task Force, the G5 Sahel Joint Force, and their individual member states, the command conducts engagements, exercises, and limited

operations, and provides appropriate security assistance to increase the partners' willingness and capabilities in counter-VEO efforts.

#### *Set the Theater*

The logistics challenges of supporting our engagements on the continent necessitate the command align with a whole-of-government approach to support national security interests. This whole-of-government approach ensures we have the authorities, capabilities, footprint, agreements, and understandings in place to maintain access and accomplish our missions. The United States Africa Command Theater Posture Plan details the command's footprint of forces and agreements on the continent. Posture initiatives focus on expanding strategic access to enable day-to-day activities, contingency operations, and crisis response. The backbone of access in Africa is our network of enduring contingency locations and agreements with key African partners, which provides freedom of action and status protection for United States personnel.

Ensuring strategic access requires complementary defense, diplomatic, and development efforts across the interagency and with our allied and African partners. An enduring mission of the command is to support the Department of State-led mission to protect U.S. personnel and facilities on the continent. We maintain defense cooperation agreements with several African nations allowing for forward staging locations to enable more efficient recovery and evacuation. As such, we maintain enduring locations and contingency locations throughout Africa, which provide a flexible and diverse posture for operational needs and the protection of United States personnel and facilities.

Our capable posture network also allows forward staging of forces to provide flexible and timely responses to crises involving U.S. personnel or interests. At Camp Lemonnier, Djibouti, the only forward and enduring United States military installation in Africa, United States Forces engaged in security cooperation activities, contingency operations, and logistics support to five combatant commands: United States Africa Command, United States Central Command, United States European Command, United States Special Operations Command, and United States Transportation Command. Camp Lemonnier is our hub in East Africa and remains a vital link to build stability in this key region.

One of United States Africa Command's newest and most important posture initiatives is the development of the West Africa Logistics Network. The West Africa Logistics Network provides and positions right-sized aircraft throughout West and Central Africa to facilitate the distribution of supplies, personnel, and equipment to support locations.

### IMPLEMENTING THE UNITED STATES AFRICA COMMAND STRATEGIC APPROACH

#### *Achieving and Maintaining Influence*

United States Africa Command continues to advance United States strategic objectives through the execution of activities and the expenditure of resources to respond to both regional crises and instability, while prioritizing Great Power Competition efforts across the continent. This approach requires the United States to continue with our authorities to counter transnational threats, including terrorism and infectious diseases, which threaten African Governments and the United States and its interests in Africa. It also strives to enhance security cooperation with our African partners, so they may become more stable, well-governed, and self-reliant, thereby setting the conditions for economic growth and development.

United States Africa Command aspires to achieve and maintain influence with our allies and African partners through security cooperation, exercises, engagements, operations, and efforts to mature the theater. This requires the synchronization of emerging policy and guidance from the National Defense Strategy and other strategic documents to drive United States Government activities and engagements across Africa, reinforced by the importance of capturing a return on investment. As such, the command and its component commands have a firm understanding of the necessity to coordinate a whole-of-government approach toward strengthening relationships and building partner capability in support of national defense objectives.

Consistency in resources is the most effective method for implementing our strategic approach in Africa, as United States Africa Command does not have an abundance of dedicated assigned forces. These resources include the authorities, capabilities, funding, and allocated personnel to further our international and interagency relationships and provide appropriate military support and security cooperation to diplomatic and development efforts with our African partners. This consistency allows for the planned execution and delivery of senior leader engagements, security

capabilities, and multinational exercises necessary to bring about a secure environment for the advancement of U.S. national interests and sustainment of military advantages.

Additionally, various programs and funding allow United States Africa Command to further its campaign objectives. At its headquarters, United States Africa Command imbeds fifteen military personnel from allied and partner nations in the Multinational Coordination Center fostering an enduring relationships and increasing interoperability with allies and partners. The foreign military personnel do not command United States Forces or make final determinations on plans or directives but do assist in coordinating military engagement efforts and exercises to further U.S. multinational partnerships. Additionally, United States Africa Command leads and participates in multilateral planning groups for East Africa, North Africa, and the Sahel region. Likewise, our component commands host senior leader staff talks with their respective component equivalents. The U.S. Army Regionally Aligned Force also assists with the United States Africa Command mission. Working within the security cooperation framework, the Regionally Aligned Force executes a significant share of the military-to-military activities in Africa. Sustained access to the Regionally Aligned Force is critical to mission success.

The U.S. National Guard's State Partnership Program is by far one of United States Africa Command's most valuable implementing programs. The State Partnership Program pairs 14 African nations with 11 United States states and the District of Columbia and creates enduring relationships with their African partners to build and improve peacekeeping capacity, disaster management competency, and overall partner readiness. United States Africa Command continues to see a great return on investment with the State Partnership Program, conducting 120 events this past year and engaging over 3,000 partner nation personnel at a cost of four million dollars. We look forward to expanding this outreach as several more African countries have requested partnerships, which are currently under consideration.

Other programs mitigating the lack of dedicated forces and, in turn, building partner capability include the Department of State Global Peace Operations Initiative, the African Peacekeeping Rapid Response Partnership, and the Women, Peace, and Security Initiative. The Department of Defense also coordinates closely with the Department of State on programs in Africa including the Partnership for Regional East Africa Counterterrorism, Trans Sahara Counterterrorism Partnership, Africa Military Education Program, and Africa Maritime Security Initiative to support critical counterterrorism, maritime security and overall military professionalization efforts.

These programs continue to professionalize partner militaries and security forces through training and institution building, and their concepts are integrated into military-to-military engagements; training on human rights, rule of law, and prevention of gender-based violence; and exercises.

#### *East Africa*

In 1991, the United States closed the Embassy in Somalia as the country descended into rampant violence and insecurity. Al-Shabaab and al-Qaeda eventually filled the security vacuum and, with Mogadishu firmly under their control, used this safe haven to plan and launch terror attacks not only inside Somalia, but also regionally throughout East Africa. Since al-Shabaab's first external attack in 2010, the group has killed hundreds through external operations, with the most lethal attacks occurring in Kenya and Uganda. Somali pirates have also disrupted commercial shipping lanes, reaching as far north as the Arabian Sea and as far south as Tanzania, while attacking and hijacking sea vessels for ransom.

By 2007, AMISOM was activated in Somalia, with Burundi, Djibouti, Ethiopia, Kenya, and Uganda contributing troops and conducting military operations, which eventually led to the return of the capital city to a newly formed Somali Federal Government. Today, a United States Ambassador is permanently located in Mogadishu and, along with the USAID Mission Director, is working with the Federal Government of Somalia to improve the security environment and promote stability. As such, U.S. military operations and activities are part of a whole-of-government approach working in support of diplomatic and development efforts.

Somalia remains key to the security environment of East Africa, and its long-term stability is important to advancing United States interests in the region. When assessing Somalia, it is important to understand incremental progress has been made over the last decade as the result of a truly international effort inside the country. The United States works closely with our international partners, which include the United Nations, European Union, African Union, AMISOM and the troop contributing countries, the United Kingdom, Turkey, and others, on security sector development efforts. Together, we remain committed to Somali-led progress on improving



conditions for a well-trained Somali National Security Forces that can assume and sustain security within the country.

The United States also continues to target al-Shabaab and ISIS–Somalia. United States military activities in Somalia include remote or accompanied advise and assist missions, the building, training, and equipping of Somali combat units, and when necessary, kinetic action. The effects of our kinetic activities serve to disperse al-Shabaab and ISIS–Somalia leadership, disrupt how they communicate, and further decentralize how they conduct operations. Ultimately, our kinetic activities, encouraged and supported by the Federal Government of Somalia, create opportunities for governance to take hold.

Our actions are synchronized with AMISOM’s mandate to reduce threats and support stabilization, reconciliation, and peacebuilding. We are supporting the AMISOM transition plan, which envisions conditions for an effective, responsible, and gradual handover of security responsibilities from AMISOM by 2021. Recent efforts by Somali security forces, working with AMISOM, to stabilize the area in and around Merka, is a positive step. However, the Federal Government of Somalia must continue to demonstrate sustained progress in implementing the federated security model, within its national security architecture, and increase coordination and cooperation with the Federal Member States.

The United States brings leadership and influence to Somalia, led by the United States Ambassador, to synchronize and support the international community’s ongoing security and stability efforts. While United States military training and operations alone cannot defeat al-Shabaab and ISIS–Somalia, alongside United States diplomatic and development efforts, they provide legitimacy to the Federal Government of Somalia and create opportunity for political and economic growth, and security and stability in the broader region.

United States Africa Command’s security cooperation is closely linked with the United States Mission to Somalia’s political and economic initiatives targeting the root cause of instability. The Department of State and USAID provide effective tools to build and reinforce stabilization, democratic institution building, education, and health development programs. Somalia has held a credible federal presidential selection process, and political leaders have formed four Federal Member States and selected regional presidents and parliaments. While Somalia remains a fragile state, the gross domestic product has moderately increased over the past two years and, combined with other positive economic indicators, has the potential to lead to debt relief and additional international financing and investments.

While there have been signs of improvement in Somalia, progress is not irreversible and sustained international engagement will be necessary to keep the country on a positive trajectory. The United States, by virtue of our capabilities, influence, and credibility, is uniquely postured to support Somali efforts, including to help coordinate other international partner engagement. As such, the Federal Government of Somalia must now take advantage of the opportunities before them, with a clear understanding future assistance will depend on demonstrated progress.

In Djibouti, the United States remains a steadfast partner. In May 2018, members of the Djiboutian Army’s first ever Rapid Intervention Battalion graduated from training. The Texas National Guard, assigned to Combined Joint Task Force–Horn of Africa, provided the Rapid Intervention Battalion with comprehensive individual and collective training in support of the unit’s mission as a multi-purpose reaction force responsible to the leadership of the Djiboutian Army.

However, Djibouti’s increasing partnership with China across defense, trade, and financial sectors encroaches on and, at times, diminishes United States access and influence. In 2018, Djibouti nationalized the Doraleh Container Port. Despite the increased presence of China within the port complex, Djibouti has retained control of the container port, increasing shipping volume and through-put since removing Dubai Ports World. Our continued access and unimpeded usage to this facility is critical to our logistical efforts in East Africa.

Additionally, China’s first overseas naval base in Djibouti, only a few miles from Camp Lemonnier, creates air space and coordination challenges for all international partners. United States Africa Command considers access to Djibouti and to critical global shipping lanes through the Bab-el-Mandeb strait an imperative to ensure United States strategic interests are not compromised. We work closely with the United States Ambassador to Djibouti and his initiative to coordinate with the host nation, the Chinese, and other countries based in Djibouti to de-conflict operations, ensure the safety of forces, and maintain appropriate access for our military activities.

In Ethiopia last April, Abiy Ahmed Ali became Prime Minister, and his commitment to political reform, human rights, and unity has been a positive contribution to peace and stability in the region. By June, Abiy’s Government made significant

progress implementing the 2000 Algiers Accord to end the war with its neighbor, Eritrea. Since then, both countries have taken numerous positive actions to conclude Africa's longest running border conflict. Commercial flights between the capitals of Addis Adaba and Asmara now occur daily, Ethiopian commercial vessels operate through Eritrean ports, communication channels are open between the populations reuniting families and friends, and military forces are withdrawing from contested territory.

Prime Minister Abiy's reform agenda represents an unprecedented attempt to comprehensively reset Ethiopian governance. The Government of Ethiopia is working with various ethnic factions inside the country to address root causes of conflict and expand the political discourse. Prime Minister Abiy restructured his cabinet, establishing a Ministry of Peace and appointed women to 50 percent of the positions, to include the Minister of Defense, a first for Ethiopia.

In partnership with the Government of Ethiopia and in support of our diplomatic mission, United States Africa Command is developing additional support options to improve security cooperation with this key partner. Ethiopia is already benefiting from security cooperation programs, including intelligence sharing initiatives, and we will identify avenues to enroll more personnel in United States military education and training programs. In July 2019, Ethiopia will host United States Africa Command Exercise Justified Accord in order to enhance AMISOM's Troop Contributing Countries' ability to conduct peace operations. Ethiopia is the largest contributor of United Nations peacekeeping forces and provides approximately 4,200 troops to AMISOM.

United States Africa Command will seek to expand our military-to-military relationship in support of Prime Minister Abiy's fast-paced internal reform efforts and regional outreach.

#### *North Africa*

Since 2011, with the overthrow of Libyan dictator Muhammad Qaddafi and the rise of the Arab Spring, Libya has been in a constant state of turmoil. In 2014, Libyan militants began pledging allegiance to the Islamic State and its cause. By 2015, the Islamic State had infiltrated the coastal city of Sirte, shifted aspirations of the militia members there, and declared it a part of the caliphate. Soon militants from outside Libya joined the organization, now branded as ISIS-Libya, and their numbers swelled into the thousands.

In 2016, the Libyan Government of National Accord requested assistance from the United States and our European allies to rid the country of ISIS-Libya. Together, we assisted Libyan forces aligned to the Government of National Accord and conducted hundreds of kinetic strikes in support of its ground operations in Sirte. Within months, Sirte was liberated. Since then, the United States has remained engaged in the international efforts to stabilize Libya.

United States Africa Command focuses on three objectives for Libya. First, United States Africa Command assists in degrading terrorist groups, such as AQIM and ISIS-Libya, who pose threats to United States and Western interests and destabilize Libya and its neighbors. Second, every effort is made to prevent widespread civil conflict that would threaten security and stability. Finally, United States Africa Command supports the political reconciliation process by providing security to facilitate diplomatic engagements in Libya.

United States Africa Command continues to support the United States Libya External Office's diplomatic efforts to promote the United Nations-facilitated Libyan political reconciliation process. The recent return of a former Ambassador to Libya as the Chargé d'Affaires of the Libya External Office offers a seasoned diplomat, who is familiar with the multi-layered problem set. The U.S. is now better positioned to manage the diplomatic and counterterrorism strategy. In 2018, United States Africa Command conducted kinetic strikes targeting the leadership and operational commanders of both ISIS-Libya and AQIM providing the opportunity for the Libyan Government of National Accord to continue its efforts to improve security and work towards political reconciliation.

Tunisia is one of our most capable and willing partners. In May 2018, United States Marine Corps Forces Africa conducted Exercise African Lion in Tunisia and Morocco. This annual, multinational exercise enabled United States Forces and our African partners to increase interoperability and further refine tactics, techniques, and procedures for countering VEOs.

Furthermore, United States Africa Command-managed security cooperation programs work to develop Tunisian counterterrorism and border security capabilities. Through fiscal years 2017 to 2019, over \$165 million in title 10 and title 22 funding will be invested in developing maritime and rotary-wing capabilities to bolster Tunisian border control forces. Tunisia is also developing its counter-IED awareness pro-

gram through training provided by United States Army Africa and sponsored by the Defense Threat Reduction Agency. With this state-of-the-art training, Tunisian special operations forces will be better trained and equipped to counter IED attacks.

Tunisia is also capable of managing more advanced logistics training and maintaining increasingly complex intelligence, reconnaissance, and surveillance assets. For example, United States Air Forces Africa completed proof-of-principle flights with the Tunisian Air Force as part of an initiative to leverage their transport capability for rapid mobility requirements across the theater. Continued flights over time will serve as an opportunity to enhance the capability of the Tunisian Air Force, while reducing the stress on U.S. airlift assets and personnel. Tunisia remains a political and military leader in the region and a net exporter of security.

The Kingdom of Morocco remains a vital United States security partner and ranks in the top five of African countries providing peacekeepers to UN missions in Africa. Additionally, Morocco is a key exercise integrator serving as the permanent host of Exercise African Lion which focuses on counter-VEO, interoperability, and strengthening regional relationships. In 2019, Morocco will also host Exercise Phoenix Express, the premier United States Naval Forces Africa exercise emphasizing maritime security and counter-illicit trafficking.

Algeria is a capable partner in the fight against extremism. With the largest army in Africa, Algeria conducts frequent military-to-military engagements to build its border protection and counterterrorism forces. United States relations with Algeria continue to foster cooperation and further regional stability.

#### *Sahel and Lake Chad Regions*

Within the Sahel region of northern and western Africa, dangerous pockets of extremists control numerous under-governed spaces. The African-led, French-assisted, and United States-supported G5 Sahel Joint Force, comprised of forces from Burkina Faso, Chad, Mali, Mauritania, and Niger, is a successful example of burden sharing. The U.S. is providing bilateral security assistance for the countries of the G5 Sahel Joint Force, and United States Africa Command contributes operational planning support to compliment the funding and operational assistance provided by our European allies to the G5 Sahel Joint Force. United States Africa Command remains committed to assisting the African-led operations to degrade VEOs and to build the defense capabilities within the G5 Sahel Joint Force and, in turn, build the capabilities of individual countries within the joint force.

Mali remains the epicenter of instability and a haven for many terror groups to stage and launch attacks across the region. The United Nations Mission in Mali continues to support the stabilization of the country and implementation of the Algiers Accord for Peace and Reconciliation in Mali. Burkina Faso, Chad, Guinea, Niger, Senegal, and Togo are the leading African nations contributing to United Nations Mission in Mali, which has more than 11,000 military personnel. Our European allies provide military education, advice, and training to the Malian Armed Forces through the European Training Mission-Mali. This mission has trained over 12,000 personnel in an effort to strengthen the Malian Armed Forces to defend its territory and protect its people.

United States Africa Command lends critical support to partner counterterrorism efforts in the Sahel. This primarily takes the form of providing key enabling capabilities to the French and members of the G5 Sahel Joint Force. Furthermore, we continue to build military operational and defense institutional capabilities through measured security cooperation coordinated with other U.S. Government agencies' diplomacy and development efforts. Through these actions, we complement the international effort to maintain persistent pressure on terror networks and increase security and stability in Mali.

In Burkina Faso, United States Africa Command finds a willing and capable partner in West Africa. With almost \$40 million in U.S. title 10 expenditures, the Burkinabe armed forces remain dependable exporters of security with trained security forces capable of contributing to the G5 Sahel Joint Force. Despite manpower and equipment challenges, the Burkinabe security forces continue to conduct counterterrorism operations in both the North and Eastern regions.

In Niger, serious governance and development issues are exacerbated by rapid population growth, environmental degradation, economic stagnation, and stressed infrastructure. Moreover, regional VEOs, such as ISIS–Greater Sahara, JNIM, Boko Haram, and ISIS–West Africa, overlap within Niger. As such, our policy goals aim to assist Niger's continued development as a stable democracy with accountable governance, become an increasingly capable partner against regional threats, and achieve social and institutional development and broad-based economic growth, which will further strengthen the population against VEO recruitment efforts. In spite of these challenges, Niger is an increasingly capable regional partner.

Over a three year period, United States Africa Command-managed title 10 support has increased Nigerien counter-IED capability, as well as intelligence, surveillance, and reconnaissance asset sustainment, maintenance, and operations. This includes the Government of Niger-requested development of an expeditionary, contingency support location in Agadez, scheduled to be initially operationally capable in the summer of 2019.

In April 2018, Niger hosted Exercise Flintlock, the annual United States Special Operations Command-Africa exercise to develop capacity and interoperability among African, allied, and United States Forces. Exercise Flintlock was entirely facilitated by the special operations force units of more than 20 African nations with the support of western nations. This successful multilateral event enhances coordination among partners and improves special operations force capabilities to combat violent extremist organizations.

Within the Lake Chad Region, the Multinational Joint Task Force comprises forces from Benin, Cameroon, Chad, Niger, and Nigeria, and remains a strategically significant organization in the efforts to counter Boko Haram and ISIS-West Africa. Boko Haram and ISIS-West Africa attack military and civilian targets throughout Northeast Nigeria and the Lake Chad Border areas of Niger, Chad and Cameroon, thus dominating large swaths of territory and displacing millions from their homes, contributing to a multi-border displaced persons crisis. United States Africa Command and USAID work with the Multinational Joint Task Force to deliver humanitarian support and facilitate international relief efforts to bring basic health care, clean drinking water, adequate sanitation, and food supplies to the hardest hit areas. However, the persistent violence and the growing number of displaced persons impact the ability for organizations to deliver the required assistance.

Nigeria has faced multiple setbacks in the volatile Northeast Borno State as ISIS-West Africa has seized military bases and materiel, including armored vehicles, weapons, and ammunition. This series of ISIS-West Africa high-profile attacks has placed tremendous strain on the Nigerian military's readiness and capabilities. The attacks also underscore the need for the contributing countries to the Multinational Joint Task Force to increase their commitments, resources, troop deployments, and regional operational coordination to counter ISIS-West Africa's momentum.

Nigeria also faces instability over the violent herder-farmer conflicts in the middle belt region, as these groups fight over the scarcity of resources and usable land required to feed the growing and, often due to conflict, displaced and transient population. By 2050, Nigeria will overtake the United States as the third most populous country in the world, further compounding the strain on natural resources and risking the disenfranchisement of a population increasingly dissatisfied by the lack of security and basic services.

United States Africa Command is working to assist the Nigerian military through a variety of security cooperation efforts. In April 2018, forty African senior military leaders represented their countries at the sixth annual African Land Forces Summit in Abuja, Nigeria. Co-hosted by the Nigerian Army and United States Army Africa, the African Land Forces Summit provided a forum to develop cooperative solutions for improved trans-regional security and stability.

Over the past year, we have expanded our intelligence support and are currently working with the Nigerian Air Force to increase their effectiveness in line with international standards. In the upcoming years, utilizing title 10 and title 22 funding, United States Africa Command will execute tailored programs to expand Nigerian intelligence, surveillance, and reconnaissance; intelligence; counter-IED; and air-ground integration capabilities. United States Africa Command will continue to work with Nigeria and seek additional partnership opportunities following Nigeria's planned presidential election in early 2019.

Cameroon has been the focus of long-term United States Department of State, U.S. Department of Defense, and United States Africa Command security cooperation efforts to boost the country's capacity to counter Boko Haram and ISIS-West Africa in the Lake Chad region. Cameroon has been an effective partner within the Multinational Joint Task Force. Cameroon also ensures security in the Gulf of Guinea and in neighboring Central African Republic, where it plays a valuable role in the UN Multidimensional Integrated Stabilization Mission in the Central African Republic.

The United States has urged the Cameroonian Government to address human rights concerns, investigate allegations thoroughly, hold accountable perpetrators of abuse, and disclose the outcome of its investigations to the people of Cameroon. In accordance with the Leahy law, the U.S. Government does not provide assistance to security force units or individuals against whom credible allegations of gross violations of human rights have been lodged.

The crisis and credible allegations of gross violations of human rights in the Anglophone Northwest and Southwest regions of Cameroon is a concern. The violence stems from a long-term sense of marginalization and political disenfranchisement among Anglophone Cameroonians, compounded by government suppression of moderates, and the government and separatists' inability to enter into any constructive dialogue to resolve the conflict. The Government of Cameroon has assured the United States no security assistance will be diverted from counter-Boko Haram and ISIS-WA efforts to the Anglophone regions.

#### *Gulf of Guinea and Central Africa*

In the Gulf of Guinea, maritime security remains a strategic priority due to its role in global oil markets, trade routes, and the residence of approximately 75,000 U.S. citizens. Piracy and other illicit maritime activities threaten development efforts, weaken state security, and rob states of precious resources required for greater economic growth and effective governance. In 2018, piracy incidents trended lower as cooperation increased among the Gulf of Guinea partners.

For example, last summer, United States Naval Forces Africa conducted Operation Junction Rain as part of the African Maritime Law Enforcement Partnership Program. Under this framework, United States Coast Guard law enforcement personnel partnered with Cabo Verdeans and Senegalese on board their naval vessels countering illicit trade and criminal activities. Capacity building remains paramount to continue the downward trend in piracy and address the growing threat of illicit trafficking of drugs, arms, and persons in the region.

In Central Africa, the most visible nontraditional threat this past year was an Ebola outbreak in an unstable region in eastern Democratic Republic of the Congo. The outbreak, which began in August 2018, is presently the second most lethal in history. Furthermore, the medical response has been hampered by armed conflict in the region.

External actors in Central Africa, such as Russia, have also undermined security and countered United States interests. For example, in the Central African Republic, Russia has bolstered its influence with increased military cooperation including donations of arms, with which it has gained access to markets and mineral extraction rights. With minimal investment, Russia leverages private military contractors, such as the Wagner Group, and in return receives political and economic influence beneficial to them.

Recently, the President of the Central African Republic installed a Russian civilian as his National Security Advisor. The President also promised the armed forces would be deployed nationwide to return peace to the country by forces likely trained, equipped, and in some cases, accompanied by Russian military contractors. Russia's ability to import harsh security practices, in a region already marred by threats to security, while systematically extracting minerals, is concerning. As Russia potentially looks to export their security model regionally, other African leaders facing similar instability and unrest could find the model attractive.

#### *Southern Africa*

In comparison to a large portion of Africa, many countries in Southern Africa have suffered fewer consequences from terrorism and violent conflict. However, it still struggles with economic, societal, governance, and environmental challenges, including poverty, crime, social inequality, corruption, and lack of water and is influenced by China's growing presence in the region. The majority of United States Africa Command's engagements with Southern Africa aim to strengthen partnerships and build partner capacity for peacekeeping and crisis response, including infectious disease outbreaks.

We work closely with our diplomatic and development partners to support and complement their efforts across Southern Africa. For example, the largest exporters of security in the region are Zambia, Malawi, and South Africa. Our primary investment in these countries is through title 22, through such programs as the International Military Education and Training program and Global Peace Operations Initiative, which are designed to improve interoperability and develop long-term, sustainable peacekeeping capability and capacity.

Finally, in addition to our title 22 commitments, the South Africa-New York State Partnership Program is the oldest on the continent and offers the most meaningful United States mil-to-mil [military-to-military] engagements in South Africa. In 2018, South Africa hosted Africa's largest air show, the Aerospace and Defense Exposition, and the New York Air National Guard supported with two cargo airplanes, an unmanned aerial vehicle system, and 38 soldiers and airmen. Such engagements offer a low-cost solution to improve U.S. partnerships, particularly in a relatively

accessible and neutral ground where our competitors seek influence in both the military and economic spheres.

#### *Ensuring Strategic Access*

Our efforts to ensure strategic access must also be viewed through the lens of competitor influence and coercive activities, which seek to gain advantages over the U.S. by moving faster in economic and security markets where we are constrained by our values and law. China is a strategic competitor which uses economic and security outreach to foster investment incentives, jobs, and infrastructure growth in return for access to Africa's strategic locations, natural resources, and markets. China has most successfully employed this model in Djibouti, holding 80 percent of the Government of Djibouti's debt, where access through the Bab-el-Mandeb Strait, the Red Sea, and the Suez Canal remains a United States strategic imperative.

Today, on the African side of the Red Sea and in the Bab-el-Mandeb strait, which encompasses Somalia, Djibouti, Eritrea, Sudan, and Egypt, the Great Powers and the Gulf States both cooperate and compete for real estate and port facilities.

Along Somalia's northern coast, the semi-autonomous region of Somaliland is working with Dubai Ports World on developing its Gulf of Aden port city of Berbera. When development is complete, Berbera's location, close to the entry and exit point of the Bab-el-Mandeb strait, will be strategically valuable for both Somaliland and with whomever they choose to partner.

Djibouti, a nation about the size of New Jersey, remains congested with a preponderance of foreign forces from the United States, France, Germany, Japan, and China maintaining bases and competing for access and airspace. Currently, the Djiboutians operate the Doraleh Port facility, through which passes 90 percent of all logistics and materiel for United States operations in East Africa. Continued access to the Doraleh Port Facility remains a U.S. strategic imperative.

Just north of Djibouti, other geopolitical developments have had ramifications on the future of the Red Sea. With the normalization of relations between Ethiopia and Eritrea and the United Nations Security Council lifting sanctions on Eritrea, other nations will undoubtedly look to Eritrea to unlock its coastline for Red Sea port access.

Given its strategic location, coupled with its already developed infrastructure, Sudan is also looking to develop its Red Sea coast. In fact, Sudan recently entered into an agreement to allow Russia to explore natural gas fields off Port Sudan.

Along with U.S. Central Command, the strategic evolution of the Red Sea remains a command priority, as we consider how Red Sea access can be maintained and expanded on the continent. It is imperative for the U.S. to not only maintain our status as the preferred security partner of choice, but also look to diversify our strategic access to the Red Sea.

In 2018, United States Naval Forces Africa continued its annual exercise series, which consisted of Exercises Phoenix Express, Cutlass Express, and Obangame Express. These exercises aim to build the maritime capabilities of African partner nations, and Exercise Obangame Express this past year included participation from the Somali Maritime Police. Their participation marked the first time in nearly 30 years Somalia has participated in a security event outside its borders.

United States Africa Command seeks to build partner networks and assist in establishing the security environment required for economic opportunity and trade to flourish. Through a whole-of-government approach, enhanced security fosters development and investment with initiatives such as The Better Utilization of Investments Leading to Development (BUILD) Act. The BUILD Act facilitates private-sector investments and institutional engagements with low and lower-middle income countries. It also opens the door for United States companies to compete overseas and respond to China's increased economic engagement in Africa, most notably the \$60 billion, largely in loans with some security and development funding, recently promised during the 2018 Forum on China-Africa Cooperation.

Additionally, the Millennium Challenge Corporation, established by the U.S. Congress in 2004 to apply a new philosophy toward foreign aid, works with partner nations to promote growth in agriculture and irrigation, power and energy, and transportation infrastructure. In November 2018, the Millennium Challenge Corporation provided a \$550 million investment into the Senegal Power Compact to increase electricity access and reliability for one of Africa's fastest growing economies.

The U.S. Institute for Peace (USIP) delivers skills training, education, grants, and research through local and international partnerships. USIP also serves as a conduit for various non-governmental organizations to interface with the broader diplomatic and development stakeholders in Africa. During 2019, USIP and United States Africa Command will host a symposium to discuss how non-governmental or-

ganizations can support and, when appropriate, integrate into the United States whole-of-government approach.

United States Africa Command's component commands engage every day on the continent to enhance partner capability, where an important aspect of maintaining relationships is continued engagement between senior leaders. In 2018, senior leaders from United States Africa Command and its components conducted numerous key leader engagements, including visits to Cabo Verde, Djibouti, Ethiopia, Ghana, Kenya, Liberia, Libya, Malawi, Mali, Niger, Senegal, Somalia, and Uganda.

United States-facilitated exercises and conferences offer the best return on investment for our security assistance efforts and provide our African partners with access to American values, expertise, and professionalism. In October 2018, senior military leaders from 28 African air forces and United States Air Forces Africa met in Morocco for the African Air Chiefs Symposium. This annual symposium provides a forum to discuss common defense issues, increase cooperation, and improve command and control of air operations.

Throughout 2018, United States Army Africa continued its annual exercise series, which included Exercise Unified Focus in Cameroon, Exercise Justified Accord in Uganda, Exercise United Accord in Ghana, and Exercise Shared Accord in Rwanda. These exercises provided integrated training opportunities, with a focus on respecting the rule of law and human rights, integrating women into peacekeeping operations, and responding to allegations of abuse.

Finally, in October 2018, led by the Command Senior Enlisted Leader, United States Africa Command hosted its second annual African Senior Enlisted Leader Conference with over 50 Africa enlisted leaders from 25 countries. African enlisted leaders engaged with senior United States and NATO enlisted leaders on professional development, civilian control of the military, respect for human rights, and caring for soldiers and their families. The conference advanced key professionalism concepts and training opportunities vital to sustaining African security and peacekeeping forces.

#### *Conclusion*

In summary, United States Africa Command remains poised to meet Africa's current and future challenges. The men and women of the command, our partners on the continent, and our collection of stakeholders understand how important Africa is to the global economy and security environments. The National Defense Strategy and its supporting foundational documents have outlined the importance of long-term Great Power Competition with China and Russia and the need to limit the harmful influence of non-African powers on the continent.

As the United States Africa Command Campaign Plan guides the command into the next decade, our partner-centric approach remains central to advancing United States interests in Africa. Much work remains, as United States Africa Command continues to contribute to the broad-reaching Diplomacy, Development, and Defense approach for further economic growth and prosperity in Africa.

Finally, it remains an honor to lead the soldiers, sailors, airmen, marines, coast guardsmen, civilians, contractors, and families of United States Africa Command. Together, their efforts have made the United States safer and kept Africa on the road towards prosperity.

Chairman INHOFE [presiding]. Thank you, Senator Waldhauser. Admiral Faller.

#### **STATEMENT OF ADMIRAL CRAIG S. FALLER, USN, COMMANDER, UNITED STATES SOUTHERN COMMAND**

Admiral FALLER. Chairman Inhofe, Ranking Member Reed, thank you for the opportunity to testify before you today with my shipmate, General Waldhauser. Thank you for the steadfast support you provide our men and women every day.

I'm joined today by my wife, Martha, who is passionately committed to serving our military families and ensuring their readiness and welfare. Also with me are SOUTHCOM's Command Sergeant Major Brian Zickefoose, my eyes and ears, representing the backbone of our military, our noncommissioned officers, and Master Chief Stacie U'Ren, our dedicated gender advisor. Sergeant Major, Master Chief, and our human rights team work together to build

professionalism both within our SOUTHCOM team and with our partners. Professional forces have legitimacy within their ranks and their populations. Professional ready forces build trust.

The Western Hemisphere is our shared home. It's our neighborhood. We're connected to the nations in Latin America and the Caribbean by history, culture, and geography. From my headquarters in Doral, Florida, it takes me longer to travel to DC than it does to many of the countries in our area of responsibility. We're connected in every domain: sea, air, space, cyber and land. Our security and prosperity are inextricably linked. When our neighbors succeed, we succeed. When our neighbors are threatened, we are threatened. Our partnerships in this region are critical to the layered defense of our Homeland and to our collective ability to meet complex global challenges. Ultimately, we want enemies to fear us, friends to partner with us, and the Western Hemisphere to shine as a beacon of peace, prosperity, and potential.

To ensure the security of the Homeland, SOUTHCOM works closely with interagency teammates: the Department of State, USAID, Department of Homeland Security, and the Department of Justice. Teamwork within the Defense Department, especially with Northern Command and the U.S. Coast Guard, is also critical to mission accomplishment.

Over the past 2 months, I've traveled to Colombia, Trinidad and Tobago, Guatemala, Honduras, and El Salvador to get a firsthand view of the opportunities and challenges that directly impact the security of this Hemisphere. Criminal organizations, narcotrafickers, illegal immigration, violent extremists, corruption, and weak governments are principal among those challenges.

The most disturbing insight, however, has been the degree to which external state actors, especially Russia, China, and Iran, are expanding their influence in the Western Hemisphere. Russia, in particular, enables actions in Venezuela, Nicaragua, and Cuba that threaten hemispheric security and prosperity. As a leading state sponsor of terrorism in the world, Iran's activities in this hemisphere are concerning.

Venezuela. The situation in Venezuela is dire. Maduro's illegitimate government starves its people by using food as a weapon, while corrupt generals are rewarded with money from illegal drug trafficking, oil profits, and businesses, all at the expense of the population and other—and the rank-and-file military. Migration out of Venezuela is now over 300 million, creating a crisis for our friends in Colombia, Brazil, Ecuador, and Peru. While Russia and Cuba and China prop up the Maduro dictatorship, the remainder of the world has united. SOUTHCOM is supporting diplomatic efforts, and we are prepared to protect U.S. personnel and diplomatic facilities, if necessary.

I saw, firsthand, the impacts of this humanitarian crisis in Venezuela when I visited the United States naval ship *Comfort*. The solidarity and compassion displayed by *Comfort's* international medical team made a lasting difference in the lives of thousands. The United States of America provided *Comfort* as part of our enduring promise to the Hemisphere, while Russia flew nuclear-capable bombers. Who would you want as your friend? Who would you trust?



Building strong partnerships is the best way to counter threats and turn the challenges of our hemisphere into opportunities. In this hemisphere, our neighborhood, a little goes a long way. We need the right, focused, consistent military, education, and presence. We cannot achieve positive results and influence outcomes without being on the playing field.

Mr. Chairman, Ranking Member Reed, thank you again for the opportunity to testify today. SOUTHCOM team—our civilians, military members, and our families—appreciate the support Congress has provided us. We will continue to honor the trust you and our fellow citizens have placed in us. I look forward to your questions. [The prepared statement of Admiral Faller follows:]

#### PREPARED STATEMENT BY ADMIRAL CRAIG S. FALLER

##### INTRODUCTION

I want to thank the Congress, and especially this Committee, for your support to United States Southern Command (USSOUTHCOM). The men and women of our team work every day to earn the trust of partners in Latin America and the Caribbean. We are friends and neighbors, bound together by shared values and a shared stake in our common future. The nations of this neighborhood are connected in every domain—sea, air, land, space, and cyberspace. Our partnerships are vital to security and prosperity in this hemisphere, and to our collective ability to meet complex global challenges. We recognize that the success and security of future generations depend on how effectively we build trust with allies and partners in the hemisphere today, working with and through interagency partners like the Department of State, U.S. Agency for International Development (USAID), Department of Homeland Security (DHS), and Department of Justice (DOJ). Ultimately, we want enemies to fear us, friends to partner with us, and the Western Hemisphere to shine as a beacon of peace, prosperity, and potential.

The strengths and opportunities of our hemisphere—democracy, respect for human rights and rule of law, and military-to-military relationships rooted in education, culture, and values—are matched with a troubling array of challenges and threats to global security and to our Homeland. These include natural and man-made disasters, weak government institutions, corruption, under-resourced security organizations, violent crime, criminal organizations, and violent extremist cells. China has accelerated expansion of its Belt and Road Initiative at a pace that may one day overshadow its expansion in Southeast Asia and Africa. Russia supports multiple information outlets spreading its false narrative of world events and United States intentions. Iran has deepened its anti-United States Spanish language media coverage and has exported its state support for terrorism into our hemisphere. Russia and China also support the autocratic regimes in Venezuela, Cuba, and Nicaragua, which are counter to democracy and United States interests. We are monitoring the latest events in Venezuela and look forward to welcoming that country back into the hemisphere's community of democracies. Where threats are transregional, multi-domain, and global, the United States must renew focus on our neighbors and our shared Western Hemisphere neighborhood.

##### PARTNERSHIPS

Modest, smart, and focused investments in U.S. Forces and security assistance continue to yield meaningful returns in the form of partners who are ready to address threats shoulder-to-shoulder with us. Strengthening partnerships is at the heart of everything we do. USSOUTHCOM's mission is about the smart, focused use of force—not economy of force.

Working from a foundation of mutual respect and shared interests in regional cooperation and interoperability, we are enhancing our partnerships with Brazil, Colombia, and Chile, which are forces for regional and global security. Argentina has reinvigorated military-to-military interaction, and co-hosted our annual South American Defense Conference. Peru continues a tradition of strong liaison officer exchanges with USSOUTHCOM and recently conducted training with a Special Purpose Marine Air-Ground Task Force (SPMAGTF). We reinitiated security cooperation with Ecuador, and are moving forward with a renewed military-to-military partnership.

In Central America, partners like El Salvador and Panama have stepped up cooperation in the area of counter-narcotics (CN); in addition, El Salvador co-hosted our Central American Security Conference last year. Honduras hosts our Joint Task Force (JTF) Bravo at Soto Cano, providing a regionally-based security cooperation platform, the presence of which allows a rapid response capability. Our support to Guatemala's defense institution building efforts has helped its Ministry of Defense increase efficiency, transparency, and sustainability of its investments.

Across the Caribbean, our partners continue to look at USSOUTHCOM as their security partner of choice. Trinidad and Tobago co-hosted our annual Caribbean Nations Security Conference, and thwarted a terror attack with the support of United States special operations forces (USSOF). Jamaica has stepped up its CN efforts, recently purchasing a maritime patrol aircraft that will support regional drug interdiction operations.

We continue to expand our cooperation with allies and partners in humanitarian assistance/disaster response (HA/DR) missions and counter-threat efforts, such as drug detection and monitoring, and support to interdiction operations in Central America and the Caribbean. Allies and partners contributed to nearly half of the successful drug seizures credited to Joint Interagency Task Force South (JIATF-S) last year. In addition to continuing cooperation in traditional areas like peace-keeping and drug interdiction, we are building interoperability for high-end expeditionary operations and in the space and cyber mission sets. In the past year, Brazil became the first Latin American country to sign a Space Situational Awareness Agreement, Colombia became NATO's first global partner in Latin America, and Chile led the maritime component of the world's largest international naval exercise, Rim of the Pacific—a first for a Latin American sea power. Later this year, Brazil will send a Major General to serve as United States Army South's next Deputy Commander for Interoperability, the first Brazilian officer to serve in this role.

The majority of nations in this hemisphere share democratic values—including respect for human rights and adherence to the rule of law—and interests in advancing democracy and countering radical ideologies. These shared values and interests are the foundation of our military-to-military relationships. We reinforce and build on these shared values and interests through institutional capacity building efforts, information and intelligence sharing, education, personnel exchanges, and exercises. In the past year, we have improved the quality, depth, and frequency of information and intelligence exchanges with partners, producing joint products on transnational issues of mutual concern.

We also build on those shared values by working with our partners to elevate and integrate all elements of professionalism as a foundational component of every security conference we conduct. The professionalism of U.S. Armed Forces is the bedrock of our legitimacy, both as a fighting force and in our ability to build trust with our own people. Professionalism encompasses human rights, jointness, gender integration, and non-commissioned officer development.

Education and training—funded by the Department of Defense's William J. Perry Center for Hemispheric Defense Studies and the Department of State's International Military Education and Training (IMET) program—and Foreign Military Sales (FMS) purchases made possible by Foreign Military Financing (FMF) grants are force multipliers. Our partners prefer U.S. education and training, and these exchanges facilitate mutual understanding of values, doctrine, and culture that enable us to operate together more effectively. Our participation in multinational exercises like UNITAS (a naval integration exercise), PANAMAX (defense of the Panama Canal), and Brazil's CRUZEIRO DO SUL (regional air exercise) is another important way we increase mutual understanding, interoperability, and collective readiness.

In the absence of an enduring United States military presence in most of Latin America and the Caribbean, recurring rotations of small teams of USSOF, soldiers, marines, and National Guard personnel<sup>1</sup> play central roles in building trust and enabling the exchange of critical expertise. By carefully tailoring these rotations, we ensure they build the readiness of U.S. Forces as well as building partner nations' capabilities. On any given day, small USSOF teams conduct over 30 missions in support of about 12 partner nations throughout Latin America and the Caribbean. Many live and work alongside regional forces, building the trust, confidence, and

<sup>1</sup>The State Partnership Program (SPP) links a unique component of the Department of Defense—a state's National Guard—with the armed forces or equivalent of a partner nation, leveraging National Guard capabilities for engagements that build enduring relationships and advance mutual defense and security goals. Twenty-four of the SPP's 75 partnerships worldwide are in the USSOUTHCOM area of responsibility, including a partnership with Venezuela that is currently inactive.

lasting relationships that reinforce our status as the partner of choice and enhance our ability to respond quickly to contingencies.

Humanitarian support efforts like medical engagements, civil affairs activities, and the recent deployment of the hospital ship USNS *Comfort* demonstrate our enduring solidarity and friendship with neighbors, while countering negative messaging by adversarial nations. The international medical team aboard *Comfort* treated more than 26,000 patients in Colombia, Peru, Ecuador, and Honduras. This team conducted more than 100 training engagements, relieving pressure on regional health systems caused by the Venezuelan migration crisis and giving local medical providers more flexibility to deliver care. The integration of more than 100 military and non-governmental organization (NGO) personnel from 10 other nations helped us build trust, tell our story effectively, and enhance regional perceptions of the United States. The U.S. military medical and command staff also returned from the deployment more ready, able to operate with foreign partners, and prepared to provide critical care to U.S. warfighters. These impacts will far outlast *Comfort's* 70-day deployment.

Strengthening our partnerships is our best bid for addressing regional and global threats. We work by, with, and through partners to enhance the security of both the United States and our partners, and to help grow bilateral security relationships into regional and global security initiatives. Our networked approach to countering threats recognizes that nothing happens without robust and enduring partnerships across the U.S. interagency, region, and civil society. Our ultimate advantage is using the power of our ideals, ideas, and people to build trust with friends and create dilemmas for competitor nations. This is the primary dimension in which we expand the competitive space.

#### THREATS

Six state actors (Russia, China, Iran, and their authoritarian allies in Cuba, Nicaragua, and Venezuela) and a system of interrelated threats challenge the security of our partners and the region. Threats like natural and man-made disasters and criminal networks feed and fuel drivers of instability, including weak institutions, poverty, corruption, and violent crime. Addressing these challenges requires whole-of-government efforts, led by partner nations at a pace they can sustain, to strengthen democratic institutions and expand economic opportunity. Often, improving security is the first step.

##### *Nation State Competition and Malign Actors.*

Russia and China are expanding their influence in the Western Hemisphere, often at the expense of United States interests. Both enable—and are enabled by—actions in Venezuela, Nicaragua, and Cuba that threaten hemispheric security and prosperity, and the actions of those three states in turn damage the stability and democratic progress across the region. As the leading state sponsor of terrorism in the world, Iran's activities in the region are also concerning.

Russia continues to use Latin America and the Caribbean to spread disinformation, collect intelligence on the United States, and project power. Russia's deployment of two nuclear capable bombers to the Western Hemisphere was intended as a demonstration of support for the Maduro regime and as a show of force to the United States. Russia has also deployed intelligence collection ships to the region, as well as an underwater research ship to Latin America capable of mapping undersea cables—information it could use to cut critical lines of communication during a future crisis. Additionally, Russia is establishing joint space projects with partners in the region, which it could eventually leverage for counter-space purposes in the event of a global conflict.

China utilizes the same predatory, non-transparent foreign lending practices it has implemented around the world to exert political and economic leverage in certain countries. China has pledged at least \$150 billion in loans to countries in the hemisphere,<sup>2</sup> and 16 nations now participate in the Belt and Road Initiative. However, many countries are beginning to recognize the long-term consequences of mortgaging their future to China, as we've seen in Sri Lanka, Malaysia, Sierra Leone, Djibouti, and the Maldives. In the future, China could use its control of deep water ports in the Western Hemisphere to enhance its global operational posture. Particularly concerning is China's effort to exert control over key infrastructure associated with the Panama Canal.

<sup>2</sup> Gallagher, Kevin P. and Margaret Myers (2017) "China-Latin America Finance Database." Washington, DC: Inter-American Dialogue

China's presence and activities at Argentina's deep space tracking facility is also concerning. Beijing could be in violation of the terms of its agreement with Argentina to only conduct civilian activities, and may have the ability to monitor and potentially target United States, Allied, and partner space activities. Additionally, Chinese firms like Huawei and ZTE have aggressively penetrated the region, placing intellectual property, private data, and government secrets at risk. If governments in Latin America and the Caribbean continue to gravitate toward using Chinese information systems, our ability and willingness to share information over compromised networks is likely to suffer.

Russia and China aggressively court students from Latin America and the Caribbean to attend their military schools, offering free training in cyber, policing, and CN. Since 2012, security officials from nearly all Central American countries and nearly half of South American countries have received Russian CN training. These engagements, combined with Russia's Counter Transnational Organized Crime Training Center (CTOC) in Nicaragua, potentially provide Moscow with a regional platform to recruit intelligence sources and collect information.

Russia and China also support their authoritarian partners in Cuba, Venezuela, and Nicaragua, often through propaganda and other information-related tools. Moscow, for example, provides positive media coverage of its authoritarian allies, papering over repression and socioeconomic inequity in Nicaragua. Moscow also seeks to undercut United States policies and regional relationships through information operations and intelligence collection, and by influencing political systems, public opinion, and decision makers. Russia published hundreds of articles last year in its Spanish and Portuguese-language media that deliberately distorted our defense engagements.

The linkages between these malign actors are negatively reinforcing. Emboldened by Russian and Chinese<sup>3</sup> support, Venezuela is engaging in increasingly provocative actions, threatening Guyana's sovereign rights and jurisdiction and providing sanctuary for National Liberation Army (ELN) fighters that threaten Colombian stability. Russia and Cuba are both complicit in Venezuela's descent into dictatorship, but Cuba is particularly influential in supporting Maduro. Following the Cuban Government's advice and assisted by its intelligence machinery, Maduro is adhering to the autocratic blueprint Cuban leaders have ruthlessly executed for over six decades. Nicaragua appears to be going down a similar path following Cuba's playbook, with Cuba, Russia, and Venezuela enabling President Ortega's repression of his political opposition. These relationships give Russia, in particular, a foothold close to our Homeland. As tensions increase with Russia in Europe, Moscow may leverage these longstanding regional partners to maintain asymmetric options, to include forward deploying military personnel or assets.

Iran is also looking to reenergize its outreach after reducing its efforts in Latin America and the Caribbean in recent years. It has deepened its anti-United States influence campaign in Spanish-language media, and its proxy Lebanese Hezbollah maintains facilitation networks throughout the region that cache weapons and raise funds, often via drug trafficking and money laundering. Last September, Brazil arrested a Hezbollah financier in the tri-border area near Paraguay and Argentina, and in recent years Paraguay, Peru, and Bolivia have arrested multiple Hezbollah-linked suspects.

#### *What we're doing.*

We are increasing cooperation with partners to better understand, expose, and counter the malign activities of Russia, China, and their authoritarian allies. We are also working more closely with other U.S. combatant commands and the Joint Staff to ensure that globally integrated plans and operations are informed by threats and opportunities in this hemisphere. The Chairman of the Joint Chiefs of Staff's globally integrated planning is exactly the right approach for addressing the transregional, transnational nature of today's threat environment.

Within the region, we have to be on the playing field to compete. The same presence that strengthens our partnerships sends a powerful signal to Russia, China, Iran, Cuba, Venezuela, and Nicaragua (the six negative state actors) that the United States is committed to the region and to the security of our neighborhood.

Strong partnerships—founded in effective and transparent institutions, intelligence and information exchanges, institutional capacity building, education, exercises, and presence—are our primary bulwark against the influence of malign actors in the hemisphere and are bolstered by our work together on military professionalism. Our work with partners to reinforce the hemisphere's substantial, but in-

<sup>3</sup> For example, China is Venezuela's single largest state creditor, saddling the Venezuelan people with more than \$50 billion in debt, even as their democracy vanishes.

complete, progress in human rights is even more critical in light of Russia and China's own disregard for human rights. USSOUTHCOM's Human Rights Initiative—which just celebrated its 20th anniversary—has conducted more than 200 human rights engagements that have enhanced the ability of partner nations to build professional forces that have legitimacy in the eyes of their populations.

As I told this Committee during my confirmation hearing, the Department of State's security assistance programs—like IMET and FMF—are strategic game changers. Since 2009, IMET has provided opportunities for over 55,000 students from the region to attend schools like the Western Hemisphere Institute for Security Cooperation (WHINSEC), the Inter-American Air Force Academy (IAAFA), and the Inter-American Defense College (IADC). These numbers aren't just seats in a classroom. They represent *lifelong relationships* with future leaders<sup>4</sup> who trust us, understand our culture and doctrine, and are prepared to work with us on a range of challenges.

In addition to strengthening partnerships, we support interagency efforts to hold individuals accountable for supporting the activities of negative actors. For example, in collaboration with the Department of Treasury's Office of Foreign Assets Control (OFAC), we provided information that supported the development of sanctions against Venezuelan Government officials involved in drug smuggling, money laundering, corruption, and serious human rights abuses.

#### *Drugs and Transnational Criminal Organizations.*

Drug trafficking threatens our national security and that of our regional partners. Drug overdoses killed more than 70,000 Americans last year, and nearly half a million people across the world in 2017.<sup>5</sup> Fueled by drug demand—especially ours—drug traffickers transported enough metric tons of cocaine (that we know of) from South America by air, land, and sea last year to cover four football fields—and the majority of it was headed for our streets. Upon landfall, this bulk cocaine is broken down into multiple smaller loads and smuggled into the United States, making large interdictions exponentially more difficult. In addition to cocaine, traffickers also transport heroin, synthetic opioids like fentanyl, and precursor chemicals from China. While Mexico remains the primary source for heroin smuggled into the United States (and China the prime source of fentanyl), the Dominican Republic is emerging as a regional transit point for opioid trafficking into major United States cities like Philadelphia, Boston, and Miami.

Established drug trafficking routes and techniques provide opportunities for the illegal movement of other commodities and people—including terrorists. Several years ago, the Islamic State in Iraq and Syria (ISIS) dedicated an article to a scenario in which its followers could leverage established trafficking networks to make their way to our border. This remains a potential vulnerability we watch as closely as we can.

Drug trafficking comes with significant costs, in more ways than one. After marijuana, cocaine remains the second most valuable commodity in the global drug trade,<sup>6</sup> generating dirty money that flows directly into the hands of criminal groups. In many cases, these groups are better funded than the security organizations confronting them. Dirty money fosters corruption and insecurity that tear at the fabric of communities, erode institutions of governance, and drain the region's potential. The vicious side effects of illicit trade also cost American taxpayers billions of dollars every year. This is more than a national security threat; it's also an economic one that affects every nation in our neighborhood.

#### *What we're doing.*

Leveraging capabilities like information-sharing, network analysis, and the Department of Defense Rewards Program, we support operations by DHS and the DOJ's Organized Crime Drug Enforcement Task Forces (OCDETF) and Drug Enforcement Administration (DEA) to interdict drug shipments and disrupt transnational criminal networks. For example, our intelligence support—enabled by our Army Military Intelligence Brigade—to operations by Homeland Security Investigations and other interagency partners helped dismantle one of the largest maritime illicit smuggling networks in Central America last year.

<sup>4</sup> IMET has trained numerous individuals who have gone on to serve in key leadership positions, including the former President of Chile, Trinidad and Tobago's Chief of the Defense Staff, and Argentina's Chairman of the Joint Chiefs of Staff, who helped foster our reengagement with the Argentine military after the political dynamics changed.

<sup>5</sup> Centers for Disease Control, National Health Statistics; United Nations Office of Drugs and Crime (UNODC), *2018 World Drug Report*. Geneva.

<sup>6</sup> Global Financial Integrity, "Transnational Crime and the Developing World." March 2017.

At the tactical level, JIATF-S continues to deliver steady returns on investment and improve its efficiency in targeting drug movements. Last year, it helped keep the equivalent of 600 minivans full of cocaine off U.S. streets. But even this isn't enough to keep pace with the increasing demand and the volume of drugs flowing north through the Eastern Pacific and Caribbean. While improving efficiency, we still only successfully interdicted about six percent of known drug movements.<sup>7</sup> Doing more would require additional ships and maritime patrol aircraft and greater participation by interagency and international partners that form the backbone of JIATF-S. The U.S. Coast Guard (USCG) and U.S. Customs and Border Protection (CBP) provide the bulk of JIATF-S's maritime and air capabilities. The United Kingdom, Canada, France, and the Netherlands lead multiple interdiction operations in the Caribbean, while we focus U.S. assets on the Eastern Pacific. Last year, 17 international partners conducted nearly half of the interdictions supported by JIATF-S. U.S. Northern Command remains our closest and best Department of Defense partner and we continuously look for ways to enhance our teamwork, recognizing that threats exploit our geographic combatant command boundaries.

Our capacity-building activities, whether at the tactical, operational, or institutional level, play a key role in this fight. For example, after years of USSOF training, Guatemala's Fuerzas Especiales Navales (FEN) is now among Central America's most competent and responsive maritime interdiction units. U.S. training, equipment, and interagency teamwork have also enabled Costa Rican and Panamanian forces to partner seamlessly with the USCG in interdiction operations. Partners are also working with us to address their ability to sustain capabilities that we have developed together. For example, Colombia has increased its eradication and interdiction efforts while also conducting increased operations against the ELN.

#### *Drivers of Migration.*

Violence, unemployment, corruption, poverty, and impunity for gangs and transnational criminal organizations are some of the main drivers of insecurity that fuel migration to our southern border. Fourteen of the top 20 most violent countries in the world are in Latin America and the Caribbean.<sup>8</sup> Migration challenges are exacerbated by weak institutions, corruption, violence and instability wrought by authoritarian governments. Migration from Venezuela is on track to approach the scale of the Syrian refugee crisis, straining the capacity and resources of its neighbors. The United Nations estimates that 5.3 million Venezuelans will have fled their country by the end of 2019—with over 2 million leaving this year alone.<sup>9</sup> Last year, thousands of Nicaraguans fled to Costa Rica and other neighboring countries to seek protection, a number that will likely grow as President Ortega keeps a tight grip on power. Many Haitians continue to leave their country in hopes of finding economic opportunity elsewhere.

#### *What we're doing.*

We are working closely with Central American and other partners to share information and provide training and equipment that enhance their ability to secure their borders. We assist partners in developing strong institutional foundations needed for legitimate, effective, and sustainable defense sectors through organizations like the William J. Perry Center,<sup>10</sup> the Center for Civil Military Relations, and the Defense Institute for International Legal Studies, which help our partners build trust and confidence with their citizens. Through collaboration with the Department of State, USAID, and non-governmental partners, our civil affairs teams execute low cost, high impact civic action projects that help partner nations and extend governance to vulnerable communities.

#### TERRORISM.

As Deputy Secretary of State John Sullivan recently noted, transnational terrorism poses an immediate threat to the Western Hemisphere.<sup>11</sup> Groups like Leba-

<sup>7</sup>Figure based on JIATF South utilization of Consolidated Counterdrug DataBase (CCDB) data.

<sup>8</sup>Igarapé Institute (Regional think tank), "The World's Most Dangerous Cities." March 31, 2017 (available at <https://igarape.org.br/en/the-worlds-most-dangerous-cities/>)

<sup>9</sup>United Nations High Commissioner for Refugees (UNHCR) and International Organization for Migration (IOM), December 14, 2018.

<sup>10</sup>The Washington, DC-based William J. Perry Center for Hemispheric Defense Studies, one of DOD's five regional centers, develops and engages the Western Hemisphere's community of defense and security professionals to seek mutually supportive approaches to common challenges in order to develop effective and sustainable institutional capacity, and promote a greater understanding of U.S. regional policy.

<sup>11</sup>Remarks at the Western Hemisphere Ministerial on Counterterrorism, December 11, 2018.

nese Hezbollah, ISIS, and al-Qaida operate wherever they can garner support, raise funds, and pursue their terrorist agendas. ISIS and other groups have demonstrated their ability to inspire and recruit violent extremists to plan attacks in South America and the Caribbean. While the travel of foreign fighters from Latin America and the Caribbean to Iraq and Syria has diminished, the potential return of battle-trained extremists remains a threat. Another potential threat is posed by smuggling networks that move Special Interest Aliens from East Africa, the Middle East, and Southeast Asia through the hemisphere to attempt entry into the United States.

*What we're doing.*

USSOUTHCOM leads several annual exercises with interagency partners and partner nations to improve interoperability, preparedness, and response for a possible terrorist attack. Our neighbors are taking increasing steps to address the threat of terrorism in the hemisphere, as evidenced by the Caribbean Community's (CARICOM) development of a regional counter terrorism strategy in collaboration with the United States Department of State and USSOUTHCOM. In addition to these efforts, we work with the Defense Threat Reduction Agency to help regional partners build their capacity to combat weapons of mass destruction, another issue of growing interest to several partners.

We work closely with lead federal agencies and regional partners to detect and disrupt terrorist activity and strengthen counter-terrorism (CT) legislation. Trinidad and Tobago recently strengthened its CT legislation (including the creation of several new terrorism-related criminal offenses), and other countries are also updating theirs. In collaboration with the Federal Bureau of Investigation (FBI), DHS, and other interagency partners, we work with Argentina, Brazil, Peru, Chile, and others to share information and strengthen regional capacity to manage extremist threats. United States training and biometrics equipment are improving the ability of partners to control their borders, and in the past two years, we've helped interagency partners stop individuals with known or suspected ties to terrorism. Additionally, our small civil affairs teams work closely with U.S. embassies and USAID to counter radicalization and recruitment and amplify moderate voices in local communities.

Detention operations also play an important role in the global fight against violent extremism by keeping enemy combatants off the battlefield. The medical and guard teams at Joint Task Force Guantanamo (JTF-GTMO) continue to conduct safe, legal, and humane detention operations. In line with Executive Order 13823, we are examining ways to address medical support, capacity, and infrastructure issues associated with continued detention operations.

*Natural disasters.*

Our ability to respond rapidly in crisis is an important aspect of USSOUTHCOM's mission. Our neighborhood experiences approximately 50 natural disasters every year, of almost every type—from hurricanes to earthquakes, volcanic eruptions, wildfires, mudslides, and more. Protecting citizens before and after disaster strikes is a core mission for every military in our hemisphere. The question is not whether, but when, we will face the next disaster, and we must be ready.

*What we're doing.*

Last October at the Conference of Defense Ministers of the Americas in Cancun, Mexico, the United States Secretary of Defense and his counterparts from across the hemisphere committed to strengthening regional military cooperation on humanitarian assistance and disaster relief in support of lead civilian agencies. In support, USSOUTHCOM works closely with partner nations, Department of State, USAID, NGOs, and multinational organizations like CARICOM's Caribbean Disaster Emergency Management Agency (CDEMA) and the Regional Security System (RSS) to build national and regional response capacities. Our training, exercises, and low-cost humanitarian projects have helped our partners to be more prepared to respond to emergencies in their own countries, and more able to assist their neighbors in crisis. As an example, last year the Jamaican Defense Force deployed a team to Dominica for 60 days to provide medical aid and other emergency assistance in the wake of Hurricane Maria. We are assessing our authorities to ensure we can provide the necessary support for our partners to take on increasing responsibility for disaster responses.

When United States military support is required, our forward-deployed JTF-Bravo in Honduras, along with our annual SPMAGTF deployment, provide operational flexibility and agility. I'm proud to note that last year we integrated Chilean and Colombian officers into the SPMAGTF leadership team for the first time. Brazil will join the SPMAGTF this year, in addition to co-leading our UNITAS AMPHIB multinational naval exercise. This iteration of UNITAS will practice the establish-

ment of a multinational task force to support humanitarian response, a capability we haven't employed since the Haiti earthquake in 2010. Building on this initiative, we are working with allies and partners to develop a concept for a scalable multinational task force that works within existing security cooperation frameworks to enhance our collective ability to respond rapidly to crises.

#### CONGRESSIONAL SUPPORT FOR USSOUTHCOM'S MISSION AND THIS NEIGHBORHOOD.

I invite you to visit our neighbors and reinforce the message that we value this region—the only region that is tied to our Homeland by all domains—and the role our partners play in keeping our neighborhood safe.

I also thank the Congress for providing the Department's fiscal year 2019 appropriations prior to the start of fiscal year 2019, which minimized the impacts of the current partial government shutdown to the Department of Defense. As we look ahead, confidence in stable budgets and ensuring all of our U.S. Government security partners, like our USCG, are open for business will reassure friendly nations that we are reliable security partners.

#### *Support for our people.*

After several years of running the detention facility at JTF-GTMO as a temporary mission, we have been directed to keep the facility open. Much of the current infrastructure used by the JTF has long outlived its useful lifespan. We are undertaking a comprehensive review of the existing facilities to determine requirements for mission success, the safety of our forces, and operational efficiency. Closer to home, we are working to find ways to better support our personnel, including exploring ways to mitigate the limited military support services in the Miami area. I will keep this Committee informed of our progress.

#### *Capabilities to defend our Homeland.*

We appreciate the support of the Congress to ensure the continued operations of the USCG, which provides the majority of U.S. maritime assets supporting JIATF-S operations. The new National Security Cutters have proven very effective in the drug detection and monitoring mission, leveraging increased intelligence collection capability and on-scene endurance. Maritime patrol aircraft are also crucial to detection, monitoring, and interdiction by the USCG and partner nations. Continued congressional support for the new Offshore Patrol Cutter will enable the USCG to maintain its capacity in the hemisphere. While those new ships are beginning construction, maintenance funding is essential to keep the aging Medium Endurance Cutters—some of which are close to doubling their planned 30-year service lives—hard at work supporting JIATF-S. We also appreciate the support of the Congress to resource our intelligence capabilities like human intelligence (HUMINT) and innovative analytic tools utilized by the Defense Threat Reduction Agency's (DTRA) Joint Improvised-Threat Defeat Organization (JIDO) that allow us to exploit publicly available information and intelligence.

Thanks to congressional support, we contracted a Multi Mission Support Vessel (MMSV) to help fill capability gaps. True to its name, the MMSV was used for SOF training exercises and will now be employed to support U.S. and partner nation law enforcement in CN and CT operations. Increased U.S. joint and naval presence in regional operations and exercises will encourage partner forces, to include navies, to participate in regional security efforts such as HA/DR, CN, and CT. The Littoral Combat Ship (LCS) is mission fit for this region and we welcome its deployment this year. We are also leveraging our growing science and technology portfolio—including innovative projects like small-satellite and aerostat surveillance programs—to mitigate our intelligence, surveillance, and reconnaissance gaps, and help the Services to test new capabilities that hone the U.S. military's technological advantage.

#### *Capabilities to strengthen our partnerships.*

We appreciate congressional support for initiatives that streamline security cooperation processes and help ensure we remain the security partner of choice. Your continued support to programs and capabilities that help build trust and long-term relationships with partners enhances our ability to defend the Homeland by providing more capacity for defeating threats and sending a visible signal to our partners (and our competitors) about the depth of our commitment.

#### CONCLUSION.

Partnership goes a long way in this part of the world. The right focused and modest investments in this hemisphere yield a solid rate of return for the United States and our partners. Our competitors benefit when we don't invest in our neighborhood.



Our partners share our vision of a hemisphere that is a beacon of peace, prosperity, and opportunity. They want to work with us to achieve this vision. It is in our national interest to work with them. Thank you.

Chairman INHOFE [presiding]. All right. Thank you very much.

First of all, let me apologize for being late. I had a very small part to play in the National Prayer Breakfast, so I had to choose Jesus over you guys.

[Laughter.]

Chairman INHOFE. But, that's behind us now, so we're ready to get back to work.

First of all, let me just go ahead and—with the areas that you're working so hard in. I've been concerned about China for a long time, because we saw it coming. In fact, in Djibouti, that was the first time—it's my information, anyway—that China actually did devote its attention to starting a function in a country outside its city limits. That happened in Djibouti. Now they're as far south in Africa as Tanzania. They're making things happen. I mean, everywhere you go, the same thing, they say, "America tells us what we need, and they—China—gives us what we need." They have also—you know, I—we're all committed to the IMET program. They actually, in China, as you and I discussed in my office, for the first time, they've invited 50—50 of their leaders showed up in China, in Beijing, out of 52 nations, talking about—how close they want to be with them and trying—what they're trying to do is expand the IMET program, that we've been so successful in, into China. So, anyway, that's something that is there, and I'm sure you're feeling some of the effects of that.

I'd ask both of you—because it's happening also in SOUTHCOM, what are the effects right now that you're seeing from China that weren't there until recently? Starting with you, General.

General WALDHAUSER. Thank you, Senator Inhofe.

You know, it's interesting about Djibouti. It is the first overseas base that China has developed.

Chairman INHOFE. Yeah, the first one. Now, people are not aware of that, that this is the first base that they've established outside of their city limits.

General WALDHAUSER. That's correct. You know, it puts us in a very unique position, because we have a Chinese base roughly several miles from the front gate of our location in Djibouti. We have some interesting engagements with safety flight, weapons training on the ranges, and so forth. We have a requirement to work with them to work through some of those issues.

But, that said, overall on the continent, China has been there for quite some time, and they have worked at this relationship. What we try to do, from the AFRICOM or DOD perspective, is try to show that we are the best partner—the type of training we give them, the weapons, perhaps, that are sold by the United States of high quality—and try to make sure that our influence remains. It's a difficult task.

You mentioned the issue of all the security chiefs into Beijing. You know, as an anecdote—I have no way to prove this, but in April of 2017, we, in AFRICOM, invited all the chiefs of defense to Stuttgart for a conference. We had about 40 or so turn up. I believe the Chinese read our playbook, and I believe, after that particular

engagement, they saw it, and they wanted to make sure that they were on the same playing field as we were.

But, moreover, I would say that, in addition to the Chinese defense—or their defense group, in September of this year, China had a forum for cooperation between China and Africa, where over 50 of the heads of state of Africa went to Beijing, and where President Xi rolled out \$60 billion or so of loans and grants and programs.

The Chinese work at the relationship, and that's one of the things that we try to combat in AFRICOM by just being good partners.

Chairman INHOFE. Yeah. It's been my experience in the continent that China never comes in unless there's something they can gain from it. Of course, they use their own labor, and they're not doing that much of a benefit. Nonetheless, they have resources. I can't figure out where it all comes from, but much more than we seem to.

The same thing, you don't hear so much in SOUTHCOM about the activity of China. Briefly, what are your thoughts on that?

Admiral FALLER. Senator, in SOUTHCOM, they're invested in over 56 ports. I recently returned from a trip to Central America, and my small team, the entire hotel floor right below ours was completely booked by Chinese people. They're offering schools, all expense paid, 13 days for a half-day school, no strings attached, and cash for the countries to do what they want. Again, they're there, and they're there in force, and they have a long-term vision, economically and militarily. Our best counter is education and being there. The IMET program is huge for our partners. They want to come to the United States. They want to go to our schools. Our schools remain the world's best and something to emulate.

Chairman INHOFE. Yeah. This is my own opinion, but I think some up here agrees with this. Of all the coms [combatant commanders] that we have, AFRICOM and SOUTHCOM are the two that are the most under-resourced. I'd like to have you be very blunt—just very briefly—do you agree with that? What do we need to do to correct it?

General WALDHAUSER. Senator Inhofe, I do agree that we're under-resourced. However, we do make the best and the most of what we have.

Chairman INHOFE. Yeah, I know that.

General WALDHAUSER. Certainly, with reconnaissance assets, ISR assets, Medevac assets, and also non-episodic, but where we can count on—

Chairman INHOFE. Of those you just named, which are the least resourced right now? ISR—

General WALDHAUSER. As any COCOM would say here, we would prefer more ISR for our counter-VEO [violent extremist organizations] fight.

Chairman INHOFE. Yeah. Yeah.

Do you agree with that, Admiral?

Admiral FALLER. I would agree with that. We could also use some naval assets, as well, Senator. I know our Navy needs a bigger navy. We need some of that.

Chairman INHOFE. I understand that. You're doing great work. Senator Reed.

Senator REED. Well, thank you very much, Mr. Chairman.

Again, gentlemen, thank you for your service.

Admiral Faller, with respect to Venezuela, your views would be very much appreciated, but there's a presumption that the military, at this point, is the key, sort of, power base for Maduro, and that, as long as they stay with him, he will be incentivized to stay in Venezuela. Is that accurate, from your perspective? What are we doing to try—and what are the Venezuelans—the legitimate President, what is he trying to do to pull the military away?

Admiral FALLER. Senator, Venezuela has about 2,000 generals, more than all of NATO combined. A majority of them are on the payroll of Maduro via illicit drug trafficking and corrupt businesses. That's what he's using to buy their loyalty and their protection. In addition, Cuba, as I mentioned in my opening statement, pretty much owns the security around Maduro, and is deeply entrenched in the intelligence service. We can go into more detail in closed session. That remains the center of gravity for Maduro.

The legitimate government of President Guaido has offered amnesty and a place for the military forces, most of which we think would be loyal to the constitution, not to a dictator, a place to go. I think the diplomacy path is that path that we're trying to support.

Senator REED. Thank you.

Over many, many years, I have had complaints about the human rights abuses in America—Honduras and Guatemala, particularly. In fact, there's a report, regionally, that—provided by the Sisters of Mercy, that a former member of the Honduran Congress who's been in prison for suggesting in a press conference, who might have been involved in the killing of Berta Caseras, who was a prominent environmentalist in Honduras. This is one example. How are we conditioning our security assistance and our human rights training in these countries to promote the rule of law?

Admiral FALLER. During my recent trip, Senator, I emphasized professionalism as the key to being a legitimate force. Professionalism, a big part of that is human rights. It's like blood running through your veins. If you're not legitimate to your people, you're not going to have a force that is going to, ultimately, secure that population. We had those discussions with all the leaders of those countries, the chiefs of their defense. We have a human rights team that goes in there and performs workshops. Part of the steps that must be taken by the embassy and our country teams to certify the deliverance of those aides includes a certification that they're going to go to vetted forces and forces that have complied. We're looking at that every day, Senator. It's very important to our efforts.

Senator REED. Let me turn to General Waldhauser. But, there's a—I think, an issue that both of your AORs share. It's under-resourcing, both military, but also on the—the AID, State Department, et cetera. When you talk about capacity-building, both of you are very eloquent and very focused, but I've traveled through AFRICOM, as you know, General Waldhauser. You were hosted when I returned. In Somalia, one of the reasons al-Shabaab is so influential is that they're able to collect taxes, administer justice, provide basic public services, the civilian capacity. The question

here now is even with all the military effort we put in, if we don't have the civilian capacity component, I don't think your mission is going to succeed. Can—you can start and—you have similar problems, I think, in South America, also.

General WALDHAUSER. Senator, thank you.

To just provide some context, you know, today, the first time since 1991, we have a USAID Mission Director in Mogadishu with the Ambassador. Now, this is a very important step, because, in December of 2017, USAID signed a—over \$300 million compact with the country of Djibouti. This is very significant. There are issues of education, agriculture, of government business, and so forth. It's very important now that we have an Ambassador in the country, alongside with a senior USAID rep, who can oversee and synchronize those development efforts and make sure that the return on investment of that \$300 million is well spent.

Senator REED. But, that is a good example of how it's working, but there are many more examples where we don't have the resources, we don't have Ambassadors. The Ambassador in Mogadishu arrived, what, a few months ago, finally, after years? So, I mean, there is this complementary civilian-capacity issue that, if we don't get right, you can do your jobs very well, and we will not succeed.

Admiral Faller, your points? Because there are many of the same situations in South America and Latin America.

Admiral FALLER. Exactly the same situation. The military needs to be the small “m” in support of the big diplomacy and the big economic “e.” I see that, where it's working. An example would be in El Salvador. We've made some significant progress in the reduction of violence. This has been done by targeting in really bad neighborhoods, some 50 locations, where USAID comes in with public and private partnerships and partnership with the Government. We're there in small presence to connect those vetted police force with the military.

Senator REED. Thank you, Mr. Chairman.

Thank you, gentlemen.

Chairman INHOFE. Yeah.

I think we're all aware that we're going to have a closed session after this. Anything that gets into an area that's more appropriate in a closed session, you can pass that on to that one.

Senator Rounds.

Senator ROUNDS. Thank you, Mr. Chairman.

General Waldhauser, I'm just curious. In your opening statement for the record regarding Djibouti, you note that our continued access and the ability to use, in an unimpeded basis, the Doraleh Container Port is critical to our logistical efforts in and around East Africa. Given China's increased presence within the port complex, do you have any concerns that our access and usage could be at risk, short or long term?

General WALDHAUSER. Senator Rounds, thank you.

You know, last year at this time when I testified, Djibouti had just taken that port over from the UAE. Now, there's been some international court issues of adjudication. I won't get into that today. But, the Djiboutians have run that port now for over a year. Based on data that we get from the Embassy, the Djiboutians have,

quite frankly, done a better job, been more efficient and have had better throughput than when the Emirates ran the port. I have spent time directly with President Guelleh, talked with him and with the Ambassador—our Ambassador there, and spoke with him about our concern that we need unimpeded access. Because it's no secret that roughly 98 percent of the logistics support for Djibouti, as well as Somalia and East Africa, come through that port. That port is one of five entities in the overall Djiboutian port. Our access there is necessary and required.

We have the word from President Guelleh that we will always have access there. They have no intention of selling out to China. Those are his words. His actions, thus far, have backed that up, so I have no reason not to believe that.

But, the bottom line is, I still remain concerned about our access there, because if we were denied access or had limited access, it would have a significant impact on our activities in East Africa.

Senator ROUNDS. Thank you.

I'm also curious. I want to just change subjects a little bit. You made a comment in your statement for the record pertaining to Algeria. You note that United States relations with Algeria continue to foster cooperation and further regional stability. Can you give us some examples of what AFRICOM can do to foster the United States-Algerian security relationship?

I just want your thoughts, also, with regard to the security implications of the Tindouf refugee camps for Algeria. That refugee camp has been there for 40 years, and there clearly is an issue there. I've been there once, and I plan on being there again. I'm just curious, what are your thoughts about that situation? How big of an issue is that for security for Algeria, who is clearly allowing these folks to be there, and they're providing humanitarian aid at this time? I'm presuming that we're offering some assistance there, as well.

General WALDHAUSER. Let me start by talking a little bit about our relationship with Algeria. First of all, I would say that the Russians' weapon sales on the continent, that's one of their number-one customers. They sell high-end weapons to them—ships, submarines, that type of thing. The Russians, who sell the majority of equipment on the continent, Algeria remains a big partner of theirs.

That said, I've personally visited Algeria, met with senior officials there, and the AFRICOM relationship is one that is—a crawl-walk-run stage. We have limited engagements, but we work some issues with equipment and repairs, we have visits periodically. We've participated in some of these D-Day activities, and so forth. So, although it's an arm's-length relationship, we do all we can to continue to foster that.

Now, with regard to the refugee camps, you know, there are 12.3 million internally displaced people all over the continent. This has a lot to do with conflict, it has a lot to do with famine, drought, and the like. All these particular camps require a lot of care and the ability for our nongovernmental organizations (NGOs), to work there freely. This has been a significant issue over the last few years, because some of the terrorist groups don't adhere to the rules of war or the laws of war with regards to NGOs. So, these

camps, they're perpetuated all over the continent, and the one in Algeria, though, I'm not directly familiar with.

Senator ROUNDS. Okay. Well, I understand that it has to do with relationships between Algeria and Morocco, challenges for the group of people that have been literally out of their—what they consider to be—their homeland for nearly 40 years now. It seems to me that, at some stage of the game, some additional attention to that would be appropriate. I'm not sure whether it starts with you or with the State Department, but most certainly it's an item that I think should be of interest.

Admiral Faller, I'm just curious. You mentioned that, most certainly, the U.S. Navy could use some additional assets. On your wish list, if you were to request additional resources, specifically what would be the resource that would be number one on your list of requested items or equipment?

Admiral FALLER. Senator, the additional ISR, maritime patrol aircraft, helicopters, coupled with ships. The Navy plans to deploy a littoral combat ship later this year. That's mission fit for the kind of missions that we'd have down there, which would involve partnering with nations, training, humanitarian assistance, possibly, but also the drug interdiction. So, that would be number one, top of my list, sir.

Senator ROUNDS. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Rounds.

Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.

Thank you both very much for your many years of service.

General Waldhauser, we will miss you. I'm sure you won't necessarily miss coming before this Committee, however.

You reference, in your written statement, General Waldhauser, the Women, Peace, and Security Initiative. In the 2019 Defense budget, we included \$4 million in funding for full-time gender advisors. I was pleased, Admiral Faller, that you introduced your gender advisor, who is here this morning. AFRICOM has been commended as a leader in implementing the Woman, Peace, and Security Initiative. Can you talk about what you have seen, and the success of this initiative, and how you've seen it be helpful in Africa?

General WALDHAUSER. Thank you, Senator Shaheen—I think the strategy we've applied over the last few years is just: take little things and keep moving forward. For example, out of the AFRICOM headquarters, we run a program every year where we bring about 15 to 20 females from the African continent and take them all over the United States to talk to various military leaders, and so forth, to give them, basically, a leadership seminar. We also have seen growth—for example, we run communications seminars in Capo Verde, which is an island off of western Africa. The number of females who have come to those particular engagements has increased significantly over the last few years.

You also have an example of—we have a Flintlock Operation, which is a Special Operations main exercise of the year, which, by the way, will start here later this month in Burkina Faso. Last year, when it was in Niger, USAID was able to bring together lead-

ers—women leaders, business leaders, bring them to this exercise, and have a discussion, in a forum with military members, about women and peace and what women can contribute.

The bottom line is, we kept chipping away at small programs. We think they're having an impact. We're pretty proud of how well we do.

Senator SHAHEEN. Well, I agree. I think you're to be commended. Can you talk about what kind of impact you see? Why does this make a difference?

General WALDHAUSER. Well, I think, first of all, it's just exposure. I mean, to see that, you know, a mixed-gender military is a better military. With various—you know, we have a large continent, with different countries and different cultures, and so forth, and it exposes them to our leadership, it exposes the African military male leaders to what the female can bring, if you will, to the military. So, I think, from that perspective—it's really a bottoms-up approach.

Senator SHAHEEN. Great.

Admiral Faller, I want to switch topics, because we are still struggling with the opioid epidemic here in America. New Hampshire has had, consistently, unfortunately, one of the highest overdose death rates in the country from opioids. Much of what we're seeing in New Hampshire is heroin that has been produced in Mexico, but also in a number of Central American countries. It comes in by boat and by air into the United States. At one point, we had a—before you became the head of SOUTHCOM, we had a briefing with then-head of SOUTHCOM, who said that we interdict a very small percentage—my recollection was about 20 percent of what we see that we could interdict—because we are lacking in resources. Can you update us on whether you're seeing an improvement in those numbers and what you need to have in order for us to do a better job with interdicting those drugs coming into the country?

Admiral FALLER. Senator, it's a national security crisis. Over 70,000 deaths, as you're well aware, from your home State. While I'd say we've made progress—2017–2018 were record interdiction years—we've got a lot of work to do. We're not there. We're focused on our partners. El Salvador stepped up. Guatemala, Panama. But, there are other partners that need to do more. We need some additional assets—some ships, some force—we call them force packages from the ISR that we would need to detect what you'd need to interdict. More work to be done, for sure, in this problem, Senator.

Senator SHAHEEN. Well, thank you. I'm glad you mentioned El Salvador, because New Hampshire's National Guard has a State Partnership Program with El Salvador. Can you talk about the difference that those partnership programs make in a country like El Salvador?

Admiral FALLER. It's one of our main efforts. They bring a lasting, long relationship to the State. Before I went to El Salvador, I had a videoconference with your general, and we shared—he shared more with me than I was able to share with him. I sent him my trip report afterwards. It really helps us build capacity. They go in there, and they work on that military-to-military engagement. They also work on civil affairs projects, where they'll go out, build a school, dig a well, and other things that we need to help stabilize

the conditions for the citizens. It's very important, Senator. Thank you for the support.

Senator SHAHEEN. Thank you.

I'm out of time, but, General Waldhauser, the last time you were here, I asked you about the girls who had been kidnapped by Boko Haram, and what we're doing in AFRICOM to help the Nigerians, in particular, address that issue. Do you have any update for us?

General WALDHAUSER. Ma'am, I really have no update. I would just tell you that, of the 276 girls who were kidnapped in April of 2014, I think the number of 163 have been recovered. There's 113, or thereabouts that still are unaccounted for. I could talk in more detail in a classified session. But, the bottom line is——

Senator SHAHEEN. Okay.

General WALDHAUSER.—there has not been much progress, from what I can see, in terms of getting any of those remainder back.

Senator SHAHEEN. Thank you.

Chairman INHOFE. Thank you, Senator Shaheen.

Senator McSally.

Senator MCSALLY. Thank you, Mr. Chairman.

Thanks, gentlemen, for your leadership.

General Waldhauser, it was about 12 years ago that I was sent to Stuttgart as part of the AFRICOM transition team to stand up your Command. We had just a handful of us, no resources, no facilities, no assets at the time. We were going to be the kinder, gentler command, without a whole lot of operational focus. I was the J-33, Chief of Current Operations. We very quickly realized, you know, Africa continues to be a potential hotspot for terrorist activity, both on the east coast and the west coast and other areas in ungoverned spaces. We had to ramp up very fast to be able to take on that task. However, you know—and I see, in your testimony, you're talking about al-Shabaab and the challenges in Somalia. At the time, when we were running the time-sensitive targeting operations, we watched—literally watched, with our ISR [intelligence, surveillance, reconnaissance], hundreds and hundreds and hundreds of al-Shabaab-trained militants out there in the middle of nowhere, with no collateral-damage concerns, being trained at training camps, and then being released, because the—at the time, the civilian political leadership in our country didn't want to—didn't feel needed to do anything about it. Like a cancer growing and metastasizing, we continued to see their strength grow, and their capabilities grow, but we just didn't do anything about it. Do you have the authorities you need to address the terrorist threat in your area of responsibility now, unlike back when I was there? I've got bad memories about all that. Also, you know, how does that fit within our vital national interests and the National Defense Strategy?

General WALDHAUSER. Thank you, Senator. There's a lot there, and I hope we are living up to your expectations of how AFRICOM is performing. It's a little bit better than when you were there, starting things up.

Senator MCSALLY. I know.

General WALDHAUSER. Look, let me just take the strikes on. I'll try to be brief, but I think it's important to provide some context.



In April of 2017 we were given authorities, from the national security apparatus, to initiate, to be able to have offensive capabilities inside of Somalia. That, combined with the legitimacy of a federal government there, our strikes are tied to their strategy. Our legitimacy comes from our authorities as well as the Federal Government that we're tied in with. We had strikes for 7 months in the year of 2017, where we had 35 strikes. Last year, in 2018, we had 47 strikes for the overall 12-month period. Thus far this year, we've had, I think, 12, so far. The point I want to make is that the strikes are tied to the transition strategy that the federal government of Somalia and the Somali National Army are trying to execute. In other words, we're trying to support their plan.

Senator MCSALLY. Right.

General WALDHAUSER. President Farmajo has indicated that his main effort for security is Mogadishu. His transitional strategy has that in mind.

Finally, I would just say that, at the end of the day, these strikes are not going to defeat al-Shabaab, but they're going to provide the opportunity for the Federal Government and the Somali National Army to grow and assume the security of that country.

I would just say that my bottom line is, the strikes won't defeat. We know that they are causing problems. We know that they are deterring. It's an open question as to how much, but we know it's causing al-Shabaab problems, giving this opportunity for the government. But, the bottom line is that the Somali National Army needs to grow, it needs to step up, and it needs to take responsibility for their own security, not only for our strikes, but the overall international community that's tied there. We're talking about the European Union, we're talking about the United Nations, the U.K., Turkey. We all have pieces of the puzzle down there, and one of our pieces is the strike aspect.

The bottom line is, the Somali National Army needs to grow, needs to step up. We have made this point very clear, both the new Ambassador and myself, on numerous occasions to President Farmajo and Prime Minister Khayre. They know this. They've got to step up. It's up to them to take advantage of the opportunity that they have right now.

Senator MCSALLY. Great. Thank you.

Admiral Faller, I just have a little bit of time left, but I want to get back on to the counterdrug and the drug flow in your AOR. I know you're short of resources that you need. What are you seeing, as far as the trends of the cartel activity over water, over land, submarines, light aircraft? I mean, they're nimble, and they're innovative. What are the trends? Are they still going, kind of, over water, up until then—over land, from Mexico up, or, like, what are you seeing the trends, and what else do we need to combat it?

Admiral FALLER. They are very nimble, and they're agile and in many cases, better funded than the security forces they face. They adapt. We're seeing them go further out to sea, as far out into the Pacific as around the Galapagos and up. We're seeing them integrate with fishing vessels in a different manner. We're seeing them with lower-profile vessels, including some submerged vessels. In the air, we're seeing them use Venezuela as a launch point to fly out of Venezuela. Cross-border traffic, if you will, using Venezuela's

current state as a launch point up through the middle of the Caribbean and then into remote airfields throughout Central America. As they adapt, we adapt. But, they adapt faster, and they have more flexible resources. We're trying to get after it. But, it's a challenge.

Senator MCSALLY. Thanks.

I'm out of time. I appreciate it.

Chairman INHOFE. Thank you, Senator McSally.

Senator Peters.

Senator PETERS. Thank you, Mr. Chairman.

Thank you, gentlemen, for your testimony today and your distinguished service over many years.

Admiral Faller, last year, I asked Admiral Tidd about the situation in Venezuela, including the role of military advisors from Cuba. Certainly, a lot has changed since that meeting. I want to follow up on the question that Senator Reed asked that, basically, related to the military. Your response was that there are more generals in Venezuela than there are in NATO. My question is: If Maduro's going to be really relying on this military to prop him up, what is the extent, to the everyday soldiers, the enlisted folks, the discipline in the military? Do those generals really have command over that military?

Admiral FALLER. Senator, the leaders, including the Cuban guards that completely surround the illegitimate Government of Maduro, seem to have a grip on the top level. What we read in—at this level, that we can talk about more in a classified session—that the rank-and-file are starving, just like their population. I had the opportunity to go on the Colombian-Venezuela border to one of our medical camps—that was operating off the *Comfort*, and see some of these kids that had lost 25–30 pounds in a year. They were stick thin. They had never had medical attention. We think that condition affects a large swath of the population. We think that that population is ready for a new leader, Senator.

Senator PETERS. Admiral Faller, you also mentioned some of the additional assets that you need: ISR and ships. You mentioned the littoral combat ship coming online, and how that's going to contribute to the fulfillment of your mission. Could you give us some sense of the status and timing of that, and how you see that being fully developed in the months and years ahead?

Admiral FALLER. Senator, we expect to have a littoral combat ship this year, and that will be a big benefit for our exercise program, for our engagement with partners, and because of the flexibility it brings for counternarcotic interdiction. Counternarcotic will be its first mission. Then we forward to continuous presence, moving forward.

We're working with our Navy. They have readiness challenges, and they don't have enough ships. I think that's been discussed well before this Committee. We have the support we need. We look forward to the assets.

Senator PETERS. In addition to those assets, I know your predecessors have talked about the fact that the Navy and the Southern Command has white hulls. That's the U.S. Coast Guard. That performs brilliantly in those counternarcotics missions, as well as other missions related to your task. You know, I visited Coast

Guard units in Michigan who were incredibly stressed as a result of the Government shutdown. They're concerned about their families, particularly junior enlisted, that were living on the edge. You have men and women in the Coast Guard being deployed away from home, worrying about their families. Could you talk a little bit about the impact of the shutdown on morale and the ability to execute the mission?

Admiral FALLER. Sir, Monday morning, I had the opportunity to stand on the deck of the Coast Guard cutter *Ford* with Admiral Schultz, the Commandant of the Coast Guard. This crew of 110 of America's finest had deployed over Christmas with record-number seizures. Seventeen metric tons of cocaine, which is hundreds of lives saved in the U.S. They did that deployment in large part, without pay and without adequate parts, because that was affected by contracting. It was difficult for Admiral Schultz and I to address some of their questions. They had remarkable resiliency and a remarkable attitude. They are our main battery. During that period, there was nine Coast Guard cutters deployed, counternarcotics missions, some 1600 Coast Guard men and women working for United States Southern Command, and it did have an impact. We're thankful that the shutdown's over, Senator.

Senator PETERS. That's why we can't have any more shutdowns, for that very reason, to make sure that our men and women of the Coast Guard are getting paid, like every other member of the military out there defending us. I appreciate those comments.

General Waldhauser, we have talked in this Committee quite a bit about China's influence in Africa and how it continues to increase. You mentioned, in your opening comments, that Russia is also increasing its involvement. Would you please elaborate on that involvement to the Committee, and why we should be concerned about Russian involvement on the continent?

General WALDHAUSER. Senator, I think the issue with Russia has to do with influence. I think, in recent months over the past year, they perhaps got more involved in mineral extraction, but, to a large degree, it's still a matter of influence, especially in areas we're not or especially in areas where they can say that the United States or the U.K. or Western partners are perhaps backing away from Africa. It's, I think, clear that their strategy along the northern part of Africa, southern part of NATO, if you will, in the Mediterranean, to have influence inside Libya, for example, the relationships across that country, they want to have—across the continent—they want to have influence on the continent.

I would just point to the Central African Republic right now, where the Wagner group has about 175 trainers, where some individuals are actually in the President's cabinet, and they're influencing the training, as well as, at the same time, having access to minerals in that part of the country. We're concerned that that model might be looked at or viewed positively by other countries, in terms of their ability to train and their ability to influence the government at the presidential level, as well as then getting involved in extraction of minerals.

Senator PETERS. Thank you.

Chairman INHOFE. Thank you, Senator Peters.

Senator Scott.

Senator SCOTT. Thank you, Mr. Chairman.

Admiral Faller, can you talk about Cuba's intelligence, security, military influence in Latin America, and what they're doing, and how we can combat it?

Admiral FALLER. I Can't talk about Cuba without talking about Russia. Russia is entrenched in Cuba, weapons systems and support. Looking across Latin America, we see Cuba inextricably, intertwined in all elements of Venezuela. In fact, the National Security Advisor called it "Cubazuela" yesterday. I would agree with that characterization. We see that in Nicaragua, as well. It's not helpful to democracy, and it's an autocratic way of life that runs counter to, really, the principles of the hemisphere, which are very much a democratic hemisphere.

Senator SCOTT. The sanctions that we've imposed on nationals in both Cuba and Venezuela, have you seen them have any impact? Have you seen anybody change their action as a result of them?

Admiral FALLER. We're watching that closely. We're watching the intelligence. There's a discussion of the impact. We are seeing impacts. But, we haven't seen the desired result, which is a peaceful, democratic transition to a legitimate government, yet, Senator.

Senator SCOTT. The sanctions we've done against individuals in Cuba—and we've done that over a period of time. Have you seen—has anything happened?

Admiral FALLER. It doesn't seem to have affected the overall calculus of the Cuban regime, other than harden it, solidify it, and tie it more closely to Russia. But, I think it's almost like deterrence: you don't know what happens when you don't have them, Senator. It probably has an impact. We don't see it. I would recommend—full-court pressure works.

Senator SCOTT. Okay. In the Venezuelan military, have you seen any cracking, from the standpoint of what we've been doing over the last—especially the last 2 weeks? Has anything changed?

Admiral FALLER. Certainly, there's been readiness aspects of their military that we've watched very closely. It's a degraded force. But, it's still a force that remains loyal to Maduro, and that makes it dangerous. We're looking for signs of those cracking, and we can talk, in the closed session, on some more details and trends we're seeing.

Senator SCOTT. Okay.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Scott.

Senator Jones.

Senator JONES. Thank you, Mr. Chairman.

General, I'd like to ask you about a question—

Well, first of all, thank you both for not only your—being here today, but for your service and all you do for this country.

General, I'd like to ask you about an article yesterday by Reuters concerning the cutoff of assistance to Cameroon because of concerns about human rights abuses by the Cameroon Government. That program halted—including C-130 aircraft, a number of different things. That report indicated there was a 2017 report by the U.S. State Department that listed a number of significant human rights violations and abuses that were observed in the Cameroon Government. Could you comment on what we're doing there, other than

just this halt? Are we making progress on trying to get that government to stem the tide of their human rights violations?  
[The article referred to follows:]

U.S. HALTS SOME CAMEROON MILITARY ASSISTANCE OVER HUMAN RIGHTS: OFFICIAL  
*Lesley Wroughton*

WASHINGTON (Reuters)—The United States said on Wednesday it was halting some military assistance to Cameroon over allegations of gross human rights violations by its security forces in the northwest, southwest and far north regions.

A State Department official said the United States had terminated a C-130 aircraft training program, and halted deliveries of four defender boats, nine armored vehicles and an upgrade of a Cessna aircraft for Cameroon's rapid intervention battalion.

Furthermore, the United States had withdrawn its offer for Cameroon to be part of the State Partnership Program, a military cooperation program, the official said. "We do not take these measures lightly, but we will not shirk from reducing assistance further if evolving conditions require it," the official said. "For the time being, other programs will continue."

Cameroon has cooperated closely with the United States in the fight against Islamist militant group Boko Haram in West and Central Africa. But rights groups have accused authorities of using the fight against Boko Haram to crack down on political opponents, and make arbitrary arrests and torture people.

Authorities arrested opposition leader Maurice Kamto in January, accusing him of mobilizing dissent against President Paul Biya, who has ruled the country since 1982.

Biya has been accused by the opposition and rights groups of cracking down in the Anglophone Southwest region to root out armed separatists trying to end his grip on power.

Tens of thousands of people have been displaced in Nigeria and neighboring Chad, Niger and Cameroon during Boko Haram's campaign to carve out an Islamic caliphate in northeast Nigeria.

"We emphasize that it is in Cameroon's interest to show greater transparency in investigating credible allegations of gross violations of human rights security forces," the State Department official said.

Admiral FALLER. Senator, thank you. Let me try to explain this. I'll start by why we're in Cameroon and what we're doing there.

We talked this morning about the Chibok girls from a couple of years ago, but Boko Haram is the issue there. In 2015, they were the number-one terrorist group on the planet. Depending on what you read, they have killed over 20,000 people, some estimates quite higher than that, over this timeframe, the Chibok-girls issue, all kind of atrocities. They are an extremely volatile group that needs to be dealt with. So, in that region, our mission is to train the counterterrorism forces in northern Cameroon that deal with Boko Haram. We have been doing that for several years, and, quite frankly, the BIR, the brigade of rapid intervention, is the top-shelf counterterrorism unit inside Cameroon. They have performed well, and they—and that training, by the way, has, certainly, law-of-war and battlefield ethics. So, that's why we're there.

The issue on the Anglophone piece, I won't go into detail on that. I think the article, plus the video this morning, did a very good job of explaining the history of how it got to the point where we are today. In October of 2017, when it came, kind of, to a head, the Anglophone states said, "We want to actually form our own state, the Ambazonia state." There have been issues there with atrocities, issues with allegations of law-of-war issues. This is something that brings all this to a head.

Over the last several months or so, the State Department has put on hold several security force assistance programs. Right before

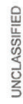
the election in October, I, with the Ambassador, went and paid a visit with President Biya, and we had a very direct conversation with him with regards to investigation into these atrocities, transparencies of these atrocities, and appropriate battlefield behavior. Since that time, the State Department has made the decision not to allocate significant money, but, at the same time, they've released some money that's been on hold to things like ScanEagle and Cessna aircraft that assist in the Boko Haram fight in the north. We still have programs that we continue with them, all kind of small engagements, as well as exercises. We did have the—we talked about the State Partnership Program with Nebraska. We put that on hold. In conjunction with the Ambassador, AFRICOM, we decided not to pursue that, because it wouldn't have been a good place for that particular group to be, so we put a halt to that.

The bottom line is, right now in Cameroon, they have been a good partner with us, counterterrorism-wise, but you can't neglect the fact that they have—there are alleged atrocities in what's going on there. We continue to take our cues from the State Department and from the Ambassador, and our level of engagement will continue, but not get out ahead of what the State Department would say if we have to take other actions. We were very emphatic with President Biya that the behavior of his troops, the lack of transparency, could have a significant impact on our ability to work with them.

Senator JONES. Great. Well, thank you very much for that.

Admiral, I was struck by a couple of things with your testimony. Number one, I was struck by the charts that you provided. Because I think people are not paying as much attention. We've always heard of—since the Cold War—the influence of Russia, but the Chinese influence in our backyard is just incredible to me. I was struck by your initial comments about our shared responsibilities, our shared security with our neighbors, and how we share so many things together. I'm new to this Committee, and so I've been reading a lot, and I've seen that there are initiatives for the Pacific and in Europe. Would some similar initiative to that be appropriate for Central America or for SOUTHCOM?

[The charts provided to follows:]



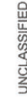
Security Personnel Trained  
Since 2015

### Countries Receiving Russian Security Training

## Strategic Bomber Deployments in 10 years

## Port Calls in 10 years

## Combined Military Exercises with Venezuela in 5 Years



# Billion

## Weapons Sales to Region in 10 Years

## Articles Distorting U.S. Defense Engagements in 2018

## Countries with Russian Collection Sites

## Heads of State Meetings With Key Allies in 2 Years



# RUSSIAN INFLUENCE



## RUSSIAN SECURITY FOOTPRINT EXAMPLES



Bejuical  
SIGINT Site



Training Center

Cuba

Nicaragua

## WEAPONS SALES



Fighter Aircraft



Surface-to-Air Missiles

## INFORMATION WARFARE



RT  
AMERICA

Disinformation

## DEPLOYMENTS



Strategic Bombers  
Deployed in 2008, 2013, 2018



Warships  
Naval diplomacy/joint exercises

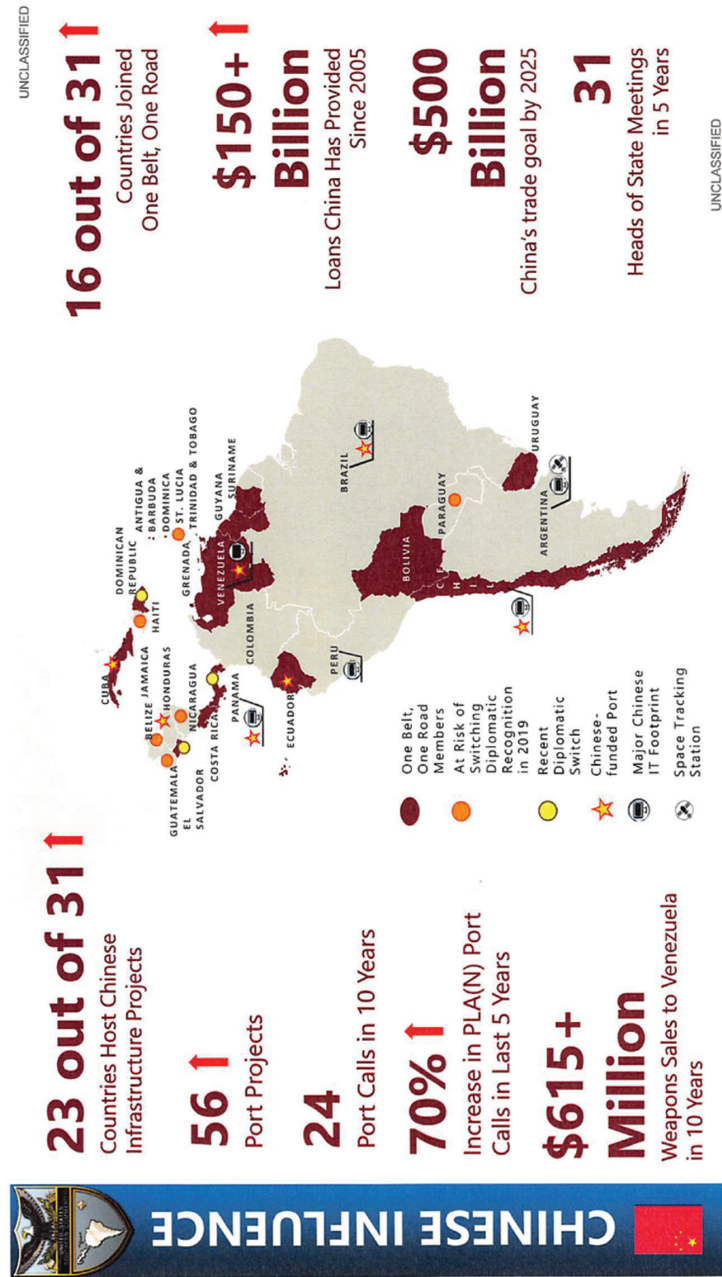


Intel Collection Vessels  
Focused on U.S. East Coast



Underwater Research Vessel  
Threat to Undersea Cables







# CHINESE INFLUENCE



## INFRASTRUCTURE INVESTMENTS



Colon Port  
Panama Canal Investments



HUAWEI Smart City  
ZTE中兴

IT and Smart Cities

## WEAPONS SALES



Early Warning Radars

## DEPLOYMENTS



Hospital Ship "PEACE ARK"  
Deployed in 2011, 2015, 2018



Destroyer "LUYANG II"  
Deployed in 2015

## CHINESE SECURITY FOOTPRINT



Space Tracking Station  
Neuquen, Argentina

Admiral FALLER. Senator, I think a big idea, an initiative that recognizes the importance of our neighborhood, recognizes what goes on right here in areas connected by sea, land, air, space, cyber, is important to our shared security and our future, would be of great benefit. I worry, Senator, that we're not going to be present on the field in enough numbers to play the game. We've got to be there to influence the outcome and the results.

Senator JONES. All right. Well, thank you, sir. We'll send you some more Mobile-built LCSs.

Chairman INHOFE. Senator Cotton.

Senator COTTON. Thank you, gentlemen, for your appearance today and your service to our Nation, for all those men and women who serve underneath you in Africa Command and Southern Command.

Admiral Faller, I want to return to your comments about the presence of Cuba and Russia in Venezuela. You said, earlier, Cuban guards completely surround the Maduro Government. Does that mean that Maduro is dependent on the Cuban security and intelligence forces for his continuation in office?

Admiral FALLER. Senator, I think it's a good sense of where the loyalty of the Venezuelan people are that his immediate security force is made up of Cubans.

Senator COTTON. So, the men that surround Maduro, like our Secret Service, are Cubans, not Venezuelans.

Admiral FALLER. That is my understanding and assessment of the situation.

Senator COTTON. So, Venezuela's intelligence security services are so corrupt, so incompetent, so disloyal, so sclerotic that Maduro cannot even count on his own personal safety in his bed at night, on his own people.

Admiral FALLER. That's a fair assessment, as I understand, Senator.

Senator COTTON. How far does that go throughout the Venezuelan security and intelligence services? Does Nicolas Maduro have to depend on Cubans and Russians on the streets to beat his own people to keep them in line?

Admiral FALLER. Senator, I'm not—beyond the—what I characterize—I'm not aware of the details, but we watch that closely. We've seen reporting of Russian security forces being flown in. We're looking for evidence of how that will play out. Certainly this is an area that has our focus, as well as all our partners in the interagency.

Senator COTTON. That was another point. You mentioned that—you said you can't speak of Cuba's presence in Venezuela—let me stop myself.

Can you estimate, in this setting, how many Cuban security and intelligence officers there are in Venezuela?

Admiral FALLER. Sir, I don't have that number. I'd take that for the record.

[The information referred to follows:]

We estimate the number of Cuban security and intelligence personnel in Venezuela is somewhere in the thousands; this number is in addition to the over 20,000 medical personnel Cuba provides to Venezuela.]

Senator COTTON. Is it fair to—

Admiral FALLER. I'm——

Senator COTTON. Is it fair to say there are lots?

Admiral FALLER. I'd say there's—there are many, sir.

Senator COTTON. And——

Admiral FALLER. I also would mention, Senator, the presence of China has not been helpful in a diplomatic way. I'll leave that to the diplomats. China's in there, and they're involved in cyber in ways that are absolutely not helpful to a democratic outcome.

Senator COTTON. You talk about Russians traveling into the country. Have we seen an increase in Russian presence in Venezuela in the last 2 months as the National Assembly began to take its seat and President Guaido declared himself as interim President, and the United States and so many other nations around the world have recognized his legitimacy?

Admiral FALLER. Senator, it's hard, with Russia, to figure out what they're really up to. I——

Senator COTTON. You don't say.

Senator COTTON. There was reports last week by Russian official TASS news agency that I was actually on the Colombian-Venezuela border, and they rolled that with B-roll footage of amphibious landings and helicopter assaults. I was actually walking out of Senator Rubio's office at the time. I don't think the truth goes very far when it comes to their media, sir.

Senator COTTON. Okay, thank you for those comments, Admiral Faller, about Venezuela.

You mentioned China's activity in Venezuela in the cyber domain. They obviously are very active, as well, in what you might call debt diplomacy through their Belt and Road Initiative. Secretary of State Pompeo was in Panama last October cautioning that nation, and all nations who are participants in China's Belt and Road Initiative, about what it could mean for their sovereignty. Obviously, China has foreclosed in the port outside Colombo, in Sri Lanka. Malaysia recently left the Initiative because of China trying to throw its weight around. What's been the results of Secretary Pompeo's visit in the region? What feedback are you getting from some of these Belt and Road Initiative members?

Admiral FALLER. Senator, the states in the region, the countries, they want to continue to partner us, but I've cautioned the leaders that I've met with that, "While you might want to do that, if you leverage your ports and many of your businesses, including your IT infrastructure, to Chinese companies, with no strings attached and limited understanding of what the internal workings are, that you've actually put yourself in jeopardy of having a meaningful security relationship with us. It gets to a point where I won't be allowed or authorized to share information, because I just don't know where that information is going." So, I've been very emphatic about that, in terms of how it would affect us being a partner of choice. This is my concern to other questions that have been asked about what this hemisphere looks like, 10, 15, 25 years from now, and who the partner of choice is. We've got to be present, Senator.

Senator COTTON. Thank you, Admiral Faller.

General Waldhauser, one question for Africa. This is a little bit outside the warfighting domain, but the American military is called upon to do a lot outside that domain around the world, especially

in your area of operations. Nigeria has its elections next weekend. Nigeria is the seventh-largest country in the world, way larger than Russia or Mexico or Japan. An important ally of ours. What are the prospects for that election? Does it appear that it will be free and fair, and that either party, should they win, will continue to be a partner of the United States?

General WALDHAUSER. Senator, we're very much aware of the elections on February 16th. From the military perspective, we will watch that from the standpoint of actions leading up to and what will happen afterwards. We are—on the intelligence reports, we hope it'll be a peaceful election, but I think our sights are set on forward, and not in the rearview mirror, meaning that whoever would win, that now, okay, let's sit down and talk about where we are and how we can best help, whether it be the displaced people and the issues with—humanitarian issues in northern Nigeria, whether it's their army and their work against Boko Haram and ISIS—West Africa. So, my answer to that question is, let's get the election over. They're watching this today, by the way. I mean, my comments are going to be watched in Nigeria, and it's very important that I don't sway, either way.

Senator COTTON. Sure. Well—

General WALDHAUSER. The bottom line is, whoever wins, we want to sit down with them and now, how do we move forward and improve the situation?

Senator COTTON. Good. Well, I appreciate that answer. Of course, their election is a choice for the Nigerian people, and we want to have a good, stable relationship with whoever wins, to help continue that partnership.

Thank you, General.

Chairman INHOFE. Thank you, Senator Cotton.

Senator Duckworth.

Senator DUCKWORTH. Thank you, Mr. Chairman.

Gentlemen, thank you for being here today.

We've already discussed and gotten a good idea of how complex your missions are in both of your areas of operation. Our own vital national interests are threatened by violent extremists, by great-power competition, and all of multifaceted challenges that you face. As I looked at recent reporting on SOUTHCOM, much attention has been on the dictator's effort to cling to power; in AFRICOM, the persistent presence of violent extremists. Are these events merely symptoms of a larger systemic problem in both regions? What, in your assessment, are the prime drivers of instability in SOUTHCOM and AFRICOM? How are your commands postured to deal with the root causes? It's one thing to deal with the symptoms, but what are we doing to really get to the root causes that are occurring in both of your regions?

General WALDHAUSER. I'll go first, Senator. Thank you very much.

I'll use Niger as an example. Niger has a population of about 19 million. About 50 percent of those are under the age of 15. They certainly are in a very difficult area of Africa, meaning that they have a pressing from all sides, whether it be ISIS—West Africa, JNIM [Jama'at Nasr al-Islam wal Muslimin], in the west; whether it be AQ [al Qaeda] coming down through the Algeria-Nigerian bor-

der on the way to Mali; they have ISIS–West Africa on their eastern flank. They’re in a tough situation. What goes unnoticed sometimes is the whole-of-government approach that is used in Niger. For example, USAID has about \$150 million a year that they use for things like education, especially for young girls, for government, and—government infrastructure, and so forth. Moreover, the Millennium Challenge Corporation—they’re on the—I think, second year of a 5-year compact down there which has to do with agriculture, watering crops, and so forth. If you look at the security assistance that we’re providing, and you add to that USAID’s effort and the Millennium Challenge compact, that’s, I think, a good example of a whole-of-government approach of how we’re trying to deal with a country that has some very significant security challenges.

Senator DUCKWORTH. Thank you.

Admiral Faller?

Admiral FALLER. We do have some bright spots. I’d like to point out, Brazil has been a exporter of security in our history, same with Colombia. The trajectory of both our mil-to-mil relations with those countries is very positive. In the current Venezuela situation, we’re sharing a lot of information, we’re looking at this as a regional solution. Chile commanded, in our largest exercise, the Rim of the Pacific. But, around the region, corruption, weak governance, lack of jobs, these are things that are of effect. The military is a part of this whole government solution.

I saw this in Honduras. I was in an outreach center run by USAID. It was right next to a partnered police station. We had a few Army civil affairs people there meeting with some young men and women that had been supplied jobs. I asked the one individual—he had gone all the way to the United States-Mexico border, and turned around and came all the way back. He walked, as part of the caravan, but he came back. I said, “Well, why did you come back?” He said, “It was pretty scary for me. I felt that I should come home.” I said, “Well, why did you go?” He goes, “The family next to us was starving—or we were starving, and the family next to them was starving, but across the street, they had some food because their father had made it to the United States and was sending remittance back.” So, at the heart of this is the want of a better life and economy, and the want to have your kids go to school. All citizens of all the world deserve that.

Senator DUCKWORTH. Thank you.

Looking at this whole-of-government approach, how easy has it been—or, for you each, to work with other executive branch agencies to provide a coordinated whole-of-government approach? Is this happening—for example, you may be happening in Niger, but is it happening in other parts of Africa? How are we—are we consistent in applying this approach? What can we do to really help you be part of this, this team, so that we can get at the root causes?

General WALDHAUSER. Well, Senator, I would say that the AFRICOM staff has individuals from those agencies that work very closely with us on a daily basis. Moreover, as dollars become tight, our return on investment needs to be demonstrated. As a consequence, we have to be better stewards of our efforts, in terms of where we want to place our emphasis. We need to coordinate that

and synchronize that with this agency, because, really, it gets, I think, to the larger issue of influence, and the China influence, as well. We need to demonstrate that we can compete with them. We may not be building soccer stadiums or government buildings, but, at the same time, we're teaching them how to be better farmers, we're showing them what education can do for them. So, the bottom line for us is, we need to continue to work with our partners, which we have good relationships with, by the way. This development, diplomacy, and defense effort in the AFRICOM—at State Department and with AFRICOM is very, very positive experience.

Senator DUCKWORTH. Admiral?

Admiral FALLER. We have representatives from every inter-agency at my headquarters, and they sit in at every meeting. We're working this problem set hard, and we're work it in conjunction with country teams in the Embassy. A consistent level of resourcing is important, and recognizing this is a problem that will take years to solve, not months or days.

Senator DUCKWORTH. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Duckworth.

Senator Ernst.

Senator ERNST. Yes, thank you, Mr. Chair.

Thank you, gentlemen, for being here today and, of course, to the men and women in your commands. We thank them for what they do for all of us. To the family members that are here, thank you so much for the support that you give to your loved one. So, thank you.

Admiral Faller, I'll start with you. We've talked about a lot of different groups that are engaged in SOUTHCOM, but what I'd like to do is dive in a little bit to Hezbollah. They do have a notable presence in South America. As we saw last year, Argentina and Brazil, they both took action against Hezbollah assets in their respective countries. We've heard, from regional authorities, that they are aware of Hezbollah's presence in the tri-border area of Brazil, Argentina, and Paraguay. Can you go a bit further into the threat that Hezbollah presents in SOUTHCOM? What are our interests in making sure that they are not affecting us? What are those national security interests for us and our partners?

Admiral FALLER. Hezbollah is present. We watch them closely. It points to the importance of partnerships in the intelligence-sharing relationships that we are keen to develop and strengthen even further, because a lot of what's required to monitor them is human intelligence, and those nations know their terrain best.

Hezbollah's connection to Iran can never be understated. Iran is the largest sponsor of state terrorism in the world. There is a nexus there that goes back. We watch that working, in partnership with the other combatant commands, Defense Intelligence Agency, very, very closely. We look for trends, indications, and warnings. A terror threat anywhere around the world could be a threat of our Homeland.

Senator ERNST. I appreciate you highlighting how Iran is interconnected here. We talk about some of those near-peer threats with China and Russia in the SOUTHCOM AOR, but we also need to

recognize that Iran is a player, as well. So, thank you for making that connection.

Do we have sufficient information-sharing authorities in place, then? You've mentioned the need to communicate with friends and allies. Do we have the right authorities available?

Admiral FALLER. Senator, we have to work that on a country-by-country basis. It's a key thing that we look at when we do our country engagements. So, the answer is, we never have enough. We have countries where we want to sign additional agreements. We have to get assurances with them about what they'll share and who they'll share it with. It goes back to my concern about who owns the IT infrastructure in a given city or a given fusion center. We're constantly looking at this. I fly, Sunday, to Brazil for my meeting with their new military leadership. This will be one of our top areas of discussion. I would say that's a very healthy intel-sharing relationship that's growing, and we've been able to really work with our partners, because sharing information intelligence builds trust, frankly. Building trust is what is going to ensure our long-term interests in this hemisphere are safeguarded.

Senator ERNST. That is very good. We've also talked about the role that Special Operations plays in achieving your objectives in SOUTHCOM. Part of that ties back into Hezbollah and others. What are some of the biggest challenges that you'll face with regard to resources or authorities when it comes to our Special Operations and how we employ them in SOUTHCOM?

Admiral FALLER. We have very small numbers of Special Operations teams that are engaged with partners, building their security forces, and building it very effectively. Those need to be habitual relationships that are keyed off of what the partner needs. It's also good for our training, as well, as our partners train in jungles and a tough kind of terrain.

I would say our challenge is maintaining that. Our SOF forces are under pressure worldwide. As we look at what their deployment ratio is, the amount of time they're spending away from home to the time they spend at home, making certain that we get that balance right, making certain that we don't decimate the small presence that we have, which would break trust and really break the training and stability of our partner nation security forces.

Senator ERNST. Thank you. Yes, our dwell time is very small. We need to work on that.

Before I move on to the General, we have also talked about GITMO, Guantanamo Bay. Right now, we do have Iowa National Guard soldiers deployed there as a security force. What can we do to ensure that the troops we have that are stationed or a rotational force at GITMO, that they are being cared for, that they are safe? Not only do we want to make sure that those that are held there are kept in a safe environment, but also for our troops. What more can we be doing? Can you explain some of the challenges that we have at Guantanamo Bay right now?

Admiral FALLER. I had the honor to visit with some of your Iowa Guard prisoner guards, detainee guards—

Senator ERNST. Thank you.

Admiral FALLER.—just last weekend, Senator. They're doing fabulous work. So, thanks—



Senator ERNST. Great. Thank you.

Admiral FALLER.—for the—to the State for that.

The facilities were built with about a 5-year lifespan, and that's been 15–20 years ago. Our responsibility is the safe, humane treatment of the detainees, but also the safety of that Guard force. We have facilities that were beyond the ability to repair the roofs, where the alarm systems are questionable, based on the water intrusion. When the President's budget is released, I expect it to include money that would be put for some long-term facility upgrades in development. We need that for the safety of the Guard force and for the future of safe detainees.

Senator ERNST. Thank you. I appreciate that.

In the few seconds I have remaining, General, as well, Special Operations Forces in Africa, do we need to maintain our Special Operators in Africa and the work that they are doing?

General WALDHAUSER. Well, we certainly need to maintain them, and we certainly have to take a close look at how we employ and deploy them, and what their schedules are. We do—we continually reevaluate that all the time. The bottom line is, yes. But, I would say, what we really need in AFRICOM are some predictable general-purpose forces that can do things with regular armies on a somewhat episodic, but yet predictable, basis.

Senator ERNST. Very good. Thank you, General. I appreciate it.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Ernst.

Senator KAINE.

Senator KAINE. Thank you, Mr. Chair.

Thank you, to our witnesses.

The Chair and Ranking indicated that a unifier in your two regions is that you're under-resourced. I think another unifier is, in both your regions, you have a real cross-disciplinary, non-siloed focus, not just military assets, but the entire spectrum of what the U.S. can do. I think that's a—something about SOUTHCOM and AFRICOM that I really appreciate.

Admiral Faller, let me start with you. The discussion about Venezuela is a really important one. If the world wants to see a democracy-versus-dictatorship challenge, Venezuela is just, like, the perfect test case for circa 2019. What do democracies care for, and what do dictatorship care for? The Venezuelan Government of Maduro is supported by Russia, Cuba, and Iran. They're enabling him to do all kinds of horrible things, economically and in violation of human rights, et cetera. The Guaido interim government, which has a constitutional claim that, in the vacancy of a President, the Speaker of the legislative assembly becomes an interim President, is supported by the United States and the EU. You really can see what the difference between democracy and the aspirations of democratic governments and dictatorships, and what they care about, writ very clearly in the Venezuelan circumstance now.

But, here's a reality. We're dealing with regional institutions, like the Organization of American States (OAS), for example. In the OAS, every nation has one vote. The United States has a hard time getting the OAS to firmly come out against the Maduro Government, because many Caribbean nations still support the Maduro Government. They have been bribed to do so, with low-

price oil. It's very hard for us to do something like this on our own. When a principal regional institution like the OAS isn't completely with us, it's hard to put the appropriate pressure on.

I guess the point that I want to make is: Hard to beat something with nothing. The Chinese and Russians have been investing so heavily in Venezuela, tens of billions of dollars, over and over and over again. These Caribbean nations, they might feel culturally closer to the United States, but they're getting something from Venezuela that they need.

Your point about "We need to be on the field" is really, really, important. As I talk to leaders in this region, they say, "We would so much more like to do work with you guys. We are culturally connected, and we're all Americans, you know, but the other guys are there and present and investing. Even if we have suspicions, they're there with resources, and you aren't." I think that's an important lesson.

Want to ask about the Northern Triangle. It's a resource question, as well. The Alliance for Progress has been an initiative in the last few years to invest money and security and economic development assistance in the three nations in the Northern Triangle. Would it be your recommendation—so long as we can make those investments smart, would it be your recommendation that, if we can improve the security and economic development arc in those three countries, that that would help us deal with some of the challenges that SOUTHCOM has to deal with?

Admiral FALLER. Senator, the week before last, I visited projects, in all three countries, that were a direct result of the investments that you just cited. Those projects were USAID, State, INL, and a small footprint of Department of Defense working side by side to bring security, with local policing, and jobs, and host-nation investment in a way that stabilized some of the worst neighborhoods and showed hope. We talked to citizens that live there. We saw the results. I think consistent investment, in accordance with our laws, is a good thing in that area. Investment, a dollar there is going to save lives and result in better security here at home.

Senator KAINE. That's really important. The funds for those initiatives have been pretty dramatically slashed, the last 2 years. We don't know what the budget submission will be that we'll get, hopefully, by the end of the month. But, I think it's penny wise and pound foolish to cut development and security assistance and then complain about people coming to our border. We need to help build and support economies there, and security there, if we want people to not leave their own countries.

Let me quickly—General Waldhauser, to you—on page 5 of your submitted statement, you write, "In the fight against Boko Haram and ISIS–West Africa, we operate with partners in the Africa Union-enforced Multinational Task Force." The fiscal year '18 NDAA included a provision, in section 1264, that required the administration to provide an initial report and subsequent updates on the legal and policy frameworks for use of military force. I'm interested in the initial report, which was submitted in March of 2018. I'd like to put that in the record, if I could. It makes no—

Chairman INHOFE. Without objection.

[The information referred to follows:]

UNCLASSIFIED WITH  
SECRET//NOFORN ATTACHMENT

THE WHITE HOUSE

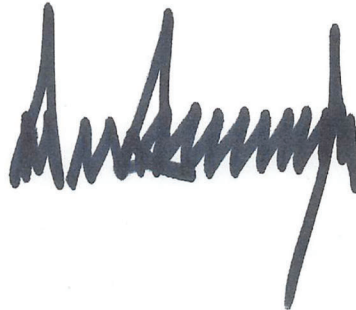
WASHINGTON

March 12, 2018

Dear Chairman McCain:

In accordance with section 1264 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115-91), I transmit herewith the attached report on Legal and Policy Frameworks Guiding the United States Use of Military Force and Related National Security Operations.

Sincerely,

A handwritten signature in dark ink, appearing to be "Donald Trump", with a long, sweeping flourish extending from the bottom right.

The Honorable John McCain  
Chairman  
Committee on Armed Services  
United States Senate  
Washington, D.C. 20510

UNCLASSIFIED WITH  
SECRET//NOFORN ATTACHMENT

UNCLASSIFIED

**Report on the Legal and Policy Frameworks Guiding the United States' Use of Military Force and Related National Security Operations**

This report is provided consistent with Section 1264 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2018.<sup>1</sup> It provides an update to the legal, factual, and policy bases for the "Report on the Legal and Policy Frameworks Guiding the United States' Use of Military Force and Related National Security Operations," originally published on December 5, 2016 ("original report"). Consistent with Section 1264, this report contains a classified annex. If a particular item or topic area from the original report is not covered in this update or its classified annex, it remains unchanged from the original report.

***Countries in Which the United States Has Used or Is Using Military Force***

Consistent with the War Powers Resolution, the President provides a periodic report to Congress every six months on the status of the situations in which U.S. Armed Forces have been, among other things, introduced into "hostilities or into situations where imminent involvement in hostilities is clearly indicated by the circumstances."<sup>2</sup> Including as described in the most recent periodic War Powers report, submitted on December 11, 2017, the United States has used military force in the following countries:<sup>3</sup>

- *Afghanistan:* Pursuant to the strategy that the President announced publicly on August 21, 2017, U.S. forces remain in Afghanistan for the purposes of stopping the reemergence of safe havens that enable terrorists to threaten the United States or its interests, supporting the Afghan government and the Afghan military as they confront the Taliban in the field, and creating conditions to support a political process to achieve a lasting peace. United States forces in Afghanistan are training, advising, and assisting Afghan forces; conducting and supporting counterterrorism operations against al-Qa'ida and against the Islamic State of Iraq and Syria (ISIS); and taking appropriate measures against those who provide direct support to al-Qa'ida, threaten U.S. and coalition forces, or threaten the viability of the Afghan government or the ability of the Afghan National Defense and Security Forces to achieve campaign success. The United States remains in an armed conflict, including in Afghanistan and against al-Qa'ida, ISIS, the Taliban, and the Taliban Haqqani Network, and active hostilities are ongoing.

<sup>1</sup> National Defense Authorization Act for Fiscal Year 2018, Pub. L. No. 115-91 (2017) ("NDAA for FY 2018").

<sup>2</sup> Joint Resolution Concerning the War Powers of Congress and the President, Pub. L. No. 93-148, 87 Stat. 555 (1973) ("War Powers Resolution").

<sup>3</sup> Letter from the President to the Speaker of the House of Representatives and the President Pro Tempore of the Senate providing a Supplemental Consolidated Report Consistent with the War Powers Resolution, December 11, 2017 ("2017 War Powers Report").

UNCLASSIFIED

## UNCLASSIFIED

- *Iraq and Syria:* As part of a comprehensive strategy to defeat ISIS, U.S. Armed Forces are conducting a systematic campaign of airstrikes and other vital operations against ISIS forces in Iraq and Syria. U.S. Armed Forces have also carried out airstrikes and other necessary operations against al-Qa'ida in Syria. U.S. Armed Forces are also deployed to Syria to conduct operations against ISIS with indigenous ground forces. In Iraq, U.S. Armed Forces are advising and coordinating with Iraqi forces and providing training, equipment, communications support, intelligence support, and other support to select elements of the Iraqi security forces, including Iraqi Kurdish Peshmerga forces. Actions in Iraq are being undertaken in coordination with the Government of Iraq, and in conjunction with coalition partners. U.S. Armed Forces participating in the Defeat-ISIS campaign in Syria have taken a limited number of strikes against Syrian government and pro-Syrian government forces. These strikes were lawful measures to counter immediate threats to U.S. and partner forces while engaged in that campaign.

Additionally, on April 6, 2017, U.S. forces in the Mediterranean Sea operating beyond the territorial sea of any state struck the Shayrat military airfield in Syria in response to the chemical weapons attack on Syrian civilians in southern Idlib Province, Syria, on April 4, 2017.

- *Yemen:* A small number of U.S. military personnel are deployed to Yemen to conduct operations against al-Qa'ida in the Arabian Peninsula (AQAP) and ISIS. U.S. Armed Forces continue to work closely with the Government of Yemen and regional partner forces to dismantle and ultimately eliminate the terrorist threat posed by those groups. United States forces have conducted a number of airstrikes against AQAP operatives and facilities in Yemen, and supported United Arab Emirates- and Yemen-led operations to clear AQAP from Shabwah Governorate. In October 2017, U.S. forces also conducted airstrikes against ISIS targets in Yemen for the first time.
- Separately, United States forces, in a non-combat role, have also continued to provide logistics and other support to the Saudi-led coalition combatting the Houthi insurgency in Yemen. The limited military and intelligence support that the U.S. military is providing to the Saudi-led coalition does not involve the introduction of U.S. Armed Forces into hostilities and thus does not trigger reporting under the War Powers Resolution.
- *Somalia:* In Somalia, U.S. forces are countering the terrorist threat posed by ISIS and al-Shabaab, an associated force of al-Qa'ida. United States forces have conducted a number of airstrikes against al-Shabaab as well as ISIS. United States forces also advise, assist, and accompany regional forces, including Somali and African Union Mission in Somalia (AMISOM) forces, during counterterrorism operations.
- *Libya:* United States forces have conducted a number of airstrikes against ISIS in Libya. These airstrikes were conducted in coordination with Libya's Government of National Accord.

## UNCLASSIFIED

## UNCLASSIFIED

- *Niger*: United States forces that were deployed to Niger to train, advise, and assist Nigerien partner forces were attacked on October 4, 2017 and on December 6, 2017, by elements assessed to be part of ISIS. United States and Nigerien partner forces responded with armed force in self-defense.

*The Domestic Law Bases for the Ongoing Use of U.S. Military Force*

- *Statutory Authorization: The 2001 AUMF*
  - *The Scope of the 2001 AUMF*: The classified annex contains more information on the application of the Authorization for Use of Military Force (2001 AUMF)<sup>4</sup> to particular groups and individuals.
- *Statutory Authorization: The 2002 AUMF*: Although the Authorization for Use of Military Force Against Iraq (2002 AUMF)<sup>5</sup> was mentioned in the original report with respect to its authorization to use force against ISIS in Iraq and in certain circumstances in Syria, the original report did not provide a full explanation of the scope of the 2002 AUMF.

Under the relevant portions of the 2002 AUMF, “[t]he President is authorized to use the Armed Forces of the United States as he determines to be necessary and appropriate in order to . . . defend the national security of the United States against the continuing threat posed by Iraq.”<sup>6</sup> Although the threat posed by Saddam Hussein’s regime in Iraq was the primary focus of the 2002 AUMF, the statute, in accordance with its express goals, has always been understood to authorize the use of force for the related dual purposes of helping to establish a stable, democratic Iraq and for the purpose of addressing terrorist threats emanating from Iraq. After Saddam Hussein’s regime fell in 2003, the United States continued to take military action in Iraq under the 2002 AUMF to further these purposes, including action against al-Qaida in Iraq (now known as ISIS). Then, as now, that organization posed a terrorist threat to the United States and its partners and undermined stability and democracy in Iraq. Congress ratified this understanding of the 2002 AUMF by appropriating funds over several years. Furthermore, although the Iraq AUMF limits the use of force to address threats to, or stemming from, Iraq, it (like the 2001 AUMF) contains no geographic limitation on where authorized force may be employed. Accordingly, the 2002 AUMF reinforces the authority for military operations against ISIS in Iraq and, to the extent necessary to achieve the purposes described above, in Syria or elsewhere.

- *The President’s Constitutional Authority to Take Military Action in Certain Circumstances Without Specific Prior Authorization of Congress*: In addition to these statutes, Article II of

<sup>4</sup> Authorization for Use of Military Force, Pub. L. No. 107-40, 115 Stat. 224, (2001) (“2001 AUMF”).

<sup>5</sup> Authorization for Use of Military Force Against Iraq, Pub. L. No. 107-243, 116 Stat. 1498 (2002) (“2002 AUMF”).

<sup>6</sup> *Id.* § 3(a)(1).



UNCLASSIFIED

the Constitution provides authority for the use of military force in certain circumstances even without specific prior authorization of Congress. For example, on April 6, 2017, the President directed a military strike against the Shayrat military airfield in Syria pursuant to his authority under Article II of the Constitution to conduct foreign relations and as Commander in Chief and Chief Executive. United States intelligence indicated that Syrian military forces operating from that airfield were responsible for the chemical weapons attack on Syrian civilians in southern Idlib Province, Syria. The President directed this strike in order to degrade the Syrian military's ability to conduct further chemical weapons attacks and to dissuade the Syrian government from using or proliferating chemical weapons, thereby promoting regional stability and averting a worsening of the region's current humanitarian catastrophe. In directing this strike, the President acted in the vital national security and foreign policy interests of the United States. Congress was notified of this particular strike on April 8, 2017, in a Presidential report, consistent with the War Powers Resolution.

#### *Working With Others in an Armed Conflict*

The 2017 National Security Strategy and the 2018 National Defense Strategy continue to prioritize working by, with, and through allies and partners to achieve our national security objectives. This calls for partnerships with states, multinational forces, and in some cases, non-state actors that share U.S. interests. For example, 70 state partners (and 4 international organizations) are part of the Defeat-ISIS Coalition. United States-supported non-state actors in Syria were also critical in dismantling ISIS's self-proclaimed physical "caliphate."

- *Domestic Authorities and Limitations:*

Section 1232 of the NDAA for FY 2017,<sup>7</sup> as amended by Section 1231 of the NDAA for FY 2018, purports to limit "bilateral military-to-military cooperation" between the United States and Russia. The United States does not support Russia's military strategy in Syria, and U.S. military forces do not cooperate with Russian military forces. However, Section 1232 does not purport to limit military-to-military discussions with Russia to de-conflict military operations in Syria to reduce the risk of interference, miscalculation, or unintended escalation of military operations.

As described in the original report, the United States often supports its partners and allies by providing intelligence in furtherance of shared objectives. As appropriate, the United States takes a variety of measures, including diplomatic assurances, vetting, training, and monitoring, to promote respect for human rights and compliance with the law of armed conflict by the recipient of U.S. intelligence and to mitigate the risk that the intelligence will be used in violation of the law. Sharing must always be consistent with U.S. domestic law.

#### *Application of Key Domestic and International Legal Principles to Key Theaters*

<sup>7</sup> National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, 130 Stat. 2000 (2016).

UNCLASSIFIED

UNCLASSIFIED

- *Afghanistan*: Since October 7, 2001, the United States has conducted counterterrorism combat operations in Afghanistan. Pursuant to the strategy that the President announced publicly on August 21, 2017, U.S. forces remain in Afghanistan for the purposes of stopping the reemergence of safe havens that enable terrorists to threaten the United States, supporting the Afghan government and the Afghan military as they confront the Taliban in the field, and for the purpose of creating conditions to support a political process to achieve a lasting peace. United States forces in Afghanistan are training, advising, and assisting Afghan forces; conducting and supporting counterterrorism operations against al-Qa'ida and against ISIS; and taking appropriate measures against those who provide direct support to al-Qa'ida, threaten U.S. or coalition forces, or threaten the viability of the Afghan government or the ability of the Afghan National Defense and Security Forces to achieve campaign success. The United States remains in an armed conflict, including in Afghanistan and against al-Qa'ida, ISIS, the Taliban, and the Taliban Haqqani Network, and active hostilities are ongoing. The domestic and international legal bases for U.S. military operations and activities in Afghanistan remain unchanged from the original report.
- *Iraq*: Due to accelerated progress in the fight to defeat ISIS, the United States and the Defeat-ISIS Coalition are shifting focus in Iraq from combat operations to sustaining military gains. United States forces, however, continue to conduct airstrikes, and Iraqi security forces are still engaged in combat operations against remaining cells of ISIS. ISIS retains the ability to carry out lethal attacks, and it still poses a significant threat to civilians and the stability of the region. At the continued request and with the consent of the Government of Iraq, and with the continued authority provided by statute and the Constitution,<sup>8</sup> U.S. forces are advising and coordinating with Iraqi forces and are training, equipping, and building the capacity of select elements of the Iraqi security forces, including Iraqi Kurdish Peshmerga forces, to prevent the re-emergence of ISIS. The domestic and international legal bases for U.S. military operations and activities in Iraq remain unchanged from the original report.
- *Syria*: The United States and the Defeat-ISIS Coalition liberated 4.5 million people from ISIS oppression in 2017, and ISIS has lost 98 percent of the territory it once claimed in Iraq and Syria. The United States and U.S.-supported Syrian Democratic Forces (SDF) are engaged in liberating the middle Euphrates River valley in Syria. U.S. operations include continued airstrikes; advice and coordination to indigenous ground forces; and training, equipment, and other assistance in support of those indigenous forces. Despite this, ISIS continues to be able to carry out lethal attacks. Therefore, the United States continues to use force against ISIS and al-Qa'ida in other parts of Syria as well. After the middle Euphrates River valley is liberated, the United States will continue to conduct airstrikes against these terrorist groups in Syria and will continue to train, equip, and build the capacity of appropriately vetted Syrian groups pursuant to the authority provided by statute and the Constitution.<sup>9</sup>

<sup>8</sup> NDAA for FY 2018, *supra* note 1, § 1222.

<sup>9</sup> *Id.* at § 1223.

UNCLASSIFIED



UNCLASSIFIED

The fight against ISIS continues, and it remains a regional and global threat through its ability to organize and inspire acts of violence throughout the world. Similarly, al-Qa'ida continues to pose a threat to the United States and to the security of our partners and allies. The domestic and international legal bases for U.S. military operations and activities against ISIS and al-Qa'ida in Syria remain unchanged from the original report.

In May and June 2017, as well as February 2018, the United States took strikes against the Syrian Government and pro-Syrian Government forces. These strikes were limited and lawful measures taken to counter immediate threats to U.S. or partner forces while engaged in the campaign against ISIS. As a matter of domestic law, the 2001 AUMF provides authority to use force to defend U.S., Coalition, and partner forces engaged in the campaign to defeat ISIS to the extent such use of force is a necessary and appropriate measure in support of counter-ISIS operations. As a matter of international law, necessary and proportionate use of force in national and collective self-defense against ISIS in Syria includes measures to defend U.S., Coalition, and U.S.-supported partner forces while engaged in the campaign to defeat ISIS.

- *Yemen:* In addition to conducting direct action against AQAP in Yemen as described in the original report, the United States has also conducted a limited number of airstrikes against ISIS in Yemen. The 2001 AUMF confers authority to use force against ISIS. As a matter of international law, we note that the airstrikes against ISIS have been conducted with the consent of the Government of Yemen in the context of its armed conflict against ISIS and also in furtherance of U.S. national self-defense.

As described in the original report, since 2015, the United States has provided limited support to the Kingdom of Saudi Arabia (KSA)-led coalition military operations against Houthi and Saleh-aligned forces in Yemen. Authorized types of support continue to include intelligence sharing, best practices, and other advisory support when requested and appropriate. Additionally, the Arms Export Control Act (AECA) and associated delegations of authority provide the Secretary of State, primarily through the Foreign Military Sales program and through the Department of State's licensing of Direct Commercial Sales, the authority to provide or license defense articles and defense services to KSA, the United Arab Emirates (UAE), and other members of the KSA-led coalition. Many of these defense articles and defense services have been used in the conflict in Yemen. The domestic and international legal bases for limited U.S. military support to KSA-led coalition operations in Yemen remain unchanged from the original report.

- *Somalia:* In addition to conducting direct action against al-Qa'ida and al-Shabaab in Somalia as described in the original report, the United States has also conducted airstrikes against a limited number of ISIS terrorist targets in Somalia. The 2001 AUMF confers authority to use force against ISIS. As a matter of international law, we note that the airstrikes against ISIS have been conducted with the consent of the Government of Somalia in the context of its armed conflict against ISIS and also in furtherance of U.S. national self-defense.

UNCLASSIFIED

## UNCLASSIFIED

- *Libya:* The United States has continued to conduct airstrikes against ISIS terrorist targets in Libya, including its desert camps and networks, to promote regional stability and contribute to the defeat of ISIS in Libya. The domestic and international legal bases for military direct action in Libya remain unchanged from the original report.
- *Niger:* At the request of the Government of Niger, the previous Administration approved, and the current Administration continued, the deployment of U.S. forces to Niger under the President's constitutional authority as Commander-in-Chief and Chief Executive and under certain statutory authorities of the Secretary of Defense to train, advise, and assist Nigerien partner forces. On October 4, 2017 and December 6, 2017, those U.S. forces and their Nigerien partner forces were attacked by forces assessed to be elements of ISIS, a group within the scope of the 2001 AUMF, and responded with force in self-defense. The Administration has concluded that this use of force was also conducted pursuant to the 2001 AUMF.

*Targeting*

*United States Policies Regarding Targeting and Incidental Civilian Casualties:* The United States remains committed to complying with its obligations under the law of armed conflict, including those that address the protection of civilians, such as the fundamental principles of necessity, humanity, distinction, and proportionality. In addition to American values and legal imperatives that guide U.S. forces in the protection of civilians, protecting civilians is fundamentally consistent with mission accomplishment and the legitimacy of operations. The United States continues, as a matter of policy, to apply heightened targeting standards that are more protective of civilians than are required under the law of armed conflict. These heightened policy standards are reflected in Presidential and other Executive Branch policies, military orders and rules of engagement, and the training of U.S. personnel. The classified annex contains additional information on this topic.

*Capture and Detention of Individuals in Armed Conflict*

The capture of terrorist suspects remains an essential part of U.S. counterterrorism strategy. The United States uses all available tools at its disposal, including law of armed conflict detention, the criminal justice system, and transfers to third countries. Maximizing intelligence collection and seeking the most appropriate long-term disposition are key factors in choosing the right tool or combination of tools, while always adhering to U.S. legal obligations, policies, and values. The classified annex contains additional information on this topic.

The President issued Executive Order (E.O.) 13823 on January 30, 2018, directing the Secretary of Defense, in consultation with the Secretary of State, the Attorney General, the Secretary of Homeland Security, the Director of National Intelligence, and the heads of any other appropriate executive departments and agencies, to recommend policies to the President regarding the disposition of individuals captured in connection with an armed conflict. The Executive Branch will inform Congress of any new policies approved by the President.

UNCLASSIFIED

- *Scope of Military Detention Under Article II of the U.S. Constitution:* As discussed in the original report, the President as Chief Executive and Commander-in-Chief has constitutional authority to direct the use of military force in certain circumstances, without prior statutory authorization. Over two centuries of Executive Branch practice support this authority, supplying a “historical gloss on the ‘executive Power’ vested in Article II of the Constitution.”<sup>10</sup> This authority has been the basis for using force in a number of instances discussed throughout the original report and in this update. If the President were to order operations in reliance on his constitutional authority to use military force abroad, that authority would include the power to detain individuals with whom the United States is engaged in hostilities so that they could not return to the battlefield for the duration of those hostilities.<sup>11</sup>
- *Review of Continued Detention of Detainees at Guantanamo Bay:* The President issued E.O. 13823 on January 30, 2018, revoking Section 3 of E.O. 13492 of January 22, 2009, which was never acted upon fully but which ordered the closure of detention facilities at U.S. Naval Station Guantanamo Bay. Detention operations at Guantanamo Bay are necessary because a number of the remaining detainees are being prosecuted by military commission, and the detention of others is necessary to protect against continuing, significant threats to the security of the United States, as determined by periodic reviews. Further, detention operations at Guantanamo Bay are legal, safe, humane, and conducted consistent with U.S. and international law. The E.O. provides that all detention operations at U.S. Naval Station Guantanamo Bay will continue to be conducted consistent with all applicable United States and international law. The E.O. also permits the transport and detention of new detainees to Guantanamo Bay when lawful and necessary to protect the United States and directs the Secretary of Defense, in consultation with the Secretary of State and the Attorney General, to recommend policies to the President governing the transfer of individuals to Guantanamo Bay.

For those detainees at Guantanamo Bay not charged in or subject to a judgment of conviction by a military commission, E.O. 13823 retains the procedures for periodic review established in E.O. 13567 of March 7, 2011, which are described in the original report. The purpose of the periodic review is to determine whether continued law of war detention is necessary to protect against a significant threat to the security of the United States.

#### ***Prosecution of Individuals Through the Criminal Justice System and Military Commissions***

Since the publication of the original report, the Department of Justice has successfully prosecuted a number of individuals for terrorism and terrorism-related offenses. Among others, Ibrahim Adam Huran, also known as Spin Ghul, was sentenced to life imprisonment for his role in attempting to murder American military personnel in Afghanistan and conspiring to bomb the

<sup>10</sup> *Am. Ins. Ass'n v. Garamendi*, 539 U.S. 396, 414 (2003).

<sup>11</sup> See, e.g., *Hamdi v. Rumsfeld*, 542 U.S. 507, 519-21 (2004) (plurality) (“[D]etention to prevent a combatant’s return to the battlefield is a fundamental incident to waging war . . . .”); *id.* at 587 (Thomas, J., dissenting).

UNCLASSIFIED

UNCLASSIFIED

U.S. Embassy in Nigeria, and Ahmed Abu Khattala was convicted of federal terrorism charges stemming from his role in the 2012 attacks on U.S. facilities in Benghazi.

UNCLASSIFIED

Senator KAINE. It makes no mention of ISIS–West Africa or Boko Haram as an associated force. As far as I know, there’s not been an updated report submitted to this Committee, as would be required if any new determination were made. Has Boko Haram or ISIS–West Africa been determined to be an associated force within the—either the 2001 or 2002 AUMF?

General WALDHAUSER. Senator, first of all, we do not have offensive strike capabilities or authorities in those countries. So, we can't strike. We can strike in Somalia, we can strike in Libya, but not in Nigeria, Cameroon, Chad, and the like. We don't have authorities there.

Now, ISIS-West Africa has grown—they go by different names every once in a while, but they have grown in numbers. They're now probably in the neighborhood of around 3 to 4,000. That's the best estimate that we have. They have been very aggressive over the summer, into this year. They now have taken large pieces of real estate in northern Nigeria. I think, of the two, right now they're the one that we have the most concern about, because we're not sure what their intentions would be with regards to outside the region. Boko Haram, probably around 1,000. Bottom line, though, Senator, I can't say for sure whether they have been designated or not. I know that we don't strike them.

Senator KAINE. When you say you "don't strike," you also include don't strike under a collective self-defense doctrine?

General WALDHAUSER. No. Collective—we—if we are accompanying—that's the whole key here, now—if we are accompanying, we have the right of self-defense and collective self-defense. If we are not accompanying, which we have not done at all in Nigeria, and we haven't accompanied inside other places for quite some time—we do not have collective self-defense, because I haven't designated it, and we don't use it.

Senator KAINE. Great. Thank you.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Kaine.

Senator Hawley.

Senator HAWLEY. Thank you very much, gentlemen, for being here. Thank you again for your exemplary service, and for all those under your command.

General, let me start with you. The National Defense Strategy, of course, reemphasizes great-power competition that we've talked a lot about today and you mentioned, to great degree, in your testimony. I want to ask you about China, in particular, in your AOR. What could you tell us—to what degree and in what ways are we continuing to shift focus and resources to engage in this great-power competition and counter Chinese influence in your AOR? I'm thinking, in particular, of China's growing influence. Its base in Djibouti. I've seen estimates that there may be as many as 25–27 Chinese bases across the continent. What can you tell us about that and what we're doing to counter this growing influence there?

General WALDHAUSER. Well, thank you, Senator. Let me try to take that from the 50,000-foot level. First of all, just to emphasize, China has one overseas base in Djibouti. They participate in UN peacekeeping operations, places like Mali, places like Sudan, but they do not have other bases. Is that in their future? That's perhaps.

What I would say is—from the African perspective, is, China has been there for quite some time. They're in the process of building over 300 miles worth of railroads, railroads tied primarily to areas of mineral extraction, which, again, then take this goods to a port somewhere. So, they're heavily invested and heavily involved.

From the African perspective, they, the Africans, do not want to be in the middle of this. They don't view it as, "We either choose the United States or we choose China." They don't want to be in the middle of that particular engagement.

I think that one of the things that we do, from the DOD perspective, is, we try to just show—just be good partners. When Secretary Tillerson was there, a year or so ago—or whenever the visit took place, I believe it was a year or so ago—you know, he talked about, "We need to work with the governments of those countries to make sure the arrangements they make are in their best interests." You had leaders from the African Union, you've had—Paul Kagame is another one that—you know, that—the African Governments will make their decisions based on their best interests, and they're capable of doing that.

On the other hand, Chinese efforts, in terms of selling of equipment and some of the arrangements that have been made, there has been some blowback from various countries. Sierra Leone, for example, is walking away from an airport agreement that was supposed to be built by the Chinese. The Kenyans, for example, have problems with the Chinese equipment that's been sent to them. So, again, the bottom line is, in the AFRICOM AOR, China is there.

The final thing I would say, in order that—this issue of influence and how we want to be the best partners—the Chinese work hard at developing and maintaining the relationship with the senior officials of the governments inside the African continent. We are very grateful, for example, of Senator Inhofe and his team and his visits that they make there, but I read an article the other day that talked about, in the last decade, 80 senior-level—we're talking Minister and above, to include the President of China—visits on the African continent. That's a lot. Moreover, since 1990, their Foreign Minister, his first trip is—every year, in January, is to a country in Africa, just to see how they're doing.

So, I would just say, the whole-of-government approach, if we want to maintain influence, we have to kind of up our engagement, and develop and work at the relationship part of this.

Senator HAWLEY. You testified, I think, last March—to a House committee, March of 2018—that you expected China would—we should expect an increasing number of bases—outright military bases. Is that still your assessment?

General WALDHAUSER. Well, I think first of all, the Belt and Road Initiative is what is driving all of this. I think what the Chinese are doing is, they're taking a lot of lessons learned, and they are learning a lot from their first overseas base that they have in Djibouti. This is not an easy thing to do. The United States is very good at it. They watch what we do. But, they're learning this. They certainly have their eyes on other facilities. Ports, for example, are a key to what would facilitate their, not only mineral extraction, but their markets for their goods to come into the continent, as well. I mean, they view this large youth bulge, the population demographics, which we haven't talked about today, but it's in the testimony—they view a large consumer class as a place where they can sell their goods sometime in the future. So, although Djibouti is the only base, they certainly are looking at other options.



Senator HAWLEY. Let me just ask you, more generally, about our European allies and their help, or lack thereof, in your AOR. What things should we be doing in order to encourage our European allies to—in this era of renewed great-power competition, to be helping us with our strategic objectives in your—in the area under your command?

General WALDHAUSER. From the AFRICOM perspective, the European Union does a lot on the continent with regards to training, so there are European Union training missions in Mali, there are European training missions inside Somalia. Those are just two examples. We work closely with them, because we are one—for example, I've indicated, in Somalia, we are one of a group of in—of organizations and countries that is trying to, you know, make things right there. The European Union is a big player, and we coordinate with them. I talk with their leadership all the time. Our effort to coordinate the training activities in a place like Somalia, the European Union is a big player. They do a lot. They, by the way, are the ones who pay the stipends for the Somali National Army. They've put a lot of money into Somalia, no doubt about it.

Senator HAWLEY. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hawley.

Senator Blumenthal.

It's Senator Reed, presiding.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

Thank you both for your service and for being here today in critical commands that are perhaps less in the spotlight, but no less important than any of the others that we oversee, both of them absolutely critical to our national security. Thank you and the men and women who serve with you, for your service to our Nation.

I want to begin on the topic of military partnership programs, also perhaps less visible to the public, but very important. Both of you, I think, have endorsed the State Partnership Programs. The International Military Education and Training Program, as General Votel testified on Tuesday, are, he said, "dollar for dollar, the most effective funding that CENTCOM receives, from a strategic perspective." The Connecticut National Guard, as a matter of fact, is an active participant in the State Partnership Program, and currently partners with Uruguay. Next year is the 20th anniversary of this partnership. To date, the Connecticut National Guard has conducted over 110 mutually beneficial exchanges with their Uruguayan partners. In April, the Connecticut National Guard will send 40 soldiers and airmen on a Connecticut Air National Guard C-130H to Uruguay, marking our last—largest contingent to Uruguay to date. This is an enormously educational, beneficial experience for them, for the Uruguayans, and it is repeated again and again and again all around the world. This kind of relationship, I think, is extremely important to both countries, to us and other countries around the world. So, thank you for your support. General Evon, our TAG, was here this morning, and we had a chance to meet with him.

I want to ask you, General Waldhauser. I was searching for the exact statement you made, about a year before the Niger tragedy, if I may put it that way, about the lack of sufficient intelligence resources devoted to your command, particularly to that area of

your command. I note, in your testimony, you say, "Over a 3-year period, United States Africa Command has increased Nigerian counter-IED capability, as well as intelligence, surveillance, and reconnaissance assets, sustainment maintenance, and operation." Your estimate as to the dearth and deficit of intelligence in that part of the world was striking to me before the Niger incident. How much improvement has there been in the investment in intelligence in that part of the world?

General WALDHAUSER. Senator, I think the best way to answer that question is, you know, our mission there really is to work with our partners. In this case, it's the French. I would say, over the last year, that our relationship with the French, to include intelligence-sharing, has really gone to as good as I've seen it. The French have the lead in that area. We support partners, and, in that particular case, in the Sahel area of northern Mali, Niger area, they have the lead, and it's our job to support them. So, we kind of use the phrase, "It's African-led, French-assisted, and United States-supported." What I would say is that our intelligence professionals, as they synchronize what we bring and what they bring, is something that has really added to our ability to understand the situation there over the last year.

Senator BLUMENTHAL. Do you think, now, that it is satisfactory? Adequate? Excellent? How would you characterize it? You said "as good as you've seen," but that was not very good in the year before the Niger incident.

General WALDHAUSER. So, I would use the words, as you said, "satisfactory and adequate." We're never going to have the ISR total that we need, to include the human intelligence that goes into places like that, but, for our support and for what our mission is, it's adequate ISR now as we utilize our partners, and how we train and how we assist the Nigerian forces, as well.

Senator BLUMENTHAL. Would you say, Admiral Faller, that that's true in your command, as well, that you're satisfied that there are sufficient ISR—intelligence, surveillance, and reconnaissance—resources devoted?

Admiral FALLER. Senator, we're constantly looking at this. I think we do have gaps. We mitigate those gaps with different sources of intelligence. We are deficient in our ISR for the counter-narcotics mission.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

Senator REED [presiding]. On behalf of Chairman Inhofe, Senator Blackburn, please.

Senator BLACKBURN. Thank you for being here today. We look forward to a closed session with you.

I want to come back to something each of you have mentioned but we've really not talked that much about, and that is the telcom issues that are in each of your AOR, and the participation of China—Huawei, ZTE—and their relationship with the Russians. The Chairman mentioned, earlier, his concern about how China is putting their fingers into every area when it comes to not only the ISR, but the communications component, building out these networks. He mentioned he didn't know where the money came from. General, I'd be interested to hear from you. When you talk about



China and how they are advancing, how much of the bankrolling of this comes from Russia? Or do you all know?

General WALDHAUSER. Well, ma'am, the best way to answer that is, I think that when the Chinese come to a country with a plan, whether it's to build railroad, infrastructure, bridges, and the like, they come with a full plan. They come with the charts to do it, they come with the money to do it, they'll bring the workers to do it. It's just kind of a one-stop-one——

Senator BLACKBURN. Does the money come from Russia, primarily?

General WALDHAUSER. This is Chinese, now. I would—in fact, how I would answer that is, in kind of a—not to be—in a kind of anecdotal way, but recently in the elections in the Democratic Republic of the Congo, where Joseph Kabila just was—went out of office, one of his opponents said that the Chinese bring the money, and the Russians bring the muscle.

Senator BLACKBURN. Got it.

General WALDHAUSER. So, I think that's a good way to try to illustrate, kind of, where these two different countries are when it comes to their engagement.

Senator BLACKBURN. Okay.

Let me ask you this. When we look at what has happened with the Chinese and with their access into the telcom area, and as we look at artificial intelligence and 5G, how do you see Huawei and their participation? How is that going to affect the buildout in your AORs?

Admiral, if you want to go at it first, and then the General.

Admiral FALLER. It's concerning. The extent to which China would own the IT infrastructure of a country, their intelligence or fusion centers would affect our relationship and our ability to——

Senator BLACKBURN. Do they understand that you will not share information with them if it is going over Huawei or ZTE? Or——

Admiral FALLER. We've had frank discussions——

Senator BLACKBURN. Very frank discussions.

Admiral FALLER.—Senator, about this.

Senator BLACKBURN. Okay.

General WALDHAUSER. Senator, the way I would answer that is, we obviously have some unique challenges in Djibouti. I mean, the Chinese bases have several miles away from where we're located. The Djibouti base services not only AFRICOM, but it does CENTCOM and SOCOM, I believe, as General Votel testified the other day. We'd be naive to think that the counterintelligence and the communication issues, and the fact that they have actually built the system inside Djibouti, they're not trying to get after what we're trying to do.

Senator BLACKBURN. Okay. How do you make certain—what is your best effort in making certain that we remain the partner of choice?

General WALDHAUSER. Well, again, as I said several times this morning, from our military perspective, we want to be sincere in our efforts, we want to deliver what we say we can do, we want to be role models when our troops train with African troops, we want our equipment to be quality equipment, and we just—we, essentially, want to be good partners. I think that, when you bring

in the agencies that we talked about—USAID, Millennium Challenge Corporation, and so forth, their projects—I mean, we’ve got to make sure we elevate those, because, in places like Senegal, for example, they’re—the Chinese will build a wrestling stadium, but, at the same time, we have all kind of compacts ongoing that don’t get the publicity that some of these things do. So, it’s—bottom line for us is, we have to make sure that we’re really doing an—overall whole-of-government approach, and we’re synchronizing our efforts, and we make sure that—we take credit for some of these programs that may not get the visibility that a brand-new infrastructure would.

Senator BLACKBURN. Thank you for the comments. We hope that that whole-of-government approach continues to include making certain that we’re paying attention to those telcom and wireless networks.

Yield back.

Chairman INHOFE [presiding]. Thank you, Senator.

Let me just announce—it looks like we’re down to the most important one, of course—last, we say for—we are going to have—I say to the staff of those who are not here right now, we’re going to have a closed session immediately following this, in S—in Visitors Center, 217, for those who would like to come and ask some of the questions that were not appropriate to be asked in an open session.

Senator King.

Senator KING. Thank you, Mr. Chairman.

Admiral Faller, you’re not going to be surprised by this question. The question is, interdiction of drug shipments—and I understand it’s already been discussed, to some extent—what do you need? If you were given a blank sheet of paper—or not a—what do you—what does the Coast Guard need? What do you need? What do we need to do a better job of interdicting those drug shipments that we know about? I just—it just is in—it’s so frustrating that we are only interdicting about 25 percent of what we know about. So, do we need 18 more cutters, 12 more Zodiacs? What’s on your list of assets?

Admiral FALLER. It’s all of our responsibility, and we’ve got to start at the source. So, very encouraged by the Colombian Government getting back into—seriously back into the eradication game. They’ve met their goals for 2018, and we’re seeing progress in 2019. So, record cocaine is going to mean record drug flows, and we’ve got to stop it along the way. That requires ISR, intelligence and surveillance assets, maritime patrol aircraft, helicopters—

Senator KING. No, I understand that, but I’m asking you for some specifics. Do we need eight more Global Hawks? Do we need 14 more cutters? What is it we need?

Admiral FALLER. We need more Navy ships.

Senator KING. Okay.

Admiral FALLER. More U.S. Navy—

Senator KING. Of what nature?

Admiral FALLER. Sir, the littoral combat ship is fit for purpose for this type a mission, Senator. We need multiple force packages. We need the Coast Guard, a sustained presence. They’ve stepped up in a big way, from five to eight cutters over the holiday. Then

we need the partners in the game. We're seeing improvements in some of the partners. I'll credit El Salvador, Guatemala. We need others to step up. That requires pressure from our government and myself to get that to happen. So, a lot of work to be done, Senator.

Senator KING. Do you feel we are moving the needle? Are we moving forward on these multiple fronts?

Admiral FALLER. We had record interdiction in 2017, 2018, but it's insufficient. We're nudging, but we're not moving the needle enough, Senator. One of the areas you asked me to look at previously, I need to get back to you on, is the authority piece and whether we have artificial seams between the air-land boundary, and how we can better utilize and work across that boundary. We've stepped up our partnership, within the last year, with Drug Enforcement Agency and fusion centers here in the United States. Again, more needs to be done to stay ahead of the threat.

Senator KING. I just hope, if there are assets, in terms of either budgetary resources, authorities, you will let us know, because these drugs are killing our people, and—one a day, in Maine. This is a—it seems to me, a high-return opportunity, here, given the fact that we know of the shipments that we can't interdict.

Admiral FALLER. Senator, I agree 100 percent. It's a threat to our Nation, killing our citizens. It's killing citizens of our partner nations, as well. The money from this is fueling those drug and criminal organizations, which is driving instability, it's contributing to the other factors we see, like the illegal migration. So, it's important, for many reasons, that we have to get after this.

Senator KING. Well, keep—stay with us on this, Admiral. Thank you.

On the issue of—and you mentioned in your testimony, I think, in answer to Senator Kaine, about progress you're seeing in the northern triangle countries based upon American investments. I would point out that there was a huge refugee problem in the world in 1945. There were about 10 million refugees in western Europe after World War II. One of the responses of this country was the Marshall Plan, which was designed to stabilize the economies of those of that region. It was very controversial at the time, but it—I think all would agree now, it was immensely successful. I think we need a similar kind of approach to stabilizing those countries so people don't have to flee. The best way to stop someone coming to our border is that they never start on the journey. That means—I believe you agree that that means work, AID, agriculture, all of those programs in those countries, again, dealing with the issue of corruption, but to try to do that effectively. Do you agree that that's a—should be a priority?

Admiral FALLER. Senator, I agree. That should be a priority.

Senator KING. Thank you.

Quick question, General. By the way, these graphics are terrific on the—on Chinese and Russian influence in Latin America. I compliment your staff, whoever presented them. They're very dramatic and sobering.

General, in Africa, China's doing similar kinds of things: investing, blending, developing infrastructure, all those things. Is there a concern that this is a precursor to a military presence? I mean,

is Djibouti a beginning of a militarization process that presents a kind of global threat or an expansion of a threat from China?

General WALDHAUSER. Senator, I think, at this point in time, it's too early to make that leap at this point. I mean, they obviously want to—one of the reasons for their engagement there is, they've got, you know, 2,000 or so peacekeepers, they've got 300,000 or so civilians there. They want to be able to protect their interests in their projects that they're working on. So, whether that leads to a militarization of the continent, it's still early to tell. But, I would say that one of the areas of concern that we have there is, in the Djibouti—the Straits of Bab al-Mandab area, where the Red Sea comes down, where we've had really open access for quite some time, that is an area of concern, because not only the Chinese, but the Russians, the Emiratis, the Saudis are all interested in real estate on the Red Sea, on the African side—Sudan, Eritrea—

Senator KING. They're using an interesting technique of lending money and then calling it. It's a kind of debt colonialism.

General WALDHAUSER. Well, they have leverage in some—in many of their situations. As I said, I mean, the—these are decisions these governments have to make, but Djibouti's a—really a classic example, where the Chinese own over 80 percent of their overseas debt. This is a—certainly a concern.

Senator KING. Thank you.

Thank you, gentlemen.

Chairman INHOFF. Thank you, Senator King.

Before Senator Perdue is recognized, I want to repeat to the staff that's here that there will a closed session after this. Hate to ask you to go over, because there may be nobody there when you get there. But, nonetheless, there will be this opportunity. All right?

Senator Perdue.

Senator PERDUE. Thank you, Mr. Chair.

Thank you both for your careers and for being here today.

I want to beat a dead horse, because I don't think we've gotten to the essence of the issue yet. We're all concerned about what China and Russia are doing in your AORs. General Votel was in this week. We had the same conversation about China's Belt-Road Initiative in harbors like Hambantota, in Sri Lanka, Gwadar, in Pakistan. We've just seen the first foreclosure in Sri Lanka, obviously, but what Russia is also doing in Kaliningrad and Sebastopol and Latakia and Tartus—Americans have always projected power based on our Navy and based on our allies, who allow us to service our military through their geography. Russia and China are both now—because we have such an advantage on—in the sea, it seems to me that they are setting the stage across three continents that are of tremendous strategic importance. I'd like us to talk about what the NDS does or doesn't do, and what you both need in your AORs to deal with what we naturally have to assume is an effort that is an economic, if not military, involvement that is beyond anybody's expectation 5 years ago. When I look at what Huawei is doing in some of these Latin American cities, I'm very concerned. So, I'd love both of you to address the question specifically.

Before I ask you both—General, first of all, in Africa, we know now—Admiral, you've just told us—there are 56 port investments in South America. In Africa, General, do we have a similar esti-

mate of the ports that they've made these—what I call “debt-trap diplomacy loans” in the specific port infrastructure?

General WALDHAUSER. Senator, I'm not an expert in that area, and we can take that for the record.

[The information referred to follows:]

General WALDHAUSER. China has invested in ports in 23 of Africa's 33 coastal nations. We currently have no indications Beijing made these investments with the prior intent to create leverage over the host nation or port operators. However, it is possible China could use these investments in the future to apply pressure to those African states or seize port control.

General WALDHAUSER. But, what I will say, the Chinese are involved in port operations all around the world.

Senator PERDUE. Yeah.

General WALDHAUSER. So, it's not unique that perhaps you have a Chinese company that has equities in a port on the African continent.

Senator PERDUE. Right. So, what we saw in the South China Sea, though, is where they had, quote, “nonmilitary interests” have now—we've got plenty of evidence that they've converted those to military bases. I have no doubt that they're going to have some of the same interests in—particularly in Hambantota, right there. That's such a strategic thing—location.

The question I have is—I don't think the NDS actually addresses this growing potential threat, because we haven't been able to confirm it, as you just said, General. So, my concern is—in these two AORs, you and General Votel are three guys that sit right in the middle of what China and Russia are both doing. I'm worried, because of the effort and the focus we have on the current crisis today around the world, where we're taking our assets and spreading them very, very thinly, what are we doing now to preclude the potential that we won't be able to show up, it'll be too late once we recognize that they've actually done what we were worried they were going to do? Would you both address that in—as it relates to the NDS?

General WALDHAUSER. Well, Senator, let me just kind of clarify. You know, I don't have a crystal ball to predict what the Chinese will do militarily on—

Senator PERDUE. Understood.

General WALDHAUSER.—African continent. But, what I do know is that they've made a conscious decision to put their military on the world stage in an area where the United States is not necessarily engaged to a large degree.

Senator PERDUE. Yes, sir.

General WALDHAUSER. So, they work in areas where they don't really have any competition from us. We're not in countries where they are. We're not at places where ports on the western side of Africa, which is my big concern, by the way—on the western side of Africa, we're not really located there. So, there's no doubt about the fact that they have long—a long-term vision, and, by 2049, the 100-year anniversary, part of this Belt and Road Initiative, this is not—Djibouti is not the first, and it won't be the last port. The growth of their military on the continent, I don't know what it'll turn out to be, but I do know that the Chinese—they made a conscious decision to start there, and they're not going to get smaller.

Senator PERDUE. Other than Djibouti, do we have any other access ports in Africa?

General WALDHAUSER. Well, I think I would say Capo Verde, Senegal. These are places that we've talked about before that are—you know, they're good locations for the Chinese. They want to have a government that's relatively stable. They don't want to have to deal with problems and so forth. You look where you—where the military geography—meaning deepwater ports are there. So, I mean, they certainly want other ports on the eastern—and I could—you know, there's all kind of speculation about what those other ports might be on the eastern side. But, I do know they're looking on the western side, and that's a concern for us, because—

Senator PERDUE. Yes.

General WALDHAUSER.—they can be in the Atlantic Ocean rather quickly.

Senator PERDUE. Admiral, the Ambassador in El Salvador actually warned, last August, about what the Chinese military is planning to do in La Union, that commercial port, where they do have a proprietary loan there. Can you speak to how the NDS will affect this in your AOR?

Admiral FALLER. Senator, I think the NDS rightly shined a light on this as a biggest challenge that will confront us perhaps in the next generation—

Senator PERDUE. But, we haven't resourced it yet.

Admiral FALLER. We're working on the resourcing. It's not—as I've mentioned in previous questions, we need that consistent level of resourcing in this AOR. In addition to the ports you mentioned, I will also point out the space stations that the Chinese are investing in and partnering in in this AOR. They—and again, back to the education, some of the basic military building blocks, they're taking a page from our playbook. The Peace Ark deployed to South America and the Caribbean this past year, they're trying to replicate our playbook to win both access and influence, and our counter has to be to remain present. We have the ability to have the winning hand, based on our values, our democratic principles, and the shared interests that we have in this hemisphere.

Senator PERDUE. Thank you both.

Chairman INHOFE. Thank you, Senator Perdue.

All right. It seems this has come to a conclusion.

We appreciate your attention very much. It has been very significant. Also appreciate the time both of you have spent with me and other Members of this Committee.

If it's not an inconvenience to do so, we will now go to the Senate Visitors, number 217, and we'll see how many people want to conclude this with some questions that may not have been appropriate for open session.

So, with that, we are adjourned.

[Whereupon, at 12:09 p.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

## QUESTIONS SUBMITTED BY SENATOR TOM COTTON

## COLOMBIA

1. Senator COTTON. Admiral Faller, with the re-emergence of the FARC and the net production of drugs still rising, do you foresee the reduction in United States monetary support to Colombia (counter-terrorism, counter-narcotics and counter-transnational organized crime) causing any issue for the SOUTHCOM mission?

Admiral FALLER. A reduction in United States monetary support to Colombia would negatively impact the SOUTHCOM mission. The United States funding that goes to Colombia is not only used for counternarcotics and counterterrorism within Colombia, but it also partly funds the United States-Colombia Action Plan (USCAP), in which Colombia exports security throughout the region by training other partner nations to address these challenges to regional security. As an example, in 2019 the Colombian Military will train over 2,100 security force personnel from Central America and the Caribbean to strengthen their capability to provide security, support the rule of law, and enhance their ability to participate in regional security and humanitarian response operations. The Colombian Military and Police exporting security capacity under USCAP is a shining example of the return on investment from the United States support to Plan Colombia. It shows that the U.S. military can rely on its partners to share their expertise to address common regional security challenges. In addition, the Colombian Military is currently providing extensive support in responding to the Venezuelan migration crisis requiring them to divert funding and manpower from security operations. Any cuts in U.S. funds would further strain their national security budget.

## FOREIGN INFLUENCE IN VENEZUELA

2. Senator COTTON. Admiral Faller, Cuba has sent military envoys Venezuela since early 2000's. As early as 2010, Iranian Quz force were patriated as Cuban citizens and joined these military envoys. In recent years, Russia has continued this trend both overtly and covertly. How many Cuban, Russian and Iranian actors are currently in Venezuela?

Admiral FALLER. We have limited information on the number of Cuban, Russian, and Iranian security personnel supporting the Maduro regime. We estimate the number of Cuban security personnel in Venezuela is somewhere in the thousands; this number is in addition to the over 20,000 medical personnel Cuba provides to Venezuela. Russia maintains a diplomatic defense presence in Venezuela, and at times likely sends teams of military technical experts to guide Venezuela in the use and maintenance of acquired weapons systems. Iranian entities maintain a small, limited presence in Venezuela, but we remain concerned that the world's leading state sponsor of terrorism could take advantage of turmoil in Venezuela to expand its presence.

3. Senator COTTON. Admiral Faller, what are their roles in security?

Admiral FALLER. Cuba: Cuban military personnel serve as security and military advisors who assist Venezuelan security services' monitoring of both the population and military for signs of dissent, are part of Maduro's personal security detail, and help collect intelligence. Russia: Moscow provides the Maduro regime with security materiel, training, and disinformation assistance. Russia is Venezuela's largest supplier of weapons to include surface- to-air missile systems, combat and fixed wing aircraft, tanks, and artillery, with Moscow selling Caracas \$9 billion in military equipment from 2008 to 2018. The two countries regularly conduct combined military exercises; their most recent exercise in December 2018 included the deployment of two long-range bombers (Tu-160 Blackjacks) capable of carrying nuclear weapons. Also, in mid-March, two Russian aircraft arrived in Venezuela carrying a reported 100 Russian military personnel that Moscow officially said were in Venezuela to fulfill existing military contracts. Separate, Maduro-affiliated Venezuelan sources said the troops would assist with cyber security and air defenses. Iran: While Iran's relationship with Caracas in the past few years has largely centered on economic cooperation, Iran and Venezuela have officially been cooperating on defense issues for almost a decade. Given this longstanding relationship, it is possible that Tehran may be providing the Maduro regime with security advice, and potentially assisting with military equipment maintenance. Last year, the Iranian naval deputy commander, Rear Admiral Touraj Hassani Moqaddam, relayed Iran's intent to deploy naval vessels with helicopters to Venezuela. China: Additionally, China remains the top provider of sovereign loans to Venezuela, with Caracas owing \$20 billion. Beijing also has sold Venezuela over \$1 billion in military equipment, including assorted

missile variants, fixed wing transport and combat aircraft, light tanks, mortar systems, and radars.

4. Senator COTTON. Admiral Faller, what are their roles in controlling or influencing Policy?

Admiral FALLER. Cuba: Havana is the Maduro regime's principal foreign supporter, and is the external actor with the most influence over Maduro's decision-making. Cuba helps to prop up the regime by backing Maduro in international forums, helping to rally support for the regime, and supporting information operations to discredit the U.S. It is likely that Maduro is turning to Havana for advice on how to handle mounting social unrest and an emboldened opposition. Russia: Moscow plays a key role in providing financial support and access to the Maduro regime, probably affording Russia some sway over Venezuela's policy decisions. Venezuela is likely to increasingly rely on Russian banks to move financial assets in ways that skirt sanctions and secure cash flow. Additionally, Russia is one of the top providers of Venezuela's sovereign loans, with Caracas owing Moscow over \$3 billion. Iran: We assess Iran holds less influence over the Maduro regime's policies, given that Caracas's relationship with Tehran has not been as essential to the regime's survival. China: Separately, China remains a key financial backer of the Maduro regime, and appears to be supporting the regime's efforts to monitor the population. Beijing is the top provider of sovereign loans to Venezuela, with Caracas owing \$20 billion. Since 2016, Chinese telecommunications company ZTE embedded a special unit within Venezuela's telecommunication company to support national ID cards that have the potential to monitor citizens' behavior. Beijing also has sold Venezuela over \$1 billion in military equipment, including assorted missile variants, fixed wing transport and combat aircraft, light tanks, mortar systems, and radars.

#### VENEZUELAN MILITARY COMPOSITION

5. Senator COTTON. Admiral Faller, Venezuela has more Generals than the United States and NATO combined. Additionally, Maduro's regime, described as a mafia state, retains only 20–25 percent support across the nation. What is the actual composition and force structure of the military, loyal to Maduro?

Admiral FALLER. Venezuelan armed forces branches include the Bolivarian Air Force, Navy, Army, and National Guard. The commanders and top-ranking military officers in each of these services remain loyal to the Maduro regime. Of the over 1,000 defections since Interim President Guaido took office, only two of the defectors have been general officers, indicative of senior military leaders' commitment to the regime and the benefits they receive. The President is the commander-in-chief of the Bolivarian Armed Forces, and appoints the Minister of Defense, Commander of the Operational Strategic Command (akin to the U.S. Joint Staff), and the commanders of each of the services. The Maduro regime also relies on the National Militia and armed gangs, known as colectivos, as force multipliers for conventional forces.

---

#### QUESTIONS SUBMITTED BY SENATOR DAN SULLIVAN

##### THREATS POSED BY AFRICAN TERRORIST ORGANIZATIONS

6. Senator SULLIVAN. General Waldhauser, you stated that Boko Haram and ISIS–West Africa focus on attacking military and civilian targets throughout numerous areas in Africa and contribute to a multi-border displaced persons crisis. Can you expand on your assessment of the global threat posed by Boko Haram and ISIS–West? Do they currently pose a direct threat to the U.S. Homeland? If so, to what extent? If not, when are they expected to pose a direct threat to the U.S. Homeland?

General WALDHAUSER. We do not currently assess Boko Haram and ISIS–West Africa are threats to the Homeland. Africa-based ISIS groups and Boko Haram have neither conducted nor inspired external attacks against the United States Homeland. However, their diffuse extremist networks enable or inspire attacks against United States and other Western interests in Africa and in Europe. Additionally, ISIS and al Qaeda safe havens in North Africa, the Sahel, and East Africa pose an enduring threat to stability, and United States, allied, and host-nation interests within those regions.

7. Senator SULLIVAN. General Waldhauser, what do you see as the greatest threat Boko Haram and ISIS–West Africa poses to the United States Homeland in the near-term, mid-term, and long-term?



General WALDHAUSER. Africa-based ISIS groups and Boko Haram have neither conducted nor inspired external attacks against the United States Homeland, and are not projected to pose a threat to the Homeland in the mid or long term. Due to their diffuse extremist networks Boko Haram and ISIS–West Africa are capable of enabling or inspiring attacks against United States and other Western interests in Africa and in Europe. Additionally, ISIS and al-Qaeda safe havens in North Africa, the Sahel, and East Africa pose an enduring threat to stability, and United States, allied, and host-nation interests within those regions.

#### SOF'S ROLE IN SUPPORTING THE NATIONAL DEFENSE STRATEGY

8. Senator SULLIVAN. General Waldhauser, the recently released National Defense Strategy clearly identifies great power competition between the United States and China and Russia as the highest priority threats to our national security. Are we over-utilizing out elite special operations forces on low-intensity threats in AFRICOM?

General WALDHAUSER. Our Special Operations Forces (SOF) possess unique capabilities and we continue to evaluate how we employ and deploy them. USAFRICOM aligns forces and resources on the continent to best support the National Defense Strategy. In addition to SOF that provide heightened capability, USAFRICOM also needs predictable general purpose forces that can conduct those missions that do not require SOF unique capabilities.

9. Senator SULLIVAN. General Waldhauser, how do you intend to balance the competing requirements of continuing the counterterrorism fight while also supporting the new primary lines of effort in countering China and Russia? Are security force assistance brigades (SFABs) the right solution?

General WALDHAUSER. USAFRICOM is currently in our first year of a five-year campaign plan specifically designed to balance requirements that address VEOs and global competitors. The USAFRICOM Campaign Plan applies a balanced approach to account for the increased presence of external actors, namely China and Russia, and the continued threat posed by VEOs. Our ability to balance efforts to address those challenges relies on our ability to effectively work with a wide range of able and willing partners-United States interagency partners, other combatant commands, European allies, the United Nations, European Union, the African Union, and most importantly African partners. USAFRICOM would make full use of the range of organic capabilities within a Security Force Assistance Brigade (SFAB), as that unit is specifically designed with many of our partner-centric objectives in mind. We would welcome the assignment of an SFAB to USAFRICOM.

10. Senator SULLIVAN. General Waldhauser, how does AFRICOM envision supporting an enduring counter-Violent Extremist Organization (VEO) effort while supporting efforts to deter Russian and Chinese aggression in other theaters?

General WALDHAUSER. The USAFRICOM Campaign Plan applies a balanced approach to account for the increased presence of external actors, namely China and Russia, and the continued threat posed by VEOs. Our ability to balance efforts to address those challenges relies on our ability to effectively work with a wide range of able and willing partners-United States interagency partners, other combatant commands, European allies, the United Nations, the European Union, the African Union, and African partners. The United States Security Force Assistance (SFA) programs to African partners also increase our ability not only to counter violent extremist groups but also influence great power competitors. Through Sec 333 authorities, many of our SFA programs enhance our relationships with partners while improving their ability to conduct their own C-VEO operations. These SFA programs are fundamental to our effort to remain the partner of choice by reinforcing the sincerity of our partnerships and the high quality of our products, which African nations largely view as superior to those offered by the Chinese and Russians. Our efforts to foster positive relationships further support our goal of ensuring a stable and prosperous Africa, which inherently-assists to deter Chinese and Russian malign action. To the extent that we enable deterrence of China and Russia in the USAFRICOM AOR, we are engaged with USINDOPACOM and USEUCOM Globally Integrated Planning efforts in their capacity as Coordinating Authorities to the China and Russia global campaign plans.

## QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

## RUSSIAN INFLUENCE IN AFRICA

11. Senator BLUMENTHAL. General Waldhauser, you state in your testimony that the Central African Republic has recently installed a Russian civilian as the country's national security advisor. What does this appointment signal in terms of Russian influence in the Central African Republic? How does this further Russian strategic interests?

General WALDHAUSER. As of this time this individual has stepped down as the national security advisor. Should this individual remain involved in Central African Republic (CAR) policy-making, he would be able to facilitate agreements between the CAR and Russia. We are unaware of efforts to replace him, or to leverage his relationship to CAR for future Russian efforts. CAR provides Russia three key opportunities: First, it is a chance for Russia to publically supplant French and Western influence with Bangui's support. Second, CAR represents an opportunity for the Russian Oligarchs (including those the United States has sanctioned) to generate profit by exchanging security services for mining contracts, demonstrate private military capabilities, and supplement limited Russian state resources. Lastly, CAR provides an operating environment with little to no governmental oversight, considerable freedom of movement to militarily strong actors, and limited regulation or Rule of Law that could inhibit unilateral action.

12. Senator BLUMENTHAL. General Waldhauser, you mention that Russia is importing "harsh security practices" into the Central African Republic. In addition to the murder of Russian journalists, what other harsh security practices are being employed?

General WALDHAUSER. Russian private military contractors (PMC) are reportedly abusing locals who approach Russian mining interests, investigating crimes committed against Russian personnel or property, physically abusing host nation security trainees, and intimidating foreign and local travelers. The Russian contractors also reportedly cooperate with local armed militias and turn a blind eye to human rights violations committed by those groups. The UN is currently investigating at least one alleged incident of abuse and has asked the CAR government to take actions against the PMCs. In 2018 three independent Russian journalists were murdered in the CAR while investigating the activities of the Russian PMCs.

13. Senator BLUMENTHAL. General Waldhauser, in your testimony, you also state that other countries could find the Russian model of harsh security practices attractive. What countries in the African subcontinent are you concerned about being most susceptible to Russian influence, and what can AFRICOM do to thwart Russian efforts?

General WALDHAUSER. Several African nations are susceptible to continued or increasing Russian influence, particularly where Russia already has extensive ties. Russia's influence in Algeria and Angola stems from legacy Soviet relationships, though Algeria has largely restricted the relationship to arms sales transactions. Russia is providing support to the Libyan National Army (LNA), who is increasing pressure on Tripoli. Russia already has extensive influence in CAR, embedding private military contractors in the country in return for mining rights and influencing the government. Mauritania's and Tunisia's nascent economies and desire to improve defense capabilities may provide Moscow with opportunities to expand its influence there. Russia is increasing its influence in Sudan; the Sudanese Parliament recently advanced plans to create a Russian military base in the country, and Russian private military contractors are reportedly operating in the Darfur region. In West Africa, Mali, Guinea, and Guinea-Bissau are probably most susceptible to Russian influence, due to longstanding Russian military sales and training programs. Russia has economic interests in these countries, usually centered on mining, and the local leaders are likely interested in military aid, without preconditions, that would help them to remain in power. To thwart Russian exploitative efforts, USAFRICOM continues to work with a host of partners to be the military partner of choice in Africa and advance our shared values.

## HEZBOLLAH

14. Senator BLUMENTHAL. Admiral Faller, how would you characterize the threat from Hezbollah in your area of operation? Which countries are most susceptible to influence from Hezbollah?

Admiral FALLER. Hezbollah is the most capable Violent Extremist Organization (VEO) in the region. Since 1992, LH has successfully conducted three major terrorist

attacks in Central and South America, killing 135 people and wounding hundreds more. The majority of countries in the SOUTHCOM AOR do not recognize Hezbollah as a terrorist organization, which enables Hezbollah to maintain an operational presence in the area. This operational presence includes well-developed networks of businesses owned and operated by Hezbollah associates and networks that are used to facilitate criminal activities, conduct fundraising in support of Hezbollah, and perform international financial remittances. Through a vast array of political, religious, and social networks, Hezbollah leverages influence over vulnerable populations in the Tri-Border Area (TBA) of Brazil, Paraguay and Argentina. Most of this influence is political and social in nature, with some loosely affiliated elements engaged in criminal and illicit activities, primarily in the TBA and other Free Trade Zones in Central and South America. Countries such as Venezuela and Paraguay, with high levels of institutional corruption, insufficient Anti-Money Laundering regulations, and unproven judicial ability to prosecute individuals involved in the facilitation of terrorism, or narcotics are most susceptible to influence from Hezbollah.

15. Senator BLUMENTHAL. Admiral Faller, what are you doing to address the threat—including Hezbollah's terrorist activities, money laundering, and drug trafficking?

Admiral FALLER. SOUTHCOM collaborates with the Interagency and Law Enforcement to share intelligence and information and support operations and activities to degrade Hezbollah's ability to conduct illicit activities throughout the SOUTHCOM area of responsibility, ultimately denying funds to Hezbollah. Our analytical and operational support to Department of Treasury sanctions, Law Enforcement investigations, and the detection and monitoring mission are at the forefront of our efforts to address the Hezbollah threat.

16. Senator BLUMENTHAL. Admiral Faller, your predecessor, ADM Tidd, has testified that Venezuela has long provided a haven for narco-terrorist groups and Lebanese Hezbollah supporters. What is your understanding of the current links between Hezbollah and the Government of Venezuela? What support, if any, is Hezbollah providing the Maduro regime in Venezuela?

Admiral FALLER. Venezuela is home to well over a million people of Lebanese ancestry. Some of the members of the Lebanese diaspora community in Venezuela have been linked to illicit business, money laundering, narcotic sales, and document forgery. The Government of Venezuela has been employing and providing safe haven to Hezbollah associated facilitators and financiers since at the least the mid-2000's. There have been multiple reported links between prominent Venezuelan businessmen and politicians and Hezbollah-associated individuals. Most notably, former Venezuelan Vice President and current Minister of Industries and National Production, Tarek El Aissami, may have been involved in a number of illicit financial transactions and been leveraged by other corrupt Venezuelan officials to provide travel documentation to benefit associates of Hezbollah over a period of years. Hezbollah openly expresses support for the Maduro regime. Hezbollah likely wants Maduro to remain in place, as Hezbollah has operated throughout Venezuela with minimal scrutiny during Maduro's regime. Hezbollah likely perceives that the United States-recognized president, Juan Guaido will work to deter Hezbollah-associated activity within the country.

17. Senator BLUMENTHAL. Admiral Faller, are you working to build the capacity of regional allies to address Hezbollah's malign activities? How can Congress support SOUTHCOM in this effort?

Admiral FALLER. SOUTHCOM routinely engages with partner nations to share information, provide training, and encourage actions to counter threat networks throughout the region. Our staff coordinates with Interagency, Law Enforcement and Global Organizations, such as the United Nations Office on Drugs and Crime, to enable operations by Partner Nation Law Enforcement to disrupt, degrade, and deny Hezbollah activities. Congressional support over the years has enabled SOUTHCOM to build our partners' capacity to counter Hezbollah's malign activities. Continued support of the Department's security cooperation activities in this region, as well as programs throughout the Interagency that strengthen our relationships with our partner nations, such as State Department's International Military Education and Training program, would be helpful.

18. Senator BLUMENTHAL. Admiral Faller, in your testimony, you note that groups like Hezbollah operate wherever they can garner support and raise funds to pursue

their agendas. Where do you see them gaining support and funding, and how is SOUTHCOM confronting them?

Admiral FALLER. Hezbollah receives significant and continuous financial support from the Lebanese expatriate, Shi'a Muslim diaspora in Latin America. Lebanese expatriate remittances are a pillar of the Lebanese economy—their familial and sustainable structure makes them an economic and social services backstop in the absence of a state entity capable of providing basic security and social services. Free Trade Zones provide illicit financial networks with plentiful opportunities to leverage existing conditions to enable money laundering activities and the import/export of illicit goods. Characteristics of Free Trade Zones that enable these activities include: high volume of goods being imported/exported through the area, the high use of cash, and greater profitability due to tax benefits.

#### AFRICOM MISSION

19. Senator BLUMENTHAL. General Waldhauser, in your written testimony, you justify the current AFRICOM posture by emphasizing the need to “address significant terrorist threats and apply persistent pressure on terrorist networks.” Based on your testimony and the current force posture, is it fair to say the primary mission in Africa is defeating Violent Extremist Organizations?

General WALDHAUSER. The USAFRICOM Campaign Plan applies a balanced approach that accounts for the increased presence of external actors, namely China and Russia, and the continued threat faced by VEOs. Our ability to balance efforts to address those challenges relies on our ability to effectively work with a wide range of able and willing partners; United States interagency partners, other combatant commands, European allies, the United Nations, European Union, the African Union, and African partners. The USAFRICOM mission strikes a balance between countering VEOs and great power competition. The three mission areas called out in our mission statement are strengthen security forces, counter transnational threats, and conduct crisis response.

20. Senator BLUMENTHAL. General Waldhauser, do you think that the National Defense Strategy appropriately prioritizes the threats to American interests that we face in your area of operations?

General WALDHAUSER. From a USAFRICOM perspective, the NDS accurately characterizes the global challenges and threats. We are in a dynamic environment with great power competitors, constant competition, and an array of state and non-state actors. All five threats detailed in the NDS manifest in Africa to varying degrees, representing an important cross section in a globalized world.

21. Senator BLUMENTHAL. General Waldhauser, despite the apparent focus on counterterrorism efforts in Africa, in your testimony, you state AFRICOM plays a “significant role” in fulfilling National Defense Strategy priorities towards Russia and China. Why is your role in great power competition so significant and how are you fulfilling this role?

General WALDHAUSER. Great Power competitors, China and Russia, are increasing engagements in Africa and enhancing their access and influence. China's expanding engagements in Africa are probably intended to protect China's citizens and investments, and project the image of being a responsible global power while growing its influence on the continent and internationally. For its part, Russia seeks to counter United States influence and interests while bolstering its own influence through security cooperation, arms sales, and energy partnerships. Our proximity to Chinese forces in Djibouti offers us a unique opportunity to demonstrate our resolve to counter China outside of Asia. Our interaction with key partners such as Morocco, Tunisia, Nigeria, Kenya and Ethiopia help secure geostrategic locations necessary for stability on the continent. Working in close cooperation with nations such as Ghana and Senegal, we help to ensure Chinese compliance with international norms by exposing illicit activity such as illegal fishing or other resource extraction sanctioned by the Chinese Government. By working with other nations such as Uganda, Cabo Verde, Seychelles, Botswana and Gabon, we may be able to ensure that when China or Russia do gain military access to ports, bases or airspace, that they are unable to take full advantage of that access to threaten United States freedom of maneuver in and around Africa.

22. Senator BLUMENTHAL. General Waldhauser, the Authorization for Use of Military Force (AUMF) of 2018 lists two known African terrorist organizations, al Qaeda in the Islamic Mahgreb and Al Shabaab as “associated forces” included in the au-

thorization. Have you, or will you, use military force against any other Violent Extremist Organizations in your area of operation?

General WALDHAUSER. Under my authority, as directed by the Secretary of Defense, we have used military force against violent extremist organizations, in the USAFRICOM AOR, associated with those included in the 2001 AUMF. The Secretary based that direction on a thorough vetting of their function, connection to the organizations included in the 2001 AUMF, and threat to the United States. In the future, we will continue to target violent extremist organizations using this authority. These designated organizations remain classified and the information can be provided to your staff. Additionally, we have used military force under our collective self-defense authorities to defend our designated partners, and we will continue to use force to defend ourselves, regardless of who is attacking us. If attacked, we will defend ourselves and our partners.

---

QUESTIONS SUBMITTED BY SENATOR MAZIE HIRONO

POLITICAL UNCERTAINTY IN VENEZUELA

23. Senator HIRONO. Admiral Faller, on January 23, 2019, the elected leader of Venezuela's National Assembly, Juan Gerardo Guaido, declared his position as the interim president of Venezuela based on constitutional authority. He has since been internationally recognized as the true President of Venezuela by Spain, France, Germany, the UN, Kosovo and the United States. From your perspective, what effect have the sanctions established by the United States had on Venezuela?

Admiral FALLER. Treasury's Office of Foreign Assets Control (OFAC) has aggressively employed its Venezuela sanctions authorities to target nearly 150 individuals and entities, including regime insiders and their support networks involved in corrupt activities, in an effort to hold the Maduro regime accountable. As a result of OFAC actions, all property and interests in property of these entities and individuals, and of any entities that are owned, directly or indirectly, 50 percent or more by these blocked entities and individuals that are in the United States or in the possession or control of U.S. persons are blocked and must be reported to OFAC. OFAC's regulations generally prohibit all dealings by U.S. persons or within (or transiting) the United States that involve any property or interests in property of blocked or designated persons. These actions furthered international efforts to deny Maduro and his supporters of their revenue sources and continue pressure on the regime. For additional insights into the effect of United States sanctions on Venezuela, I defer to the Department of State and the Department of the Treasury.

24. Senator HIRONO. Admiral Faller, we have heard of the grave humanitarian crisis in the area with the displacement of more than 3.3 million people. What impact will this have in your AOR and what role, if any, does CENTCOM have in mitigating this crisis?

Admiral FALLER. The current number of Venezuelan migrants since 2014 is 3.4 million, or over 10 percent of Venezuela's population. The UN is projecting 2 million more Venezuelans will emigrate in 2019, with most of these migrants staying in Latin America. Most Venezuelan migrants have settled in Colombia, with over one million migrants in Colombia so far. The second-largest Venezuelan migrant recipient is Peru, which hosts about 500,000 migrants, followed by Chile with over 280,000 and Ecuador with over 200,000 migrants. The displacement of millions of Venezuelans has had a profound effect throughout the region across nearly every spectrum of society. In the area of defense, neighboring countries like Colombia and Peru have had to divert resources that were otherwise appropriated for important security initiatives. In Colombia for example, resources that could have been used to fund peace accord consolidation efforts have been diverted to help ease the suffering of Venezuelan migrants. We are also seeing some transnational organized crime groups, such as Colombia's National Liberation Army (ELN), are taking advantage of these conditions to recruit desperate Venezuelan migrants, increasing criminality along the border between the two countries. SOUTHCOM certainly has played a role in mitigating the crisis. We have provided direct support with air lift to deliver humanitarian assistance supplies on behalf of USAID. We also deployed the USNS *Comfort* to the region, providing medical care to over 26,000 patients—relieving some of the burden placed on these neighboring countries to provide medical care. In addition to direct support, SOUTHCOM plays an important role in reducing tensions and encouraging collaboration among regional military leaders.

25. Senator HIRONO. General Waldhauser and Admiral Faller, China is making aggressive investments in both of your areas of responsibility with the “Belt and Road Initiative” (BRI). At the Senate Intelligence Committees’ worldwide threats hearing, the Director of National Intelligence, Dan Coats, stated that “Traditional adversaries will continue to attempt to gain and assert influence, taking advantage of changing conditions in the international environment increasingly isolationist tendencies in the West, and shifts in the global economy.” With the increased economic competition with the United States from China, have you experienced, or do you expect to experience, deterioration of United States partnerships in your area of responsibility?

General WALDHAUSER. This is probably our biggest challenge in Africa, because Africa’s issues will not be solved militarily. Although security is important, it will not ultimately be the deciding factor in how Africans choose to partner with the United States. African states are seeking to diversify economic and security relationships in order to bolster development, investment, and economic growth. China understands this and is using its investment in infrastructure and other development programs to buy leverage with African countries. We have seen this pattern play out in Asia and are now seeing it begin to play out in Africa. China increasingly funds both incumbent politicians and opposition leaders within our AOR, as well as decision makers within ministries related to their commercial or posture objectives. This illicit individual funding, combined with legitimate investment that nevertheless causes heavy debt burdens, has slowed and complicated governance reform and our engagement in some partner states. Additionally, we have seen China adopt tactics of political involvement where their economic interests are concerned. To counter China’s advance, both Department of State and Department of Defense have invested in programs such as Defense Institution Building and the Security Governance Initiative as ways to deepen long standing United States support to security sector reform, governance, and rule of law within our AOR. As we encourage governments to become more transparent and provide them the means to fight corruption, we can then potentially ensure that Chinese investment on the continent complies with international norms and does not provide China undue influence.

Admiral FALLER. Latin America and the Caribbean is our neighborhood and we do have very strong partnerships in this region. However, China is seeking to inch out the United States as the preferred partner. China uses predatory economic policies to exert political leverage and gain access to key infrastructure, ranging from ports to telecommunications architecture. Greater Chinese involvement in regional governments’ IT and telecommunications will limit our ability to share information with them given the ensuing counterintelligence concerns. For example, Chinese telecommunications firms, such as Huawei and ZTE, as of 2014 were the purveyors of 32 percent of all phone connections in Latin America, and are expected to reach 68 percent or 605 million smartphones by the year 2020. China also has increased the tempo of its key leader engagements in the region, and frequently provides all-expenses paid security training as a way to further ingratiate itself with partners. While most countries in the region continue to view the United States as their preferred partner, we remain concerned that China’s charm offensive and the accompanying indebtedness it promotes could increase countries’ exposure to Chinese coercion.

26. Senator HIRONO. General Waldhauser and Admiral Faller, how are you working with the Department of State, other government entities and our allies within your AOR? Are there areas of improvement that should be examined? If so, what are these areas?

General WALDHAUSER. We work very closely together with the Department of State (DOS) and USAID on these issues daily and at many levels. In what we refer to as a 3D approach: Diplomacy, Development, and Defense. DOS political advisors, USAID development advisors, and representatives from other government agencies are embedded throughout USAFRICOM, and we have regular synchronization meetings with both our United States Embassies and DOS. USAFRICOM also hosts an annual Africa Strategic Dialogue, which brings together senior stakeholders from the Departments of State, Defense, and USAID to coordinate strategic approaches and harmonize guidance for Africa. In addition, the Africa Strategic Integration Conference brings together officials from across the United States Government, including many from Africa, to discuss regional issues facing the United States in Africa and to help us to develop unified responses. Our allies are integrated into our work in similar ways. Through our Multinational Coordination Cell, we host Liaison

Officers from 17 partners and jointly plan our assistance and operations through regionally-focused multinational working groups.

Admiral FALLER. We have a robust relationship with the Department of State positioning the U.S. as the partner of choice throughout the region with very few exceptions. It starts at the ground level in the embassies where DOD members form an important part of the country teams. We integrate our operational and capacity building activities in the region in direct support of—and aligned with—Department of State Integrated Country Strategies. SOUTHCOM implements several key State security assistance programs such as International Military Education and Training, Foreign Military Financing, and the Global Peacekeeping Operations Initiative to build our partners' capacity to counter mutual threats and enhance global security in a way that other powers cannot. The gold standard for Interagency cooperation and coordination is the Joint Interagency Task Force-South where DOD, as the lead federal agency for detection and monitoring of air and maritime narcotics trafficking, provides a vital coordination link for alignment with the various federal agencies that carry out the other phases of the interdiction continuum. The close coordination between SOUTHCOM and our State and USAID partners manifests itself nearly every year during hurricane season and for other disasters that strike. Also, we work closely with regional partners to expose Chinese malign influence, ensure our partners understand the dangers of China's predatory financial practices, and have the complete picture concerning so-called promises of Chinese IT and cyber cooperation. Given their bleak fiscal outlook, most countries in the region feel pressure to pursue economic cooperation with Beijing. Many of these countries lack the expertise and experience to scrutinize fully Chinese bids and safeguard against unfavorable terms; our regional partners would likely benefit from access to experts who can help them discern bad deals.

#### CLIMATE CHANGE

27. Senator HIRONO. General Waldhauser and Admiral Faller, while some dispute the existence of climate change and the extent of its global impact, climate-related events provide a significant risk to our national security and that of our allies. What steps are you taking within your areas of responsibility to address the security risks associated with climate change?

General WALDHAUSER. In addition to complying with responsibilities set forth in DOD Directive 4715.21, "Climate Change Adaptation and Resilience", USAFRICOM supports environmental security engagements with partner nations, interagency, and non-governmental organizations across the area of responsibility. The effects of climate change threaten environmental security by degrading natural resources and the environment. Environmental issues can easily manifest into human conflict, increasing competition and tension between populations. Environmental security engagements are a tool in abating these concerns - advancing cooperation amongst nations and regions while promoting security and stability. Some examples of these engagements are water security initiatives and mangrove forest management. Ultimately, solutions to climate change and environmental problems contribute to national security objectives.

Admiral FALLER. SOUTHCOM does consider climate change in its strategic planning. During environmental compliance and assessments, climate change is incorporated into learning objectives in order to mitigate impacts of natural disasters to include frequency and severity. Additionally, to ensure our own personnel and families are ready, SOUTHCOM conducts annual hurricane preparedness training for all personnel assigned to our headquarters. The threat of instability caused by climate change has led to the inclusion of climate change scenarios in some of SOUTHCOM's major exercise scenarios like TRADEWINDS. During the TRADEWINDS annual exercise, national agencies and partner agencies practice collaboration and coordination to limit the impacts and severity of the weather systems often attributed to climate change. These efforts attempt to reduce the risks of local, regional, and international instability during crisis and disasters in our AOR. The associated risks include, but are not limited to, immigration, cultural property protection, and environmental impacts. Lastly, we conduct environmental subject matter expert engagements that are often related to pre- and post-natural disaster planning, such as a recent engagement on post disaster waste management.

28. Senator HIRONO. General Waldhauser and Admiral Faller, how have United States Forces been trained and equipped to respond to natural disasters in your AOR?

General WALDHAUSER. USAFRICOM routinely conducts deliberate planning to prepare for contingencies to respond to crises which may result from natural disasters.

ters including, instability, pandemic influenza/infectious disease, and non-combatant evacuation. Currently, we are conducting disaster relief support in response to the flooding in Mozambique. These efforts take into account a whole-of-government approach to include how we will coordinate with and support interagency partners such as DOS and USAID. In addition, we provide guidance to USAFRICOM service components, so they can forecast necessary recourses and training to support mission requirements. For example, United States Army Africa developed and approved a plan to support Foreign Humanitarian Assistance which involved its Headquarters and staff working with both DOS and USAID. Along with service components, USAFRICOM relies heavily on other capabilities like the State Partnership Program to increase partner readiness. Currently, Africa has 14 State Partnership Programs. These programs bring unique capabilities as many of the National Guard units consist of first responders and emergency personnel who bring this expertise when they conduct emergency management and natural disaster response training and exercises.

Admiral FALLER. The Services are responsible for training and equipping forces, providing ready forces for the combatant commands. At the combatant command level, we help the Services maintain and build readiness by tailoring bilateral and regional exercises and training events to increase the readiness of U.S. Forces for a range of missions, including humanitarian assistance and disaster response. The countries in the SOUTHCOM AOR experience approximately 50 natural disasters every year ranging from wild fires, to volcanic eruptions, to hurricanes, and earthquakes. We work closely with our partner nations and regional coordination mechanisms such as the Caribbean Disaster Emergency Management Agency and the Coordination Center for the Prevention of Natural Disaster in Central America to build our collective capacity to respond to and/or coordinate disaster relief efforts. We've seen a decrease in requests for assistance following these disasters because our partners are increasingly prepared to handle the responses themselves.

29. Senator HIRONO. General Waldhauser and Admiral Faller, how have United States Forces been equipped and prepared to help address the growing health crises associated with climate change?

General WALDHAUSER. Climate change creates a number of challenges within the USAFRICOM operational environment. Increasing spread of infectious diseases (e.g. malaria and cholera), fresh water loss (e.g. Lake Chad Basin), desertification, sea level change, and extreme weather (e.g. flooding and heat waves) are significant concerns. These issues lead to increasing risks for complex humanitarian disasters, exacerbation of conflicts, and instability in fragile states. Although primary responsibility for training and equipping United States Forces lies with each individual service, USAFRICOM supplements the services in multiple ways. First, we educate our forces on the health threats posed by climate change through programs such as the Africa Today course, the USAFRICOM Newcomer's Course, and the Joint Humanitarian Operations Course. Second, we execute several health engagement programs designed to build the capability of our African Partners to manage health risks worsened by climate change. Two examples are the Africa Malaria Task Force (AMTF) and the African Partner Outbreak Response Alliance (APORA). Finally, the USAFRICOM Campaign Plan includes objectives focused on preparation to respond to all types of disaster as well as increasing African Partner capability to prevent and respond to infectious disease outbreaks. Numerous humanitarian and security force assistance activities support these objectives and ultimately build awareness and preparation for both the United States and our African Partners.

Admiral FALLER. United States Forces have expeditionary units with capabilities in disease surveillance, vector control, preventative medicine services, dental services, damage control resuscitation and surgery, as well as veterinary services and medical logistics capabilities. These capabilities are primarily designed to support organic DOD forces to allow DOD security forces, engineers, and logisticians to bolster State and local government response capabilities. Historically, the DOD has supported USAID's Office of Foreign Disaster Assistance in responding to natural disasters, including extreme weather events. Often, this support includes capabilities that account for adverse health outcomes that may result from a natural disaster. To illustrate this, in 2010 SOUTHCOM stood up a joint task force to assist in the aftermath of the Haiti earthquake. SOUTHCOM, in support of USAID, conducted Foreign Disaster Relief operations in support of the Government of Haiti and the United Nations Stabilization Mission in Haiti (MINUSTAH) by providing localized security, facilitating the distribution and restoration of basic human services, providing medical support, and conducting critical engineering operations in order to alleviate human suffering and provide the foundation for the long term recovery of Haiti.



## WITHDRAWAL OF UNITED STATES TROOPS AND THE WAR IN THE MIDDLE EAST

30. Senator HIRONO. General Waldhauser and Admiral Faller, despite the announcement of the defeat of ISIS and the immediate withdrawal of troops from Syria and the framework for peace with the Taliban in Afghanistan, ISIS continues to be an active and legitimate threat that is likely to pursue external attacks. What kind of threat does the Islamic State pose in your Areas of Responsibility?

General WALDHAUSER. Africa-based ISIS groups have neither conducted nor inspired external attacks against the United States Homeland. However, their diffuse extremist networks allow enabled or inspired attacks against United States and other Western interests in Africa and in Europe. Additionally, ISIS and al Qaeda safe havens in North Africa, the Sahel, and East Africa pose an enduring threat to regional stability and a continued threat to United States, allied, and host-nation interests within those regions.

Admiral FALLER. SOUTHCOM views self-radicalizing individuals responding to ISIS's messaging as one of the principal violent extremist organization threats in the region. Currently, ISIS lacks operational capacity in the AOR, but does have many sympathizers who have left this region to fight on behalf of ISIS. ISIS has used the story of a Trinidadian fighter in their magazine Dabiq to recruit and radicalize other westerners. An alleged terrorist plot in Trinidad was thwarted in early 2018 with the help of United States authorities. The disruption led to the arrests of 14 Trinidadian ISIS sympathizers who were subsequently released. SOUTHCOM is concerned with the possible return of many Trinidadians and other South Americans who may possess combat experience in Iraq and Syria.

31. Senator HIRONO. General Waldhauser and Admiral Faller, what concerns do you have in terms of the withdrawal of troops from Syria as well as the potential agreement with the Taliban?

General WALDHAUSER. Both the withdrawal of troops from Syria and the potential agreement with the Taliban could provide propaganda fodder for both the Islamic State and al Qaeda to rally extremist support within Africa. The narrative that the Taliban 'won' a protracted war against the United States and its allies would very likely be used in extremist circles to recruit new members and garner materiel or financial support for Islamic State or al Qaeda networks on the continent. The withdrawal of troops from Syria could also allow remnant ISIS networks to rebuild connectivity with its provinces or aspiring networks in Africa, although are currently not seeing this at this time.

Admiral FALLER. ISIS remains a resilient enemy with many loyal fighters and supporters throughout the world including Latin America and the Caribbean. I defer to OSD and United States Central Command on the specific implications of the withdrawal from Syria and the potential agreement with the Taliban.

## OPERATIONS OF U.S. COAST GUARD

32. Senator HIRONO. Admiral Faller, the Joint Interagency Task Force South (JIATF-S) executes detection and monitoring of illicit trafficking across all domains, and facilitates international and interagency interdiction to enable the disruption and dismantlement of illicit and converging threat networks in support of national and regional security. Despite its effectiveness, last year, only 6 percent of known drug movements were interdicted. What would you require in your AOR to increase the overall effectiveness of the Joint Interagency Task Force South (JIATF-S)?

Admiral FALLER. More Maritime Patrol Aircraft to detect drug trafficking movements and provide overwatch in support of interdiction operations would enable our partners to increase drug seizures. Currently, partners conduct nearly 40 percent of interdictions supported by JIATF-South. To increase the effectiveness of United States interdiction operations, JIATF-S requires integrated force packages that include a ship with an on board Law Enforcement Detachment (LEDET), helicopters (with airborne use of force capability), small boats for boardings, and supporting maritime patrol aircraft (MPA). Annually, every additional force package allotted to JIATF-S projects to seize and/or disrupt 33 metric tons (MT) of cocaine. The greater the number of fully integrated packages—the more drugs can be taken off the high seas.

33. Senator HIRONO. Admiral Faller, what effect, if any, did the recent government shutdown have on the readiness of the U.S. Coast Guard and their effectiveness to perform these essential operations in your AOR?

Admiral FALLER. While operations continued during the lapse in appropriations, the Coast Guard was forced to defer or delay maintenance on 75 cutters, many of which routinely deploy in support of SOUTHCOM counter-narcotics missions. Simi-

larly, deferred aviation maintenance and a shortage of nearly 500 spare parts caused by the lapse in appropriations will impact the availability of armed Coast Guard helicopters crucial to drug interdiction efforts in the Western Hemisphere. In spite of not being paid during the partial government shutdown, approximately 1600 Coast Guard personnel deployed throughout the SOUTHCOM area of responsibility continued to protect the Homeland from drug traffickers and provide force protection to our personnel at JTF-Guantanamo. This is the first time on record that members of the U.S. military were not paid during a lapse in appropriations. Finally, and most importantly, the shutdown had a detrimental effect on the morale of these servicemembers and placed an undue burden on their families. The professionalism and resiliency shown by our Coast Guard brothers and sisters and their families during this time was truly impressive.

---

#### QUESTIONS SUBMITTED BY SENATOR TIM KAINE

##### ASSOCIATED FORCES

34. Senator KAINE. General Waldhauser, during testimony you stated that you could not say for sure whether Boko Haram or ISIS-West Africa had been designated an Associated Force pursuant to the 2001 AUMF. Could you provide me a list of what groups have been deemed Associated Forces under the 2001 AUMF within the AFRICOM Area of Responsibility?

General WALDHAUSER. The names of groups in the USAFRICOM AOR designated as associated forces under the 2001 AUMF are classified. Those designated organizations were thoroughly vetted by the Secretary of Defense, connected to the organizations listed in the AUMF, and demonstrated a threat to the U.S. This classified information can be provided to your staff.

##### COLLECTIVE SELF DEFENSE

35. Senator KAINE. General Waldhauser, in response to my question about collective self-defense you stated "if we are not accompanying . . . we do not have collective self-defense because I haven't designated it and we don't use it." While you may have applied restrictions to accompany missions and the use of collective self-defense, do you have the legal authority to use collective self-defense for a partner force when U.S. Forces are not present or threatened themselves?

General WALDHAUSER. Let me clarify the remarks I made during testimony. While I have, in certain situations, applied restrictions to accompany missions in the USAFRICOM Area of Responsibility, I do have the legal authority to use collective self-defense for a designated partner force when U.S. Forces are not present or threatened themselves. Under authorities granted to CDR USAFRICOM by the Secretary of Defense, transmitted in Chairman of the Joint Chiefs of Staff Execution Orders, we retain the ability to provide assistance to designated partner forces during counterterrorism operations where we do not accompany them on the mission. Through our remote advise and assist efforts, we observe the partner force and enemy activity through visual means, typically the employment of Intelligence, Surveillance, and Reconnaissance (ISR) assets. Achieving this visual perspective enables the conduct-based characterization of the enemy activity, meaning that once the attacking force has committed a hostile act or has demonstrated hostile intent towards the designated partner force our use of lethal force may be authorized.

36. Senator KAINE. General Waldhauser, has the Department of Defense provided you any legal framework regarding the use of collective self-defense? If so, could you please provide us a copy of that framework? If not, what are the standing guidelines and Rules of Engagement you have disseminated to your commanders regarding the legal use of collective self-defense?

General WALDHAUSER. The collective self-defense authority is discussed in the Chairman's Directive on the Standing Rules of Engagement and, in some cases, within operational orders provided by the Secretary to CDR USAFRICOM. These resources do not specifically discuss the legal framework surrounding the collective self-defense authority. USAFRICOM executes its collective self-defense authorities in compliance with domestic and international law as articulated in orders issued by the Joint Staff and USAFRICOM. Additionally, although classified, CDR USAFRICOM has provided restrictions and standing guidelines on the use of collective self-defense, which are also outlined in USAFRICOM orders.

---

## QUESTIONS SUBMITTED BY SENATOR MARTIN HEINRICH

## MILITARY DEFECTIONS

37. Senator HEINRICH. Admiral Faller, on February 2, 2019, Air Force General Francisco Yanez announced his departure from Mr. Maduro's military and declared his support for Mr. Guaido. He is the highest-ranking military officer to defect, thus far. Do you know how many troops have defected?

Admiral FALLER. We assess based on regional partners' migration figures that over 1000 Venezuelan troops have defected between mid-January and mid-March 2019. Most defectors are junior officers and enlisted personnel. Only two general officers have defected, and they lack the sufficient influence to cause a groundswell of high-ranking officials to defect.

38. Senator HEINRICH. Admiral Faller, is there any safe haven for troops once they defect?

Admiral FALLER. Most Venezuelan military defectors seek refuge in Colombia and Brazil after pledging their allegiance to Guaido. Both of these partners are playing pivotal roles in resettling the defectors and their families. Interim President Guaido has publicly promised to extend amnesty to members of the armed forces who assist in reinstating the constitutional order. To date, most high-ranking officials appear to remain skeptical of the amnesty offer.

39. Senator HEINRICH. Admiral Faller, if Guaido succeeds, what would the Venezuelan military look like, and what do you envision would be the role of the United States?

Admiral FALLER. While Venezuela has a longstanding military culture, we assess it will take some time for Interim President Guaido to rebuild the military to eliminate longstanding corruption; root out officials who remain loyal to the ideology of Chavismo (which is the only ideology many of the junior officers and enlisted have ever known), Cuba and other external state actors; and regain military interoperability with West. There are many military officials who under Maduro have used their position to profit from the drug trade, and have allowed transnational criminal groups access to Venezuelan air space. Cuba, in particular, has deep inroads into Venezuela's military and overall security apparatus, and it will take some time to undo that influence. Additionally, for almost 20 years, the Venezuelan military has been more aligned with Russia and China, receiving military training from those nations and using their equipment and weapons. Further, criticism of Maduro often stems from the rank-and-file believing he has betrayed Chavismo, and the prevalence of true believers within the military's ranks will complicate Guaido's efforts to build a cohesive, unified military. The Venezuelan military's senior ranks will probably suffer the greatest reductions due to the predominance of corrupt supporters of Chavez and their close relationship with Cuba and Russia. This will leave a critical gap in leadership. SOUTHCOM engagement will depend on policy decisions that must explore funding from Department of Defense and Department of State for areas such as military professionalization and institution building. A security cooperation relationship will need to be rebuilt from the ground up following years of severed ties.

## BLINDING LASERS—DJIBOUTI

40. Senator HEINRICH. General Waldhauser, there have been reports of China using blinding lasers against our pilots in Djibouti. Have you raised this issue with your Chinese counterparts?

General WALDHAUSER. In this particular incident, the United States has made it clear to the Chinese that we will not tolerate any deliberate act to harm United States servicemembers. United States responses have included: issuing a demarche on April 16, 2018 that outlined the violation of the United States-China Memorandum of Understanding regarding air and maritime safety; raising the issue through the Military Maritime Consultative Agreement Mechanism; requesting the results of an internal People's Liberation Army investigation into the event; and publicly naming China as responsible for the incident. To date, we have not had another such incident. USAFRICOM has a policy in place directing aircrews to utilize laser eye protection in Djibouti. USAFRICOM and CJTF-HOA track and report suspected lasing incidents; certain lasing events have been assessed as originating from the Chinese People's Liberation Army Naval facility in Djibouti. USAFRICOM works closely with our Department of State counterparts to ensure that China is aware of the hazard these lasers present and the specific threat it poses to pilots

flying in Djiboutian air space pursuant to the permission of the Djiboutian Government.

41. Senator HEINRICH. General Waldhauser, do you believe there has been sufficient consequences for China's breach of the Protocol on Blinding Laser Weapons in Djibouti?

General WALDHAUSER. It remains in our interest to deter aggressive acts that violate international safety conventions by raising the costs of such behavior. Actions like the lasing incident are part of China's strategy of operating below the United States threshold for military engagement and in a protracted state of hostility attempting to weaken U.S. Forces in incremental steps. In this particular incident, the United States has made it clear to the Chinese that we will not tolerate any deliberate act to harm United States servicemembers. Our responses have included issuing a demarche on April 16, 2018 that outlined the violation of the United States-China Memorandum of Understanding regarding air and maritime safety; raising the issue through the Military Maritime Consultative Agreement Mechanism; requesting the results of an internal People's Liberation Army investigation into the event; and publicly naming China as responsible for the incident. We believe China has gotten the message. To date, we have not had another such incident.

#### CHINA AND RUSSIA IN AFRICA

42. Senator HEINRICH. General Waldhauser, in 2018, the Trump Administration signaled plans to reduce forces in Africa by nearly 10 percent over the next several years, citing the need for greater emphasis on China and Russia. You are saying that China and Russia are threatening our influence in Africa. Is a drawdown of resources in Africa appropriate, given what you describe?

General WALDHAUSER. The ten percent reduction of forces in Africa only applies to counter-VEO Special Operations Forces. As a result, the reductions USAFRICOM has proposed to meet the Administration's guidance will not adversely affect USAFRICOM's ability to counter China or Russia in Africa. This is because we have carefully chosen the reductions so as to minimize its impact on missions outside of the counter-VEO fight. For example, we will continue a robust exercise program and significant Security Force assistance with our African partners.

43. Senator HEINRICH. General Waldhauser, would a drawdown of resources in Africa threaten United States interests, and allow for unchecked Chinese and Russian influence?

General WALDHAUSER. Yes, a further reduction of resources in Africa carries increased risk that our African partners may begin to view us as a less reliable partner. Should this occur African nations are likely to turn to those whom they perceive as most capable of meeting their needs. A successful approach to protecting United States interests in Africa against Chinese and Russian expansion requires a whole-of-government response. DOD plays a unique role within that response and a reduction of already sparse resources allocated to the USAFRICOM AOR would ignore the importance of Africa's role in China's global ambitions and Russia's desire to enhance their access and influence. If ordered to further reduce our forces and funding for activities in Africa, we will work to minimize the potential impact to our counter-China and counter-Russia efforts.

#### DEBT DIPLOMACY IN LATIN AMERICA

44. Senator HEINRICH. Admiral Faller, more and more countries are discovering the pitfalls of signing onto China's investment strategy. Are you taking any efforts to warn countries in Latin America against accepting financial assistance from China? If so, how?

Admiral FALLER. We work closely with partners in the region to expose Chinese malign influence and ensure they understand the dangers of China's predatory, opaque, and corrupt financial practices and promises of IT and cyber cooperation. This includes sharing case studies of China's activities in other regions, including China's efforts to purchase long term control of strategic infrastructure, such as in Burma, Pakistan, and Sri Lanka. There are security considerations to allowing the Chinese to build and operate infrastructure with little host nation oversight such as the satellite facility in Argentina. Highlighting the inherent danger in these agreements is a consistent focus area for myself as well as SOUTHCOM component commanders and senior staff during engagements with partner nation leadership. We closely coordinate with interagency partners to ensure messaging alignment and consistency.

45. Senator HEINRICH. General Waldhauser, are you taking any efforts to warn countries in Africa against accepting financial assistance from China? If so, how?

General WALDHAUSER. United States Africa Command follows the lead of the Departments of State and Commerce for debt issues in Africa and respects our African partners' rights to manage their political, military, and economic relations according to their interests. The Departments of State and Commerce, with the International Monetary Fund, World Bank, and broader international community, may advise countries in Africa on the perils—and benefits—of Chinese financial assistance. United States Africa Command advocates for the United States to remain the partner of choice by maintaining our high standards of professionalism, demonstrating our commitment to addressing partner security needs, and providing high-quality equipment, in comparison to peer and near-peer competitors. Further, we offer comprehensive training and equipping programs to meet the long-term military requirements of our partners, under conditions sustainable by the partner's budget and resource availability.

#### RUSSIAN INFLUENCE IN VENEZUELA

46. Senator HEINRICH. Admiral Faller, Russia just sent 400 military contractors to Venezuela, in support of Mr. Maduro. This is on top of Russian-made surface-to-air-missiles, and periodic visits of nuclear capable aircraft. What other Russian assets are in Venezuela?

Admiral FALLER. Russia is Venezuela's top arms supplier. From 2008 to 2018, Moscow sold to Caracas over \$9 billion in military equipment to include combat aircraft, fixed and rotary wing aircraft, tanks, armored personnel carriers, multiple rocket launch systems, artillery, mortar systems, and assorted missile variants. It is likely that technicians, training personnel, and other associated materials/equipment are provided through provisions negotiated during these sales. We have no information to corroborate the claim that 400 Russian private military contractors arrived in Venezuela in January 2019. Additionally, Russia will periodically deploy naval assets to Venezuela, such as naval surface actions groups.

#### VENEZUELA AND TURKEY

47. Senator HEINRICH. Admiral Faller, President Trump signed an executive order banning United States persons from engaging in Venezuela's gold trade. That could be extended to third parties such as Turkey, who imported roughly 23 tons last year. What is your understanding of this trade relationship?

Admiral FALLER. Turkey's relationship with Venezuela has deepened in part by an affinity between the two presidents. In the past two years, Ankara has expanded its trade with Venezuela, importing about \$900 million in gold in 2018. The Maduro regime last year began refining its gold in Turkey as a way to bypass United States sanctions.

48. Senator HEINRICH. Admiral Faller, are you monitoring movement of gold outside of Venezuela?

Admiral FALLER. Yes, we are monitoring movement of gold outside of Venezuela and collaborate closely with interagency partners to determine the effect these gold movements are having on internal and regional security. The Maduro regime continues to avoid penalty from United States sanctions, pursuant to E.O. 13850, by selling gold to African and Middle Eastern countries such as Uganda and United Arab Emirates, respectively. Russia remains Maduro's principle partner in helping move the gold via a Boeing 777 belonging to Russian-airline Norwind.

---

#### QUESTIONS SUBMITTED BY SENATOR ELIZABETH WARREN

##### VENEZUELAN REFUGEE SITUATION

49. Senator WARREN. Admiral Faller, according to the United Nations, over 3 million Venezuelan refugees and migrants have already fled their homes. A Brookings study published in December estimates that this number could grow to 8 million people if economic conditions remain dire, which would be even larger than number of persons displaced by the Syria crisis. In an interview with the Miami Herald, the study's author said the number could grow this large within only 2–3 years. What is your assessment of the consequences of millions of people leaving Venezuela?

Admiral FALLER. The UN projects that by the end of 2019 approximately 5 million Venezuelans will have left the country since 2014. Most Venezuelan migrants resettle within Latin America, taxing regional partners' social, humanitarian, and security services, particularly in towns along the border with Venezuela. Every country

in South America and parts of Central America and the Caribbean are hosting Venezuelan migrants. Some of the notable figures are: over one million Venezuelan migrants have relocated to Colombia; 700,000 to Peru; over 280,000 to Chile; 200,000 to Ecuador; 130,000 to Argentina; and close to 100,000 in both Brazil and Panama. The sudden influx of Venezuelan migrants has strained health and education services and has outpaced the ability of some governments, such as Colombia, to provide shelter and resources. Along the border between Colombia and Venezuela, the National Liberation Army (ELN), Revolutionary Armed Forces of Colombia (FARC) dissidents, and other Colombian criminal organizations exploit Venezuelan migrants crossing the border. For example, the ELN has recruited Venezuelans as young as 15 to join their ranks for unspecified illegal activities, according to the Colombian Army and local non-governmental organizations. Finally as this tragedy grows, the neighboring countries, especially Colombia, will have fewer and fewer security forces to devote to counterdrugs missions as they shift forces to help refugees in dire need of food and medical care.

50. Senator WARREN. Admiral Faller, are Venezuela's neighbors prepared to deal with a crisis of this magnitude?

Admiral FALLER. The exodus from Venezuela is producing the largest mass migration in Latin American history with an estimated 2.7 million migrants and refugees in Latin America and the Caribbean and 3.4 million globally as of February 2019. Neighbors, particularly those sharing borders or close to Venezuela are experiencing severe strains on social services, including their ability to provide sanitation, housing, feeding, and dealing with outbreaks of infectious disease. Both Brazil with 96,000 and Colombia 1.1 million have well organized governmental responses to deal with border crossings, but Colombia's challenge is complicated but much larger numbers of migrants and increased violence, primarily from terrorist activity by the National Liberation Army (ELN) which uses Venezuela as a safe haven and is taking advantage of the Colombian military being stretched thin to support the humanitarian effort. Although all of South America and the small neighboring Caribbean Islands such as Trinidad and Tobago, Curacao, and Aruba are particularly short of resources to handle the influx of migrants, other more distant, larger countries are also significantly impacted with over 700,000 in Peru, 288,000 in Chile, and 130,000 in Argentina which is simultaneously in the throes of a significant financial crisis undermining its ability to deal with a large influx of migrants. With the outpouring into the region expected to continue unabated, most of the impacted countries will require significant international assistance to avoid a greater catastrophe than it currently is. Relief supplies are currently staged in both Colombia and Brazil, ready to distribute within Venezuelan as soon as the Venezuelan military will allow it.

51. Senator WARREN. Admiral Faller, what, if anything, is SOUTHCOM or your partner agencies doing to assist Venezuela's neighbors and these refugees?

Admiral FALLER. SOUTHCOM's assistance to the Venezuelan migrants and those neighboring countries impacted by the crisis has largely been the support provided by the deployment of the USNS *Comfort* in the fall of 2018 and the air lift used to deliver humanitarian aid to the region this year. From October to December 2018, the USNS *Comfort* visited Ecuador, Peru, Colombia, and Honduras. The *Comfort* deployment improved interoperability with partner nation, non-governmental organization, and U.S. medical providers. The physicians from the USNS *Comfort* treated 14,554 medical patients, 3203 dental patients, 8335 optometry patients, and conducted 599 surgeries. They conducted 53 tours and engagements and 120 subject matter exchanges. *Comfort* had an engagement with the Ecuadorian President, Peruvian Congress, and Honduran President. The deployment of the *Comfort* highlighted the Venezuelan migrant crisis, with news coverage reached an estimated 222 million people. In February and March, DOD transported over 126 metric tons of USAID-provided humanitarian relief commodities, including water treatment equipment, hygiene kits, non-pharmaceutical medical supplies, ready-to-use supplementary food, and bulk rice, on 7 United States military flights to Cucuta, Colombia.

#### DRUG SMUGGLING AND INTERDICTION

52. Senator WARREN. Admiral Faller, Southern Command works hard every day to deter criminal networks that try to smuggle drugs into the United States. Fentanyl and other synthetic opioids are devastating the health and safety of Americans across our country. The United States Customs and Border Protection recently seized over 250 pounds of fentanyl at a legal port of entry on our border with Mex-

ico. It was the largest bust ever of this opioid. Where do most of the illegal drugs shipped from your area of responsibility enter the United States?

Admiral FALLER. The majority of illegal drugs shipped from the SOUTHCOM area of responsibility enter the United States through Mexico. More than 80 percent of United States-bound cocaine shipments departing South America transited the eastern Pacific Ocean last year, mostly aboard noncommercial maritime vessels. The vast majority of cocaine seizures occur on the high seas, or in South America, before the drug ever reaches Central America, Mexico, or the Caribbean Islands. Colombia remains the primary source for the majority of cocaine seized and tested in the United States. In 2018, at least 84 percent of the documented cocaine departing South America transited the Eastern Pacific and 9 percent through the Western Caribbean, totaling 93 percent of the known flow through the Central American corridor to Mexico.

53. Senator WARREN. Admiral Faller, of the drugs that are interdicted, how many of these are intercepted by the U.S. Coast Guard?

Admiral FALLER. In fiscal year 2018, the Joint Interagency Task Force-South (JIATF-S) supported the interdiction of 273 metric tons of cocaine in 287 maritime events. The U.S. Coast Guard played a critical role in those interdictions, participating in 171 events (60 percent). Also note that our partner nations play a critical role in maritime interdictions, participating in 116 events (40 percent). JIATF-S does not execute actual law enforcement interdiction but directly supports the U.S. Coast Guard, other law enforcement agencies, and partner nations.

---

#### QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

##### VENEZUELA

54. Senator MANCHIN. Admiral Faller, with the increased complexity of foreign defense partnerships within the Venezuelan Government such as Russian bomber visits and military equipment sales, Cuban intelligence and security forces, and the presence of Hezbollah, do you foresee dangers in an open conflict with Venezuela bleeding over into direct conflict with another foreign power or of a conflict in Venezuela devolving into a proxy war?

Admiral FALLER. Although Russia, Cuba, and Hezbollah do have varying degrees of presence and involvement in Venezuela, at this time, there is no indication that any open conflict would occur nor that it would devolve into a proxy war.

##### CHINESE INVESTMENT IN SOUTHCOM

55. Senator MANCHIN. Admiral Faller, base on continuing Chinese investment in multiple areas such as infrastructure, port projects, and canal construction, are we as the United States at risk of losing access or influence with our allies either through physical barriers to operation or through risk of compromise of information networks?

Admiral FALLER. China is seeking to inch out the United States as the preferred partner in the region. China uses predatory economic policies to exert political leverage and gain access to key infrastructure, ranging from ports to telecommunications architecture. For example, Beijing's offers to Panama, the Dominican Republic, and El Salvador of greater economic engagement likely played a key role in these countries' decisions to diplomatically recognize China. Shortly after El Salvador recognized China, Beijing tried to develop a commercial port there (La Union), a move the United States ambassador said demonstrated China's intentions to turn the port into a military base. Greater Chinese involvement in regional security services, IT and telecommunications may mean we need to reassess how we share information with them given the ensuing counterintelligence concerns. A reduced ability to share information with these partners likely would affect our ability to pass actionable intelligence that allows partners to detect, monitor, and disrupt narcotics traffickers.

##### GUANTANAMO BAY

56. Senator MANCHIN. Admiral Faller, if the requested funds are authorized and appropriated for recapitalization of Joint Task Force Guantanamo Bay facilities, how long until additional funds will be required for further repairs or updates? What is the long term cost estimate of housing the 40 current detainees indefinitely?

Admiral FALLER. Recapitalizing the infrastructure at Joint Task Force Guantanamo Bay (JTF-GTMO) will require a phased approach. The majority of facilities at JTF-GTMO were designed to expeditionary (one year design life) or temporary

standards (five year design life) and constructed between 2004 and 2008, putting them long past their life spans. Not only is the infrastructure failing, but the various systems within those buildings are also starting to fail, such as plumbing, electrical, and IT systems. With the signing of Executive Order 13823 and subsequent policy guidance, the JTF has been directed to plan for continued operations for at least 25 years. The JTF is currently assessing all of its infrastructure requirements to meet this mission and I will be reviewing it carefully to ensure a balance of troop safety, security of detainees, and good stewardship of taxpayer funds.

#### COMBATTING VIOLENT EXTREMIST ORGANIZATIONS IN AFRICA

57. Senator MANCHIN. General Waldhauser, with the limited ability to conduct kinetic strikes with United States assets against militants and extremist organizations in many regions of Africa, what efforts are currently being undertaken on the security cooperation and governance fronts to contain or combat the rapidly growing extremist threats in many of Africa's ungoverned areas?

General WALDHAUSER. USAFRICOM has a limited authority to conduct kinetic strikes with United States assets; however, the USAFRICOM Campaign Plan (ACP) supports the broader U.S. whole-of-government policy and strategy implementation to defeat priority VEOs globally. Defeating VEOs in Africa requires a synchronized, sustained, and multi-year regional campaign that leverages African, international, and interagency partners. In East Africa, USAFRICOM continues to build upon the focus and of over a decade of investments, both directly with the Somalis as well as with the African Union mission in Somalia (AMISOM) troop contributing countries (TCCs), Burundi, Djibouti, Ethiopia, Kenya, and Uganda, to consolidate gains and accelerate towards long-term recovery and stability in Somalia. These efforts allow our partners in Somalia to collaborate on C-VEO efforts with the United States and other regional partners and international organizations. USAFRICOM achieves USAFRICOM Campaign Plan North African Counter-VEO (C-VEO) Build Partner Capacity (BPC) effects and fulfills its security cooperation obligations by engaging with key partner nations to develop capabilities to detect/disrupt/degrade VEO operations, lines of communication, and safe havens. These BPC efforts allow our partners in the Maghreb to collaborate on C-VEO efforts with the United States and other regional partners and international organizations. The two primary countries USAFRICOM partners with in the North African region are Morocco and Tunisia. USAFRICOM supports and executes operations and activities in the West African Sahel Region to enable French counter-terrorism operations, enable the African led GS Sahel Joint Force to execute independent C-VEO operations, and assist Sahel partner forces to execute independent operations that apply pressure to VEO networks in West Africa. In the Lake Chad Region (LCR), USAFRICOM supports and executes operations and activities to assist partner forces in applying pressure to the Baka Haram and ISIS-West Africa (WA) networks and enable local LCR Government officials to promote and process defectors from Baka Haram and ISIS-WA. USAFRICOM's defense efforts must be executed in parallel with comprehensive diplomacy and development measures to address the underlying political, societal, and development grievances that often contribute to violent extremism in Africa. To address these issues, the United States Government (USG) and international partners conduct diplomatic and development engagements with African partners to underscore the importance of human rights standards and civilian control of the military. These efforts, which will strengthen the perceived legitimacy of our African partner governments and militaries, are essential to long-term prosperity and stability on the continent.

#### CHINESE EXPANSION IN AFRICOM

58. Senator MANCHIN. General Waldhauser, does Chinese military expansion in Africa such as their naval base in Djibouti and security cooperation efforts tied to their investments currently have the potential to inhibit our operations to secure a more stable African continent?

General WALDHAUSER. Current Chinese military efforts in Africa are unlikely to inhibit our operations and access in the region. However, if current trends continue, China could gain that capability within the next decade. China is actively working with African partners to open new bases in several locations across the continent. Additionally, China's Belt and Road Initiative (BRI) links existing and planned dual-use ports across the continent to Chinese facilities in Asia. Some of these ports are entirely operated by Chinese commercial entities and other ports only have a section controlled by Chinese firms. These ports are often connected to BRI rail, road, and pipeline infrastructure built with Chinese loans. We have seen instances in which China has leveraged infrastructure debt to pressure Africa leaders to take



actions against American interests. If Chinese control over African infrastructure continues to expand, our operations will likely start to encounter reduced access in several theaters.

#### RUSSIAN INVOLVEMENT IN AFRICOM

59. Senator MANCHIN. General Waldhauser, what efforts or strategy are we currently undertaking to combat or counterbalance the destabilizing effects of Russian sanctioned and supported arms sales and quasi-military personnel support to autocratic regimes in Africa such as the government in the Central African Republic?

General WALDHAUSER. Our efforts across Africa are designed to demonstrate that the United States and its Allies are superior security partners. Our military to military engagements throughout the region support broader U.S. Government objectives of fostering more transparent and responsive governments, which in turn leads to more resilient government institutions. As governments become more resilient, they are able to withstand Russian coercive actions that could lead to instability. In addition to supporting other government agencies in their mission of helping Africans develop more resilient governments, USAFRICOM is also working with our Allies to directly address specific Russian actions in countries where our Allies have shared interest with us such as in CAR. Due to long-standing and deep ties our Allies have with many African nations, it may be more appropriate for them to take the lead in countering Russian destabilizing activities.

---

#### QUESTIONS SUBMITTED BY SENATOR DOUG JONES

##### CAMEROON

60. Senator JONES. General Waldhauser, in response to my question regarding Cameroon you testified that: “they have been a good partner with us counterterrorism wise, but you can’t neglect the fact that they have—there are alleged atrocities and what’s going on there. We continue to take our cues from the State Department and from the ambassador and our level of engagement will continue but not get out ahead of what they do State Department would say is if we have to take other actions. We were very emphatic with President Biya that the behavior of his troops, the lack of transparency could have a significant impact on our ability to work with them.” In your written testimony you said “The government of Cameroon has assured the United States no security assistance will be diverted from counter-Boko Haram and ISIS-WA efforts to the Anglophone regions.” Has the Cameroon Government shown a willingness to hold human rights violators within their military accountable?

General WALDHAUSER. Cameroonian officials have stated they have taken steps to investigate allegations of human rights violations by the security forces. We continue to urge the government to share information with us about military prosecutions and have informed the government that lack of progress and clarity on this issue could result in a broader suspension of U.S. assistance.

61. Senator JONES. General Waldhauser, what type of assurances have we received from the Cameroonian Government and, considering what you referred to as a “lack of transparency” what type of monitoring and verification regime to we have in place to ensure our aid is not diverted to the Anglophone states where these atrocities are alleged to have taken place?

General WALDHAUSER. We have expressed grave concern over the crisis in Cameroon’s Northwest and Southwest Anglophone regions and have urged the Cameroonian government and the separatists to end the violence. In accordance with the Leahy law, assistance to those Cameroonian security force units that are credibly accused of committing gross human rights violations has been suspended. In addition, separate cuts have been made to our security assistance to Cameroon to reflect our concern. Also, we have requested Cameroon to be more transparent about investigating credible allegations of human rights abuse. We have made it clear to the government of Cameroon that our security assistance is only to reinforce their capability to fight against Boko Haram and ISIS-WA, ensure security in the Gulf of Guinea, and help secure neighboring Central African Republic through participation in the UN Stabilization Mission in Central Africa.



**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**TUESDAY, FEBRUARY 12, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**UNITED STATES INDO-PACIFIC COMMAND AND UNITED  
STATES FORCES KOREA**

The Committee met, pursuant to notice, at 9:29 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee Members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Perdue, Cramer, McSally, Scott, Blackburn, Hawley, Reed, Shaheen, Gillibrand, Blumenthal, Hirono, Kaine, King, Warren, Manchin, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. The Committee meets today to receive testimony on the posture of United States Indo-Pacific Command (INDOPACOM) and United States Forces Korea. I'd like to welcome our witnesses, Admiral Phil Davidson and General Robert Abrams.

The Senate Armed Services Committee's top priority is to ensure the effective implementation of the National Defense Strategy (NDS). That means we need urgent change at a significant scale to address the challenges of strategic competition with China. Our military advantage and deterrent edge in the Indo-Pacific is eroding. The Chinese Communist Party leadership in Beijing senses weaknesses. They are testing our resolve, and if we do not act urgently, they may soon conclude that they can achieve their goals through force. We can't take peace for granted.

Admiral Davidson, I look forward to hearing from you about the strengthening of the deterrence in the Indo-Pacific; in other words, how we and our allies can achieve the capabilities, capacity, and posture necessary to prevent a war by convincing Beijing that it cannot win.

General Abrams, as another United States-North Korea summit approaches, I look forward to hearing from you on how we ensure that our military is prepared to add strength to our diplomacy to deter conflict and win, if necessary.

Finally, I hope today's hearing will serve as a reminder that the greatest sources of American power are our alliances and our partnerships. Whether it's strategic competition with China or addressing the threat posed by North Korea, America cannot do this alone. Strategic success in the Indo-Pacific simply is not possible without allies who share our values and our interests and who share our burden of our common security. I think those of us that are together in the South China Sea know exactly what this means.

Senator Reed.

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Thanks very much, Mr. Chairman. Let me join you in welcoming our witnesses today and thank them for their distinguished service to the Nation. You are both leading commands during very challenging times. We thank you for your continued service, and also, we would ask that you'd extend our thanks and gratitude to the men and women under your commands who each day sacrifice and serve the Nation, and their families, also.

I'd first like to address the current situation on the Korean Peninsula. General Abrams, you've been in command now for approximately 90 days. I look forward to hearing from you about the readiness of our forces and how you are mitigating the effects of the modification and suspension and cancellation of our joint exercises with the Republic of Korea's forces. I am concerned that if we continue in this vein, we will begin to experience a serious deterioration of the readiness of the joint forces. While I acknowledge the suspension of exercises has created diplomatic space for negotiations with North Korea, I do not believe there has been sufficient progress on the denuclearization front to justify the reduction in readiness.

I'm also not optimistic that the upcoming second summit between President Trump and Kim Jong-un will yield substantial gains in the denuclearization of North Korea. For example, without a declaration of all nuclear and missile sites and programs, I do not think there will be a sufficient roadmap to move toward complete and verifiable, irreversible denuclearization.

I'm also concerned that President Trump may consider withdrawing troops on the Korean Peninsula as a result of some agreement he reaches with North Korea. That action would significantly undermine regional security and our ability to fulfill our treaty obligations to South Korea.

The United States and South Korea (ROK) recently concluded negotiations on the Special Measures Agreement in which South Korea agreed to substantially increase its financial support for our troops. The Special Measures Agreement reflects how much of a share South Korea pays for the burden of housing our troops on the peninsula. In addition to the Special Measures Agreement, South Korea has also spent approximately \$10 billion to build Camp Humphreys, the largest overseas United States military base. We need to acknowledge the extraordinary financial support South Korea provides to the alliance and continue to recognize that our alliances with Japan and South Korea are the cornerstone of regional security in the INDOPACOM region. At the end of the day, the preservation of our alliances is critical in countering the very

real threats that we face from North Korea and to counter Chinese coercive activities in the region.

Now, Admiral Davidson, while North Korea presents the immediate challenge to our forces in the region, China presents the most significant long-term strategic threat that this country has faced in many, many years. China's Belt and Road Initiative has left several countries, notably Sri Lanka and Malaysia, severely indebted to China. Beijing often targets corrupt local governments that personally profit from inflated loans but leave their state treasuries bankrupt and beholden to President Xi's administration. It is an economic initiative with significant national security implications for the United States.

Countering Chinese aggression globally will require us to rely on our partners and allies to a greater degree in the decades to come. Funding for programs like International Military Education and Training, or IMET, and Foreign Military Finance, or FMF, are crucial in the INDOPACOM area. Bolstering the ability of team partners like Vietnam and the Philippines to monitor and defend their territorial waters through funding from the Indo-Pacific Maritime Security Initiative will create more regional security and stability and protect freedom of navigation for all nations in the region, regardless of size.

The United States needs to recognize the work of allies like Australia who are enabling small Pacific nation states in Oceania so they can counter China's predatory economic behavior. The United States must also continue its support of the states represented in the Compact of Free Association (COFA) between United States and Micronesia, Palau, and the Marshall Islands. It's clear that China is targeting these Pacific islands in an effort to increase its influence and diminish ours.

Admiral Davidson, we have not yet seen the President's budget request, but I hope that it will align with the National Defense Strategy and reflect real DOD [Department of Defense] investments in the Indo-Pacific region. I also hope it reflects the resources needed for the whole-of-government approach that we need to counter China in the long run. As the Commission on the National Defense Strategy noted, if we don't ensure adequate funding for critical national security functions beyond the Department of Defense, in their words the "United States will be at a competitive disadvantage and will remain ill-equipped to preserve its security and its global interests amid intensifying challenges."

One other point I'd like to make is that we're all, I think, alarmed by President Xi's brutal crackdown on the Uighurs in the west and the bellicose statements about Taiwan. These present serious human rights problems for the international community, and as a global leader for human rights, we have to call out China on these issues. We must also never lose focus on the fact that it is our values, especially our devotion to human rights and democratic principles, that resonates so well around the globe and enhances our military power.

Again, thank you to our witnesses for their service. I look forward to your testimony.

Chairman INHOFE. Thank you, Senator Reed.

Admiral Davidson, we'll start with you for an opening statement. Your entire statement will be made a part of the record, but give us your overview.

**STATEMENT OF ADMIRAL PHILIP S. DAVIDSON, USN  
COMMANDER, UNITED STATES INDO-PACIFIC COMMAND**

Admiral DAVIDSON. Good morning, Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee. Thank you for the opportunity to appear with General Abrams before you today to discuss the Indo-Pacific region. I am joined by Sergeant Major Anthony Spadaro, my senior enlisted advisor who represents the soldiers, sailors, airmen, and marines in the Indo-Pacific area of operations. I'm most grateful for his service in the headquarters.

First, let me say thank you for the significant support we have received from Congress over the last 2 years. The temporary relief from the Budget Control Act (BCA) and an on-time fiscal year 2019 budget has helped to relieve pressure to military readiness and has added to the lethality necessary to safeguard United States vital national interests in the Indo-Pacific. But there is indeed more work to do.

When I took command of INDOPACOM nearly 9 months ago, I said that for more than 70 years the Indo-Pacific has been largely peaceful. This was made possible by two things: the willingness and commitment of free nations to work together for a free and open Indo-Pacific and the credibility of the combat power within United States Indo-Pacific Command. This commitment and this credibility have worked to liberate hundreds of millions of people and lift billions out of poverty in those seven decades, all to a level of prosperity previously unseen in human history. Today, the concept of a free and open Indo-Pacific resonates with our allies and partners across the region and includes economic, political, and security dimensions, and it demonstrates our commitment to a safe, secure, and prosperous region that benefits all nations, large and small.

As the primary military component of the United States' efforts to ensure a free and open Indo-Pacific, USINDOPACOM works with the rest of the United States Government and a constellation of like-minded allies and partners to advance our shared vision. When we say "free," we mean free both in terms of security—free from coercion by other nations and in terms of values and political systems. Free to choose trading partners. Free to exercise sovereignty.

An open Indo-Pacific means we believe all nations should enjoy unfettered access to the seas and airways upon which all nations' economies depend. Open includes open investment environments, transparent agreements between nations, protection of intellectual property rights, and fair and reciprocal trade, all of which are essential for people, goods, and capital to move across borders for the benefit of all.

While the term "free and open Indo-Pacific" is new, the underlying values and principles to which the vision speaks to are not. In fact, this is how the United States has approached the region throughout our 240-plus-year history. But there are indeed chal-

lenges to this shared vision of a free and open Indo-Pacific. There are five key challenges that I believe challenge our national interest and the rules-based international order.

While we have made significant progress over the past year, North Korea remains the most immediate challenge. I'm optimistic about the upcoming United States-North Korea summit later this month as we work toward identifying the path to final, fully-verifiable denuclearization as agreed upon by President Trump and Chairman Kim at their 2018 Singapore summit.

Our military combat readiness and combined lethality are the best deterrents against any threat from North Korea, so I will continue to emphasize military readiness while simultaneously supporting the United States Department of State-led pressure campaign. I should add, the United States and Republic of Korea alliance has become the linchpin of peace and security in Northeast Asia and for the long-term in the Pacific region and demonstrates what great democracies can accomplish when we work together.

Back to our challenges. China represents our greatest long-term strategic threat to a free and open Indo-Pacific and to the United States. Those who believe this is reflective of an intensifying competition between an established power in the United States and a rising power in China are not seeing the whole picture. Rather, I believe we are facing something even more serious: a fundamental divergence in values that leads to two incompatible visions of the future. Through fear and coercion, Beijing is working to expand its form of ideology in order to bend, break, and replace the existing rules-based international order. In its place, Beijing seeks to create a new order, one with Chinese characteristics, led by China, an outcome that displaces the stability and peace of the Indo-Pacific that has endured for over 70 years.

I'm also concerned about the growing malign influence of Russia throughout the region. Moscow regularly plays the role of spoiler, seeking to undermine United States interests and impose additional costs on the United States and our allies whenever and wherever possible. Terrorism and other non-state actors also pose threats to our vision of a free and open Indo-Pacific as they seek to impose their views and radicalize people across the region, as evidenced in 2017 when ISIS [Islamic State of Iraq and Syria] captured the southern Philippine city of Marawi, a city of more than 200,000 people.

Lastly, the Indo-Pacific remains the most disaster-prone region in the world. It contains 75 percent of the Earth's volcanoes, and 90 percent of earthquakes occur in the Ring of Fire that surround the Pacific Basin. The UN [United Nations] estimates economic losses in the region due to disasters could exceed \$160 billion annually by 2030, and many countries across the region lack sufficient capability and the capacity to manage natural and man-made disasters.

To address all of the challenges I mentioned, USINDOPACOM is focused on regaining our competitive military advantage over the short- and long-term. We must field and sustain a joint force that is postured for two distinct security rules: to win before fighting and, if necessary, to be ready to fight and win. USINDOPACOM's ability to prevail in armed conflict is the foundation of combat-cred-

ible deterrence. By fielding and maintaining a joint force ready to fight and win, we reduce the likelihood that any adversary will resort to military aggression to challenge or undermine the rules-based international order.

This deterrence is absolutely necessary to prevent conflict, but deterrence alone cannot ensure a free and open Indo-Pacific. Our adversaries are pursuing their objectives in the space between peace and war, using fear and coercive actions across all of their instruments of national power to revise the rules-based international order without resorting to armed conflict. Alongside like-minded allies and partners, USINDOPACOM, and the whole of the United States Government, we must compete in the gray zone between peace and war to win before fighting. These deliberate actions will ensure a free and open Indo-Pacific against those malign actors that seek to accomplish their political objectives short of armed conflict.

I want to thank this Committee for your continued support of the men and women of USINDOPACOM and for your efforts in helping us ensure a free and open Indo-Pacific. Thank you, and I look forward to your questions.

[The prepared statement of Admiral Davidson follows:]

#### PREPARED STATEMENT BY ADMIRAL PHILIP S. DAVIDSON

Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, thank you for the opportunity to appear before you today to discuss the Indo-Pacific region. First, let me say thank you for the significant support we have received from Congress over the last two years. The temporary relief from the Budget Control Act and an on-time fiscal year 2019 budget helped to restore the military readiness and lethality necessary to safeguard U.S. vital national interests in the Indo-Pacific.

#### OVERVIEW

For more than 70 years the Indo-Pacific has been largely peaceful. This was made possible by three things: the willingness and commitment of free nations to work together for a Free and Open Indo-Pacific; the credibility of the combat power of United States Indo-Pacific Command; and a robust and modern United States nuclear deterrent. This commitment, and this credibility, have worked to liberate hundreds of millions of people, as well as lift billions out of poverty, all to a level of prosperity previously unseen in human history. It has also ensured that tensions, regardless of how or where they arise, do not escalate into large-scale war.

Our nation's vision for a Free and Open Indo-Pacific, announced in 2017 at the Asia Pacific Economic Council (APEC) summit in Vietnam, demonstrates our commitment to a safe, secure, and prosperous region that benefits all nations, large and small. The concept of a Free and Open Indo-Pacific resonates with our allies and partners across the region and includes economic, governance, and security dimensions. The vast majority of nations across the region share similar values, including the core beliefs that governments should be accountable to their people. We must stand together in support of our shared values and be unambiguous in condemning those who attempt to undermine those values.

USINDOPACOM is the primary military component of our government's efforts to ensure a Free and Open Indo-Pacific. Every day we work with a constellation of like-minded allies and partners and the rest of the United States Government to advance our shared vision for a Free and Open Indo-Pacific.

When we say *Free* we mean Free both in terms of security—*free* from coercion by other nations—and in terms of values and political systems. Free to choose trading partners. Free to exercise sovereignty.

An *Open* Indo-Pacific means we believe all nations should enjoy unfettered access to the seas and airways upon which all nations' economies depend. Open includes open investment environments, transparent agreements between nations, protection of intellectual property rights, and fair and reciprocal trade—all of which are essential for people, goods, and capital to move across borders for the benefit of all.



While the term “Free and Open Indo-Pacific” is new, the underlying values and principles to which the vision speaks are not. In fact, this is how the United States has approached the region throughout our 240-plus year history. We are now seeing a general convergence around the importance of a free and open Indo-Pacific across the region—as Japan, Australia, France, New Zealand, and India have all put forth similar concepts or visions.

The United States is an enduring Pacific power. Our historical, structural, economic, and institutional ties to the Indo-Pacific are indelible.

U.S. power underpins the post-WWII international system that helps strengthen the essential foundation of a rules-based international order for economic growth and prosperity in the region for everyone. Furthermore, USINDOPACOM’s role as a guarantor of security in the region has enabled our economic power and allowed our partners and allies to focus on their economic development, which in turn has increased opportunities for U.S. economic engagement and prevented costly conflict. A peaceful, free, and open Indo-Pacific is especially vital to our economy in the 21st century when you consider the following:

- The United States conducted more than \$1.8 trillion in two-way goods trade with Indo-Pacific nations in 2017, and more than \$1.3 trillion by the third quarter of 2018.
- In 2017, U.S. foreign direct investment in the region reached \$940 billion—more than doubling since 2007.
- The Indo-Pacific is home to half of the 20 fastest growing economies.
- The Indo-Pacific currently contains over a third of global GDP and 60 percent of the global GDP growth.
- By 2030, 65 percent of the world’s middle class will reside in the Indo-Pacific, representing an unrivaled amount of purchasing power.

As the above statistics portend, this dynamic and economically robust region will continue to play a vital role in our economic future throughout the 21st century.

#### FIVE KEY CHALLENGES

In my view, five key challenges threaten our vital national interest in ensuring a Free and Open Indo-Pacific. While we have made significant progress over the last year, North Korea will remain the most immediate challenge until we achieve the final, fully verifiable denuclearization as committed to by Chairman Kim Jong-un at the summit in June 2018. China, however, represents the greatest long-term strategic threat to a Free and Open Indo-Pacific and to the United States. Through fear and economic pressure, Beijing is working to expand its form of Communist-Socialist ideology in order to bend, break, and replace the existing rules-based international order. In its place, Beijing seeks to create a new international order led by China and with “Chinese characteristics”—an outcome that displaces the stability and peace of the Indo-Pacific that has endured for over 70 years. Russia is also active throughout the region. Moscow regularly plays the role of a spoiler, seeking to undermine United States interests and impose additional costs on the United States and our allies whenever and wherever possible. I am also concerned about the threat posed by non-state actors. Violent Extremist Organizations (VEOs) seek to impose their views and radicalize people across the region, as evidenced by the capture of Marawi City in the southern Philippines in 2017—a city of over 200,000 people—by ISIS extremists. Lastly, natural and manmade disasters are an ever present danger in the region. Let me describe these five key challenges in more detail.

#### *North Korea:*

*Denuclearization.* USINDOPACOM’s assessment on North Korean denuclearization is consistent with the Intelligence Community position. That is, we think it is unlikely that North Korea will give up all of its nuclear weapons or production capabilities, but seeks to negotiate partial denuclearization in exchange for United States and international concessions.

Following a rapid series of nuclear and missile tests into 2017, tensions declined; North Korea halted nuclear testing in September 2017 and ICBM testing in November 2017. President Trump’s meeting with Chairman Kim in Singapore in June 2018 was a significant milestone, and I am optimistic about another United States–North Korea summit. North Korea has taken some steps in the direction of denuclearization, most notably the reversible dismantlement of tunnels at the Punggye nuclear test site, yet much needs to be done to make meaningful progress.

In early 2018, the two Koreas initiated a season of rapprochement, beginning with the Winter Olympics in February 2018, and continuing through three subsequent

Korean summits between President Moon and Chairman Kim and multiple lower-level meetings. More recently, North Korea has undertaken measures in accordance with the Comprehensive Military Agreement it signed with South Korea in September 2018, to include dismantling guard posts within the demilitarized zone and removing land mines near Panmunjom. North Korea also returned remains of United States servicemembers from the Korean War, which provided great comfort to mourning families.

I welcome these steps, but we must remain vigilant to the threat North Korea still poses to the United States and the international community. North Korea has demanded “corresponding measures” from the United States in return for these above actions. Kim warned in his 2019 New Year’s speech of a potential “new path,” which could indicate an eventual return to missile and weapons of mass destruction (WMD) testing if he is not satisfied with the pace of negotiations and potential benefits. Our military combat readiness and combined lethality remain the best deterrent and the best leverage against any threat from North Korea.

*Sanctions.* North Korea is continuing efforts to mitigate the effects of international sanctions and the United States-led pressure campaign through diplomatic engagement, counter pressure against the sanctions regime, and direct sanctions evasion. USINDOPACOM will continue to support the President’s pressure campaign by ensuring the military readiness of the combined force and supporting sanctions enforcement as directed by United Nations Security Council Resolutions (UNSCR). UNSCR sanctions resulted in a decline in North Korea’s export earnings and cut off key cash flow sources. However, recent calls from Russia and China to change the sanctions against North Korea threaten to undo these positive developments.

Additionally, North Korea has a long history of flouting international sanctions, and Pyongyang regularly attempts to circumvent them. Early in 2018, North Korea exceeded its sanctioned limit on refined petroleum imports through illicit ship-to-ship transfers. USINDOPACOM is working with partners and allies to disrupt illicit ship-to-ship transfers that occur primarily in the East China Sea, often near or in Chinese territorial waters, and in the Yellow Sea. North Korea is also engaged in cross-border smuggling operations and cyber-enabled theft to generate revenue, while simultaneously circumventing United Nations Security Council prohibitions on coal exports.

#### *China:*

*Military Modernization.* Over the last 20 years, Beijing has undertaken a massive effort to grow and modernize the People’s Liberation Army (PLA). The PLA is the principal threat to U.S. interests, United States citizens, and our allies inside the First Island Chain—a term that refers to the islands that run from northern Japan through Taiwan, the Philippines, and Indonesia—and the PLA is quickly increasing its ability to project power and influence beyond the First Island Chain. Beijing pursues both qualitative and quantitative efforts to transform its military, modernizing its military platforms while simultaneously increasing the number of platforms in service. Newly-fielded systems include:

- Beijing’s first aircraft carrier group, centered around its refurbished Soviet-built carrier, reached initial operational capability in mid-2018.
- Beijing’s first domestically-built aircraft carrier, has completed four sets of sea trials since May 2018 and will likely join the PLA Navy (PLAN) fleet in 2019.
- The *Renhai*-class guided missile cruiser, was launched in 2017; three additional vessels were added to the PLA Navy’s inventory in 2018. This class of vessels will be a key component of PLA Navy carrier strike groups.
- The *Fuyu*-class fast combat support ship, developed specifically to support aircraft carrier task group operations, was commissioned less than a year ago.
- The J-20, the PLA’s first 5th-generation stealth fighter, entered service in February 2018; plans are underway to research a sixth-generation fighter.
- The Y-20, a domestically-produced heavy-lift aircraft, entered military service in 2016; the Y-20 has a significantly larger payload capacity and range than the PLA’s previous heavy and medium-lift aircraft, which advances Beijing’s strategic airlift capability.
- The S-400 advanced surface-to-air missile system, received from Russia in April, 2018; the S-400 has a 250-mile range, which could expand the PLA’s air coverage over the Taiwan Strait and other high priority facilities.

The PLA maintains a high operations tempo, primarily in and near China, but is quickly expanding its operating areas beyond the region. The PLA’s Naval Escort Task Force (NETF)—now in its 31st iteration—follows its anti-piracy missions off

the Horn of Africa by conducting naval diplomacy deployments to Europe, Africa, and the South Pacific. From May-July 2018, the 28th NETF completed a three-month naval diplomacy tour conducting port visits and bilateral exercises in Spain, Nigeria, Ghana, Cameroon, Gabon, South Africa, and Indonesia before returning to China. Beijing regularly conducts joint military exercises across its ground, sea, air, and space forces, including amphibious assault training that is designed and specifically timed to intimidate Taiwan. This spring, approximately 10,000 PLA marines traveled more than 1,200 miles as part of a large-scale exercise designed to improve long-range maneuverability. In April, Beijing conducted a live-fire exercise into the Taiwan Strait with coastal artillery, and PLA Air Force (PLAAF) bombers regularly circumnavigate Taiwan.

Beijing continues pursuing next-generation technologies and advanced weapons systems, including hypersonic glide vehicles, directed energy weapons, electromagnetic railguns, counter-space weapons, and unmanned and artificial intelligence-equipped weapons. The PLA has also made significant technological, game-changing developments in its ability to defeat, or drastically reduce, the effectiveness of U.S. sensors and defensive weapons. The PLA has tested hypersonic missiles since 2014, including the WU-14, with speeds approaching Mach 10. In August 2018, Beijing claimed to have successfully tested its first hypersonic aircraft.

Beijing is also modernizing and adding new capabilities across its nuclear forces. China's third generation Type 096 nuclear-powered Ballistic Missile Submarine (SSBN) will be armed with JL-3 sea-launched ballistic missiles and will likely begin construction in the early-2020s. In April, Beijing confirmed the DF-26 entered service—a road-mobile, nuclear, and conventional capable Intermediate-Range Ballistic Missile (IRBM), expanding Beijing's near-precision strike capability as far as the Second Island Chain (a term that refers to the southern part of the Aleutian Islands, the Commonwealth of Northern Mariana Islands, Guam, the Republic of Palau, and northern Papua New Guinea). Beijing continues testing its DF-41 road-mobile Intercontinental Ballistic Missile (ICBM), which carries multiple independently targetable re-entry vehicles and has a range of up to 9,300 miles.

*South China Sea.* Beijing maintains maritime claims in the South China Sea that are contrary to international law and pose a substantial long-term threat to the rules-based international order. Beijing ignored the 2016 ruling of an Arbitral Tribunal established under Annex VII of the Law of the Sea Convention, which concluded that China's claims to historic rights, or other sovereign rights or jurisdiction, with respect to the maritime areas of the South China Sea encompassed by the "nine-dash line" are contrary to UNCLOS and without legal effect. In April 2018, Beijing continued militarizing outposts by deploying advanced military systems that further enhance the PLA's power projection capabilities, including missiles and electronic jammers. These actions run directly counter to President Xi's 2015 commitment not to militarize these features. On multiple occasions, Beijing has landed military transport aircraft on the Spratly Islands and long-range bombers on the Paracel Islands. Additionally, Chinese Coast Guard vessels now fall under the command of the Central Military Commission and regularly harass and intimidate fishing vessels from our treaty ally, the Philippines, operating near Scarborough Reef, as well as the fishing fleets of other regional nations.

*East China Sea.* Beijing continues using its military forces to advance its territorial claims in the East China Sea. Beijing maintains a high level of surface combat patrols in the East China Sea. Additionally, Chinese Coast Guard vessels frequently enter the territorial waters of the Senkaku Islands, which the United States recognizes as being under the administrative control of the Japanese. In 2017, these incursions occurred on an average of once every ten days, and continued in 2018 at about two per month. Additionally, while Beijing mostly implements United Nations Security Council Resolutions against North Korea, in a number of cases, illicit ship to ship transfers continue to occur within Chinese territorial waters.

*Economic Pressure.* While the United States strives to promote a Free and Open Indo-Pacific, Beijing is leveraging its economic instrument of power in ways that can undermine the autonomy of countries across the region. Beijing offers easy money in the short term, but these funds come with strings attached: unsustainable debt, decreased transparency, restrictions on market economies, and the potential loss of control of natural resources. Beijing's actions in this regard have potential military ramifications as well. Beijing touts its need to safeguard its citizens abroad and defend its expanding global interests in order to justify increased permanent PLA overseas basing and presence. Beijing is also exploiting growing debt burdens to access strategic infrastructure in the region. In December 2017, Sri Lanka handed over control of the newly-built Hambantota seaport to Beijing with a 99-year lease because Sri Lanka could no longer afford its debt payments to China.

Over the last year, we have seen that countries across the region are becoming more aware of the threat Beijing's economic policies pose. Malaysia announced the cancellation of three projects worth \$22 billion in August 2018, declaring that it could not afford Beijing's projects, decrying the corrupt practices associated with the projects, and criticizing the loans as a "new version of colonialism." The Maldives' former president described Beijing's investments as a "land grab" under the guise of development. In contrast, the United States' vision for a Free and Open Indo-Pacific strives to preserve the autonomy of independent nations in the Indo-Pacific region. We must continue to support countries that stand up to Beijing's coercive economic policies whenever possible and help those countries offset any economic blowback from Beijing. Our engagement in the Indo-Pacific must truly be a whole-of-government undertaking, in partnership with the private sector and civil society, to counter China's economic coercion.

*Arctic and Antarctic.* Beijing recognizes the growing strategic significance of the Arctic and Antarctic and has signaled its plans to assert a greater role in these regions. Despite not being an Arctic nation, Beijing published its first Arctic policy paper in 2018, which defends Beijing's role in the region and outlines Beijing's vision of a "Polar Silk Road" to complement its other economic initiatives. Beijing launched its first domestically built icebreaking research vessel in September 2018, and Beijing plans to launch its second in 2019. Beijing also opened bidding for construction of its first nuclear-powered icebreaker. Beijing wants to boost its polar research and expedition capabilities and recently announced plans to double the frequency of its Arctic expeditions to once a year. Beijing has also expressed increasing interest in Antarctic operations and establishing logistics stations to supply them. This is of increasing concern to our ally Australia, as well as New Zealand, as Beijing seeks positional advantage and control of territory and natural resources in these vital regions.

*Fentanyl and Pre-Cursors Chemicals.* Another challenge that affects the security environment indirectly is the continuing fentanyl and opioid crisis in the United States. Illicit fentanyl, as well as legal pre-cursor chemicals used in the production of illegal drugs primarily originate from China. Moreover, technological advancements in e-commerce and commercial shipping present a different business model from the traditional methods used by transnational criminal organizations for drug trafficking. These innovations represent a new level of complexity for U.S. law enforcement agencies and policymakers alike. I welcome the PRC's decision to designate and regulate fentanyl as a controlled substance after President Xi's meeting with President Trump in Argentina in December of last year, and we look forward to seeing tangible progress.

#### *Russia:*

*Military modernization.* Moscow continues to modernize its military forces, viewing military power as critical to achieving key strategic objectives and global influence. Nuclear weapons remain an important component of Russia's power projection and deterrence capabilities, and the Russian military conducts regular nuclear-capable Tu-95 Bear bomber long-range aviation flights off the coasts of Japan, Korea, Canada, and Alaska. For the past decade Russian military planning has emphasized the development of modernized platforms and weapons systems, and Moscow is pushing these platforms to the Indo-Pacific region. In recent years, the Eastern Military District has become increasingly important for Russian security interests. Russia has invested in military infrastructure, improved its command-and-control capabilities, deployed anti-ship missile systems, and modernized its anti-air capabilities in the region. For example, Russian units in the Eastern Military District expect to take delivery of thirty-seven new vessels by 2024, which is a major increase compared to the twenty-eight new units received in the region over the last decade. Moscow recently announced plans to expand its combat forces in the Eastern Military District and to substantially reinforce the Pacific Fleet. Despite the threat of U.S. sanctions through the 2017 Countering America's Adversaries Through Sanctions Act (CAATSA), Russia continues to export weapons to the Indo-Pacific region.

Furthermore, Russia hosted its largest military exercise since 1981, Exercise VOSTOK 2018, simulating land, sea, and air operations in the Eastern Military District and mobilizing forces from across Russia to engage in multiple live-fire missile launches. Of note, Chinese forces participated in Exercise VOSTOK for the first time. While Beijing's military cooperation was largely symbolic, because the forces remained segregated with separate command posts, Vostok 2018 was still a significant first step in forging a closer military partnership.

*Japan-Russia Relations.* Japan and Russia have a long-standing territorial dispute since the Second World War over the Northern Territories/Kuril Islands, which

are strategically important for Russia's access to the Pacific Ocean. Russia has further entrenched itself in this contested territory by reestablishing an airfield on Matua Island, located in what it calls the central Kuril Islands, to accommodate light military transport aircraft and helicopters. Russia has also deployed coastal defense cruise missile systems and SU-35 multirole fighters to the islands and also announced plans to build a naval base. This more assertive approach to its eastern front reflects growing focus in Moscow of the vital importance of the broader Indo-Pacific for Russia's long-term security. Although Prime Minister Abe and President Putin have met on several occasions to negotiate a peace treaty that could, in part, resolve this territorial dispute, they have not reached an agreement. Russia remains concerned that the United States could establish military facilities under Article VI of the Treaty of Mutual Cooperation and Security in the Northern Territories if they are returned to Japan.

*Violent Extremist Organizations (VEOs):*

In the wake of the 2017 siege of the southern Philippine city of Marawi, Philippine security forces have maintained consistent pressure on Islamic State of Iraq and Syria (ISIS) networks in the Philippines, conducting a number of arrests in 2018. Additionally, counterterrorism operations on the Philippine island of Jolo against ISIS-supporting elements of the Abu Sayyaf Group succeeded in disrupting kidnap-for-ransom operations. ISIS claimed credit for multiple small-scale attacks in the Philippines, including a mid-2018 vehicle-borne improvised explosive device attack at a military checkpoint in the southern Philippines. Outside of the Philippines, we saw a number of small-scale attacks in 2018, and I remain concerned about the growth of ISIS in the region. Over 1,000 foreign terrorist fighters have traveled to Iraq and Syria from the Indo-Pacific region, and at least 170 have returned. We expect the number of returnees to increase with the persistent loss of ISIS-held territory. ISIS' Amaq News claimed responsibility for a series of mid-May 2018 bombings against churches and a police headquarters in Surabaya, Indonesia. Other countries across the region remain concerned about the potential for disenfranchised and vulnerable populations to become recruitment targets. Self-radicalized violent extremists who are influenced or inspired by ISIS or other extremists are another cause for concern. The recent attack on a local Catholic parish in Jolo in the Sulu Archipelago is evidence of continued concern.

*Natural and Man-made Disasters:*

The Indo-Pacific remains the most disaster-prone region in the world. It contains 75 percent of the earth's volcanoes and 90 percent of earthquakes occur in the "Ring of Fire" surrounding the Pacific Basin. Since 2008 the Indo-Pacific has lost half a million lives and suffered over \$500 billion in damages, with over one and a half billion people affected by natural and manmade disasters overall. The UN estimates that economic losses in the region due to disasters could exceed \$160 billion annually by 2030. Many countries across the region lack sufficient capability and capacity to manage natural and man-made disasters.

A key element of USINDOPACOM's engagement strategy in the region is building capacity with our allies, partners, and friends to improve their resilience and capability to conduct their own humanitarian assistance and disaster relief (HA/DR).

USINDOPACOM directly supports HA/DR efforts across the region, as well. In July 2018, we sent special operations forces to help the international effort to rescue twelve Thai boys and their coach from a flooded cave. USINDOPACOM also assisted relief efforts in Sulawesi, Indonesia last year with sixty-four personnel and three C-130 aircraft after an earthquake and tsunami hit the country. Another recent example of USINDOPACOM's support continues today after the Super Typhoon Yutu hit Tinian and Saipan. USINDOPACOM responded quickly by providing joint forces, equipment, and fresh drinking water, and by building temporary shelters and assisting with clearing debris from roads and homes.

USINDOPACOM'S SECURITY ROLE IN THE INDO-PACIFIC

The most important security development in the Indo-Pacific has been the rapid modernization of the PLA. The scope and scale of that modernization has caused USINDOPACOM's relative competitive military advantage to erode in recent years. With the 2018 National Defense Strategy as a guide, USINDOPACOM is focused on regaining our competitive military advantage and ensuring a Free and Open Indo-Pacific over the short- and long-term.

My strategy centers around fielding and sustaining a force capable of combat-credible deterrence that is postured for two distinct security roles: to win before fighting and, if necessary, be ready to fight and win.

*Ready to Fight and Win.* USINDOPACOM's ability to prevail in armed conflict is the foundation of combat credible deterrence. By fielding and maintaining a joint force ready to fight and win, USINDOPACOM reduces the likelihood that any adversary will resort to military aggression to challenge or undermine the rules-based international order.

*Win Before Fighting.* Deterrence is necessary to prevent conflict, but deterrence alone cannot ensure a Free and Open Indo-Pacific. Our adversaries are pursuing their objectives in the space between peace and war, using fear and coercive actions across the instruments of national power to revise the rules-based international order and without resorting to armed conflict. Alongside like-minded allies and partners, USINDOPACOM must compete in the "gray zone" between peace and war. These deliberate actions will ensure a Free and Open Indo-Pacific against those malign actors that seek to accomplish their political objectives short of armed conflict.

#### USINDOPACOM FOCUS AREAS

Given the challenges in the region, ensuring a Free and Open Indo-Pacific requires that USINDOPACOM remain ready to execute high-end/high-tech wartime missions on short notice. USINDOPACOM must be postured to achieve a more advantageous security environment without the lethal use of military force. The following four focus areas guide the command's efforts toward meeting both of the aforementioned security roles:

- *Focus Area 1. Increase joint force lethality.* We must continue to develop and field capabilities necessary to deter aggression and prevail in armed conflict should deterrence fail.
- *Focus Area 2. Enhance our design and posture.* We will adapt from our historic service-centric focus on Northeast Asia only to a more integrated joint force blueprint that is informed by the changing threat environment and challenges of the 21st century across the entire Indo-Pacific region.
- *Focus Area 3. Exercise, experiment, innovate.* Targeted innovation and experimentation will evolve the joint force while developing asymmetric capability to counter adversary capabilities.
- *Focus Area 4. Strengthen our allies and partners.* Through increased interoperability, information-sharing, and expanded access across the region, we will present a compatible and interoperable coalition to our adversaries in crisis and armed conflict.

#### *Focus Area 1: Increase Joint Force Lethality*

Over the last two decades, adversaries have rapidly closed the gap in many of the areas that used to be clear asymmetric advantages for the United States, encroaching upon USINDOPACOM's ability to deter conflict or prevail in armed conflict should deterrence fail. Our adversaries are fielding advanced Anti-Access Area Denial (A2AD) systems, advanced aircraft, ships, space, and cyber capabilities that threaten the U.S. ability to project power and influence into the region. Increasing joint force lethality means developing and fielding systems and capabilities to preserve our key asymmetric advantages in order to prevent any potential adversary from thinking it can achieve its political or military objectives through armed conflict. Increasing our joint force lethality means joint and combined interoperability, an integrated fires network that enables long-range strike, and advanced missile defense systems capable of detecting, tracking, and engaging advanced air, cruise, ballistic, and hypersonic threats from all azimuths. In short, we must be able to defend our forces and project power so that no adversary can achieve sustained dominance in the Indo-Pacific and threaten our key allies and partners.

*Air Superiority.* The United States cannot assume that it will have air superiority in the Indo-Pacific. For over fifteen years, the predominant employment of United States armed forces has been in the ongoing fight against terrorism in Syria, Iraq, and Afghanistan where our ability to dominate in the air domain was unchallenged. In contrast, the United States faces peer competitors in the Indo-Pacific. Beijing has invested heavily in systems that challenge the United States' ability to achieve air superiority. The U.S. Government must continue to pursue multi-domain capabilities to counter anti-air capabilities and we continue to prioritize 5th generation fighter capabilities to the Indo-Pacific.

*Undersea Warfare.* The United States must maintain its advantage in undersea warfare—an asymmetric advantage that our adversaries are focused on eroding. There are four-hundred foreign submarines in the world, of which roughly 75 percent reside in the Indo-Pacific region. One-hundred and sixty of these submarines belong to China, Russia, and North Korea. While these three countries increase their capacity, the United States retires attack submarines (SSNs) faster than they

are replaced. USINDOPACOM must maintain its asymmetric advantage in under-sea warfare capability, which includes not just attack submarines, but also munitions and other anti-submarine warfare systems such as the P-8 Poseidon and ship-borne anti-submarine systems. Potential adversary submarine activity has tripled from 2008 levels, which requires at least a corresponding increase on the part of the United States to maintain superiority.

*Intelligence, Surveillance, and Reconnaissance.* The Indo-Pacific's dynamic security environment requires persistent and intrusive Intelligence, Surveillance, and Reconnaissance (ISR) to provide indications, warning, and situational awareness across over half the world. USINDOPACOM supports a re-allocation of DOD ISR assets to better satisfy intelligence needs in line with National Defense Strategy-priorities. USINDOPACOM relies on a mix of Airborne ISR (AISR) assets to provide a dedicated and flexible ISR capability across the entire region.

USINDOPACOM supports efforts to re-capitalise critical AISR capabilities and the continued development of future ISR platforms, such as the MQ-4C Triton, as well as our interoperable Processing, Exploitation, and Dissemination architectures.

*Space.* Space is a vital strategic domain. U.S. adversaries are militarizing space; USINDOPACOM must have access to resilient and defensible space systems that can operate in a contested environment. USINDOPACOM relies on space-based assets for satellite communications (SATCOM), ISR, missile warning, and Positioning, Navigation, Timing (PNT) capabilities, which support missions across the range of military operations. The command's vast geographic expanse increases the strain on USINDOPACOM's requirements and our reliance on low-density space-based assets that are in high-demand.

As Beijing's and Moscow's military modernization continues, they are pursuing broad and robust counter-space capabilities. While not as advanced, North Korea remains a threat through its employment of SATCOM and PNT jammers. The threat to the electromagnetic spectrum continues as our adversaries develop means to deny our space-enabled capabilities. As Space Command (SPACECOM) transitions responsibilities from United States Strategic Command (STRATCOM) into the future Space Force, USINDOPACOM looks forward to continued collaboration in this critical domain as we work to further integrate space-based capabilities into our daily operations and contingency planning.

*Cyber.* USINDOPACOM is heavily reliant on cyber capabilities and faces increasing threats in the cyber domain from both state and non-state actors, such as Beijing, Moscow, Pyongyang, and criminal actors. The United States must ensure it has a robust and capable cyber force with all required equipment and a common network operational structure necessary to ensure command and control. Moreover, USINDOPACOM requires an agile and defensible mission command network infrastructure to ensure adequate command and control, and enable interoperability with our allies and partners to fully leverage our combined capacities. Furthermore, the DOD must prevent and, if necessary, respond to cyber-attacks against non-military critical infrastructure in both Homeland defense and in support of civil authorities.

The U.S. military's offensive cyber capabilities provide additional tools to leverage as part of multi-domain operations to compete and win, but these tools must become more responsive to the operational requirements of the combatant commands. The growth in these offensive capabilities is not limited to equipment—we need talent and innovation. The development and retention of personnel with subject-matter expertise is a critical component for our Nation's success.

My staff coordinates extensively with USCYBERCOM to integrate effective offensive, defensive, and network operations into my multi-domain plans and operations. Our staffs collaborate daily on current operations through our respective operations centers, at least weekly on future operations planning, and at least quarterly on future capability requirements.

*Multi-Domain and Distributed Operations.* As adversary military forces grow in both quantity and quality, USINDOPACOM must integrate operations in all domains to be successful in the 21st century. The Multi-Domain and Distributed Operations concepts of the services incorporate the capabilities of the physical domains and place greater emphasis on space, cyberspace, and other contested areas including the electromagnetic spectrum, the information environment, and the cognitive dimension of warfare. Multi-Domain and Distributed Operations allow U.S. Forces to outmaneuver adversaries physically and cognitively, advancing the 20th Century concept of combined arms into the 21st century's requirement to operate across all domains, at all times.

I fully support all services and functional commands efforts to operationalize Multi-Domain and Distributed Operations concepts. In 2018, USINDOPACOM successfully demonstrated Multi-Domain and Distributed Operations capabilities in major exercises while also integrating new technologies and approaches across the

joint force. In the years ahead, USINDOPACOM will progress from experimentation to validation of concepts, culminating in an overall increase in the lethality of the joint force.

*Advanced Munitions.* Developing and fielding advanced munitions is a critical component to increasing joint force lethality. The following are some of the more pressing munitions upgrades based on the challenges we face in the region:

- Improvements to Missile Defense—Patriot Missile Segment Enhanced (MSE), Terminal High Altitude Area Defense (THAAD) upgrades, and other capabilities to defend against maneuvering and hypersonic missiles.
- Innovations in heavy weight torpedo technology provide force-multiplying effects that currently do not exist, including long range in-port or at-sea attack and shallow water covert mine laying.
- The immediate resourcing and integration of ATACMS system and/or the Kongsberg Naval Strike Missile with HIMARS/MLRS to support Army and United States Marine Corps (USMC) units conducting Multi-Domain Operations and sea control missions.
- Continued investments in Hard Target Munitions (HTM). There is a significant increase in the number of hard and deeply buried targets in the theater requiring HTM.
- Hypersonic long-range strike (H-LRS)—these emerging weapons dramatically improve probability of engaging time sensitive targets and have increased survivability and thus higher probability of success.
- Effective counters to the expanding asymmetric unmanned aerial system (UAS) threat including potential for multiple swarms of small UAS.

#### *Focus Area 2: Enhance Design and Posture*

To effectively defend U.S. interests, USINDOPACOM must update its existing design and posture to compete with our adversaries across the entire Indo-Pacific. At present, USINDOPACOM forces west of the International Date Line are focused in Northeast Asia—an historical legacy of the Second World War and Korean War. We must update our design and posture to preserve strength in this key region, but also ensure that the United States is ready to compete and win before fighting across all of the Indo-Pacific. By recalibrating theater posture to balance capabilities across South Asia, Southeast Asia, and Oceania, USINDOPACOM will be able to respond to aggression more effectively throughout the Indo-Pacific.

Similarly, the USINDOPACOM Joint Logistics Enterprise must be capable of supporting joint warfighting requirements across the entire theater in a more dynamic and distributed posture. Posture and pre-positioning are essential to overcome the region's tyranny of distance. Ship sailing times are upwards of ten days from the U.S. west coast, and it takes significant lead-time to reposition strategic airlift and tanker support to enable major force flow.

The speed of war has changed, and the nature of these changes makes the global security environment even more unpredictable. It's dangerous and unforgiving. Time and decision space have collapsed, so our approach to warfare must adapt to keep pace; with the speed and multiple avenues that our adversaries are able to pursue. We require a force posture that enables the United States to undertake a spectrum of missions. These missions include: capacity building for partners that face internal and external vulnerabilities, cooperation on transnational threats, and joint and combined training. Our enhancements to interoperability make for more effective coalitions in crisis.

USINDOPACOM will “regain the advantage” by positioning theater infrastructure that supports:

- Expeditionary capability that is agile and resilient.
- Dynamic basing for our maritime and air forces.
- Special operations forces capable of irregular and unconventional warfare.
- Anti-submarine warfare capabilities unmatched by any adversary.
- Land forces equipped with weapons systems that hold an adversary's air, sea, and land forces at risk.
- Cyber and space teams integrated into Multi-Domain and Distributed Operations.
- Unique intelligence, surveillance, and reconnaissance capabilities.

*Global Force Management (GFM) and Posture.* The Indo-Pacific is a theater that requires short response timelines across a vast region. Regional threats require U.S. Forces to maintain a high level of readiness to respond rapidly to crises.



USINDOPACOM's readiness is evaluated against its ability to execute operational and contingency plans. The plans place a premium on ready and immediately responsive forces that can exercise, train, and operate with our partner nations' militaries. Forward-stationed forces west of the International Date Line decrease response times, bolster the confidence of allies and partners, and reduce the chance of miscalculation by potential adversaries. Contingency response times require that I have the essential conventional and strategic forces assigned to USINDOPACOM.

In line with the National Defense Strategy, USINDOPACOM prioritizes stationing and deployment of 5th generation aircraft in the Indo-Pacific. Additionally, the United States has deployed some of our newest and most advanced aviation platforms to the region, such as the P-8 Poseidon, RQ-4 Global Hawk, MV-22 Osprey, EA-18G Growler, E-2D Hawkeye, and C-130J Super Hercules.

In addition to forward stationed forces, the ability of the United States to surge, rotate, and globally maneuver ready forces is an asymmetric advantage that must be maintained. The high operational demands, delayed maintenance, training pipeline shortfalls, and shortage of ready surge forces limit USINDOPACOM's responsiveness to emergent contingencies and greatly increases risk. The challenges grow each year as our forces continue to deploy at unprecedented rates while the DOD grapples with fiscal uncertainty.

*Integrated Air and Missile Defense.* USINDOPACOM faces unique Integrated Air and Missile Defense (IAMD) challenges in the Indo-Pacific to protect our forces and allies. Hawaii, Guam, and our Pacific Territories are part of our Homeland and must be defended. Hawaii is currently protected from North Korean Intercontinental Ballistic Missiles (ICBMs) by the Ground-Based Midcourse Defense System. This system includes Ground-Based Interceptors in Alaska and California; ground, sea, and space-based sensors; and redundant command, control, and communications systems.

For the defense of Hawaii, the planned Homeland Defense Radar Hawaii (HDRH) will improve U.S. capabilities. A Notice of Intent to Prepare an Environmental Impact Statement was released in June 2018, and the radar is projected to be operational by late 2023. The HDRH will provide an enhanced ballistic missile sensing and discrimination capability in the Indo-Pacific, and it increases the capability of the Ground-Based Midcourse Defense System to defend Hawaii.

Meanwhile, our adversaries continue to improve their capabilities in ways that challenge the United States' strategic, operational, and tactical freedom of movement and maneuver. Beijing and Moscow continue to develop and field advanced counter-intervention technologies, which include highly maneuverable reentry vehicle and warheads (hypersonic weapons). Beijing and Russia possess cruise missiles and small-unmanned aerial systems (sUAS) that fly different trajectories, making them hard to detect, acquire, track, and intercept due to unpredictable low-flight profiles and sophisticated countermeasures. North Korea retains its nuclear and ICBM capabilities.

USINDOPACOM's IAMD priority is to establish a persistent, credible, and sustainable ballistic missile defense by forward deploying the latest missile defense technologies to the Indo-Pacific. Through forward and persistent presence, these active missile defense capabilities would help mitigate the risk to missile threats faced in the region and to the Homeland. USINDOPACOM addresses this IAMD priority in the following ways:

- USINDOPACOM works with the DOD, Missile Defense Agency, the services, academic institutions, and industry to deploy capabilities that counter the advanced missile threats in the region.
- USINDOPACOM maintains an active Terminal High Altitude Area Defense (THAAD) battery on Guam to protect United States citizens and strategic military capabilities from North Korean intermediate-range ballistic missiles (KN-17 and MUSUDAN).
- USINDOPACOM employs additional radars across the theater supporting Homeland and regional missile defense, as well as continued testing of the Ballistic Missile Defense System (BMDS).
- In 2017, USINDOPACOM and USFK, with support from the MDA and the DOD, deployed a THAAD battery to the Korean Peninsula that is fully operational. The MDA and the services deliver improved BMDS capability to the Korean Peninsula, including integration of existing Ballistic Missile Defense (BMD) assets to improve engagement options and coverage area.
- The United States Navy completed its forward deployment of the USS *Milius* from San Diego, CA to Yokosuka, Japan in Spring 2018. This port shift provides the U.S. Seventh Fleet improved capability to support the United States-Japan Alliance.

- USINDOPACOM continues working with Japan, South Korea, and Australia toward creating a fully-integrated BMD architecture that addresses the increasing cruise missile threat.
- USINDOPACOM supports MDA and the services to develop and test emerging missile and counter-small UAS defense capabilities through modeling and simulation, as well as live-fire testing conducted at the Pacific Missile Range Facility, the Ronald Reagan Test Center at Kwajalein Island, Point Mugu, and other testing ranges located in the continental United States and Alaska.

I support all efforts that improve the capability and capacity of ballistic missile, cruise missile, and UAS defense technologies to further enhance Homeland defense capabilities and protect key regional locations. The development of a credible and effective defense against advanced and future missile and UAS threats remains vital to our operational plans and critical to the continued defense of the United States.

*Logistics and Supply.* Driven by budgetary pressure, our logistics system has become a more efficient business process, and a less effective warfighting function over the last 20 years. Efficiency has come at the cost of increased vulnerability and decreased redundancy. While this arrangement is sufficient for peacetime operations, it is insufficient for combat. Congress' Indo-Pacific Stability Initiative could significantly help reverse the current trend toward a less resilient Joint Logistics Enterprise in the Pacific.

As adversary capabilities improve, joint operations will increasingly rely on distributed supply chains in order to fight and win against a peer adversary. The joint logistics enterprise must be postured with the right capability and capacity at the right locations in order to effectively support multi-domain and distributed operations. This means developing infrastructure at both enduring and contingency operating locations; identifying and sourcing transportation, distribution, and maintenance requirements; and developing the processes to enable logistics decisions at the speed of war. USINDOPACOM is critically dependent on tactical airlift and sea lift capacity, which expands options for force design and maneuver. Increased tactical airlift and sealift capacity further increase survivability as it becomes more difficult for an adversary to counter a highly maneuverable joint force. These tactical lift assets play just as important a role as strategic lift assets in ensuring our ability to create a resilient and agile logistics network.

Significant and sustained investment in munitions is needed to reduce risk to current and future strategic readiness. Services must fund and continue investment in munitions research and development, while setting relatively steady requirements to maintain a healthy production capability for current and new munitions. I appreciate Congress' action to enhance munitions funding in fiscal year 2018 and fiscal year 2019, but shortfalls remain. USINDOPACOM's top priorities for increased procurement are Long Range Anti-Ship Missiles, SM-6, MK-48 torpedoes, AIM-9X, BGM-109 Block IV (Maritime Strike Tomahawk), and AIM-120D. The Services must also upgrade storage facilities and reassess prepositioning based on the new security environment.

Fuel supply agility and resilience are central to our success in being competitive, responsive, and lethal. The changing threat environment, energy security risks, and adversarial geopolitical and economic influences are driving longer supply lines, necessitating a flexible resupply chain and more resilient, agile, and interoperable petroleum distribution capabilities. Continued investment in next generation petroleum distribution systems is required to mitigate sustainment risk in austere, contested, and denied environments. Access and positioning of fuel remains a key pillar of our logistics posture and is vital to USINDOPACOM's ability to ensure operational freedom of maneuver throughout the theater.

#### *Focus Area 3: Exercise, Experimentation, and Innovation*

Our exercise, experimentation and innovation program is key to maintaining readiness while also developing and integrating new capabilities and concepts. This program also highlights our capabilities and capacity to deter competitors while simultaneously reassuring allies, partners, and friends.

*Pacific Multi-Domain Training and Experimentation Capability (PMTEC) Initiative.* USINDOPACOM's Joint Exercise Program has traditionally monitored the operational and warfighting readiness of assigned theater and partner nation forces for crises, contingency operations, and HA/DR. Exercises have advanced key objectives including strengthening regional alliances and partnerships, while deepening interoperability through combined training. The current Joint Exercise Program has been useful for enhancing the readiness of USINDOPACOM's assigned forward deployed forces; I am now looking to move to the next level of integration.

Scarce resources have reinforced the need to integrate all major test and training ranges in the Pacific region through a Pacific Multi-Domain Training and Experimentation Capability (PMTEC) initiative. This USINDOPACOM initiative combines the existing Air Force Joint Pacific Alaska Range Complex (JPARC), the Navy's Pacific Missile Range Facility (PMRF) and the Army's Pohakuloa Training Area (PTA) in Hawaii, the Delamere Air Weapons Range in Northern Australia, and the Marine Corps' future Commonwealth of Northern Mariana Islands (CNMI) Joint Military Training (CJMT) range into a fully networked and integrated training constellation that supports joint, combined, multi-domain training. PMTEC will also ensure USINDOPACOM has the ability to prioritize training, readiness, and experimentation to achieve a more integrated and lethal joint force that can both deter and when necessary, fight and win. As the next layer of integration, PMTEC will also link test-ranges (e.g., the Ronald Reagan Test Site at Kwajalein) to enable experimentation with developing technologies to create new, more effective, joint operating concepts that will ensure future warfighting success.

The PMTEC initiative also integrates cyber and space capabilities to enable joint and combined experimentation and testing that is truly multi-domain. Currently, many of these ranges restrict operations to just air and land capabilities or just air, land, and maritime capabilities. As a result, our forces often have to simulate or provide exercise injects that replicate space and cyber effects. We are working to fully incorporate space and cyber into our exercises.

*Experimentation and Innovation.* USINDOPACOM relies on innovation and experimentation, underpinned by strong partnerships, to address our capability gaps in the region. This includes testing and integrating new technologies, developing new capabilities, and exploring new concepts of operation and employment. USINDOPACOM makes extensive use of OSD's Joint Capability Technology Demonstration, Coalition Warfare Program, and other rapid prototyping programs to focus cutting edge technology-based capabilities and innovation to enhance our readiness.

Innovation is crucial to increasing logistics agility and resilience. USINDOPACOM will continue utilizing the Joint Capability Technology Demonstration program to identify technological solutions to our critical logistics capability gaps. To facilitate greater resilience, USINDOPACOM will protect and harden our critical logistics infrastructure, information systems, and enablers. For example, USINDOPACOM is developing the capability to rapidly repair damage to critical seaports and airfields.

As part of our innovation and experimentation efforts, USINDOPACOM maintains robust engagement with a variety of partners to identify, promote, and incorporate research and development to address key capability gaps. USINDOPACOM has worked with some of the best DOD industry partners on advancing man and machine teaming, artificial intelligence, machine-learning, hypersonic technology, autonomy, command and control, and block chain technology. USINDOPACOM benefits from engineers, operations analysts, and theater-experienced operators from Federally Funded Research and Development Center (FFRDC) and University Affiliated Research Center (UARC) partners. These partners perform robust military utility assessments of emerging technology in the context of theater plans. The ability to harness the knowledge and experience of the individuals from these organizations is vital to advancing key capabilities for targeting, cyberspace operations, undersea warfare, electronic warfare, and ISR.

#### *Focus Area 4: Strengthen Allies and Partners:*

The United States' network of allies and partners is our principal advantage against any adversary. USINDOPACOM depends upon the collective capabilities of our allies and partners to address the challenges to a Free and Open Indo-Pacific. The most obvious point—one made abundantly clear in the National Security Strategy—is that whatever we do, we must do it with our allies and partners. The keys to our bilateral and multilateral relationships are communication, information-sharing, and interoperability.

*Agile Communications.* Agile communications are crucial—not only for our readiness, but for our relationships in the region. USINDOPACOM works with allies and partners to enhance our interoperability throughout the Indo-Pacific region. Currently, USINDOPACOM is not fully postured with the latest technology to operate in cyberspace with dynamic multiple-partner combinations in all phases of military operations. Furthermore, our Nation is still developing the communication capacity and sharable encryption capability necessary to support most modern warfighting platforms and weapon systems with our allies and partners. Although USINDOPACOM does not have formal agreements for exchanging information with many of the nations or organizations within the region, there is continued progress.

The recently concluded Communications, Compatibility, and Security Agreement (COMCASA) with India is a step in the right direction. COMCASA is a bilateral agreement that allows the Indian military to procure United States cryptological equipment to enable secure voice and data exchange for enhanced interoperability. There will be similar efforts undertaken with others in the Indo-Pacific. As we continue to improve our agility in coalition information-sharing environments, our future capabilities will allow ally and partner forces alongside of our forces to adequately respond to natural disasters and contingencies. We will have agile, secure, dynamic information technology capabilities to support the full spectrum of military operations with our partners and allies in order to enhance interoperability.

*Security Cooperation and Capacity Building.* Security cooperation and capacity-building engagements in the region help build ally and partner capabilities, information-sharing, and interoperability. Addressing maritime security and maritime domain awareness challenges remains a key priority for nations across the region. The 2019 National Defense Authorization Act extended the fiscal year 2016 NDAA section 1263 “Southeast Asia Maritime Security Initiative (MSI)” for another five years (fiscal year 2021 through fiscal year 2025), and expanded MSI to encompass portions of South Asia. The MSI authority, along with other DOD authorities such as the title 10 section 333 Global Train and Equip, and Department of State authorities such as Foreign Military Financing (FMF) and International Military Education and Training (IMET), in addition to the new Asia Reassurance Initiative Act, represent weighty tools available for building partner readiness, reducing capability gaps, and building capacity. The Department of State’s one-time reprogramming of \$290.5 million of FMF to the Indo-Pacific in 2018 is a clear effort to assist our region, for which USINDOPACOM is grateful.

#### ADDRESSING THE INDO-PACIFIC TOGETHER: ENHANCING PARTNERSHIPS WITH OUR ALLIES AND PARTNERS

The Indo-Pacific is one of the largest and most diverse regions on earth. These differences are our strength, and the thousands of miles of ocean and sky between us do not divide us, they are the connective elements that bind us together. As I look at the depth and breadth of the Indo-Pacific, I see opportunities in each of the regions to advance our shared values in ensuring a Free and Open Indo-Pacific. Throughout the Indo-Pacific, the most effective way to address the challenges I have described is through collective action of multiple nations.

The security landscape mirrors the diversity of the Indo-Pacific. In *Northeast Asia*, the security environment where our strong alliances with Japan and South Korea dominate, I am focused on the immediate threat presented by North Korea and the long-term threat posed by Beijing’s and Moscow’s aggressive policies. In *Southeast Asia*, I am focused on working with our allies, Thailand and the Philippines, and our strong partners, Singapore and Vietnam, to strengthen ASEAN, expand multilateralism, and improve their combined capacity to stand up to the malign influence of state and non-state actors, especially in the South China Sea. In *South Asia*, I am focused on expanding cooperation with the world’s largest democracy, India, and working with all South Asia countries to increase air and maritime domain awareness across the Indian Ocean. Finally, in *Oceania*, I am encouraged by the opportunities to partner with our strong allies, Australia and France, and strong friend, New Zealand, to improve information sharing and maritime cooperation as the Pacific Island Countries address the challenges associated with Illegal, Unreported, and Unregulated (IUU) fishing, natural disasters, narcotics trafficking, and economic coercion from Beijing.

*Northeast Asia.* The command’s goal is to stabilize Northeast Asia and leverage our strong alliances with Japan and South Korea to improve stability across the broader Indo-Pacific. In order to achieve this, USINDOPACOM needs a security environment that is secure from coercion from Pyongyang, Beijing, and Moscow. As the region becomes more stable, we will encourage Japan and South Korea to take a greater role in the alliances related to their own security and contribute to security in the broader Indo-Pacific region.

*Japan.* The United States-Japan alliance is the cornerstone of our efforts to ensure a Free and Open Indo-Pacific. The government of Japan released its own Free and Open Indo-Pacific Strategy in 2017, and Japan is looking to become more involved across the broader Indo-Pacific region. Additionally, Japan is a key supporter of UNSCR enforcement operations and hosts the Enforcement Coordination Cell (ECC) in Yokosuka, Japan. Tokyo intends to procure high-tech United States platforms that will increase interoperability, including F-35A, E-2D Hawkeye, Global Hawk UAS, MV-22, and Advanced Electronic Guides Interceptor System (AEGIS) Ashore. Furthermore, Japan’s 2018 National Defense Program Guidelines (NDPG)

call for strengthening the United States-Japan alliance, and expanding their international security cooperation with like-minded partners in the region. They also prioritize advancements in Japan's space, cyberspace, and electro-magnetic capabilities.

USINDOPACOM and Japan's Self Defense Force have transformed the way military alliances plan and campaign together. Our approaches for a Free and Open Indo-Pacific are synchronized in our national policies and defense strategies, and communication mechanisms exist at every level of our governments to ensure we are synchronized on key issues. The United States-Japan alliance is committed to supporting countries that respect and adhere to the rule-of-law, and our alliance seeks to enable opportunities for economic prosperity throughout the region.

*South Korea.* The United States-South Korea alliance remains ironclad, and we are both committed to the final, fully verified denuclearization of North Korea. South Korea is also a key supporter of UNSCR Enforcement activities against North Korea. USINDOPACOM works closely with Seoul in obtaining capabilities required under the Conditions-based Operational Control Transition Plan (COTP)—the ongoing plan to transfer Combined Forces Command (CFC) to South Korean leadership. Seoul has future procurement plans for the P-8, advanced munitions, upgrades to PAC-3 missiles, and F-16 fighters. All these assets will increase interoperability with the United States.

*Taiwan.* In accordance with our One China Policy, based on the Taiwan Relations Act and three United States-China Joint Communiques, the United States and Taipei maintain a substantive and robust unofficial relationship with Taiwan based on the Taiwan Relations Act (TRA). Taiwan's values reflect our own—it features an open economy with a free and democratic society that respects human rights and the rule of law. The United States opposes any unilateral change to the status quo in the Taiwan Strait. The United States continues to support the peaceful resolution of cross-Strait issues in a manner, scope, and pace acceptable to the people on both sides. USINDOPACOM's engagement focuses on improving joint interoperability within Taiwan's military, improving Taiwan training and readiness, and supporting Taiwan's military and professional development.

Beijing is pushing across the globe to diplomatically isolate and economically constrain Taiwan. Taiwan has only seventeen diplomatic partners left after losing El Salvador, Burkina Faso, and the Dominican Republic as diplomatic partners in 2018. Beijing continues to press the international community and private businesses to remove or modify any references to Taiwan on websites and publications and is attempting to deny Taiwan's participation in international fora.

As evidenced in President Xi Jinping's New Year's speech, China is focused on achieving reunification as a part of the PRC's national plan of rejuvenation by "reserving the option of taking all necessary measures and not renouncing the use of force." We continue to be concerned with China's military buildup across the Strait, Beijing's opaqueness about its military capability and capacity, and its unwillingness to preclude the use of force to resolve the cross-strait issue. The United States has a deep and abiding interest in peace and stability in the Taiwan Strait and welcomes steps by both sides to reduce tensions and improve cross-Strait relations. President Xi's solution of a one country, two systems approach to reunification does not reflect the wishes of both sides. We hope that there will be continued high-level communications and interactions going forward through which both sides can continue their constructive dialogue on the basis of dignity and respect. Although President Tsai and her party, the Democratic Progressive Party (DPP), have committed to "avoid confrontation and prevent surprises" with China, the cross-Strait situation is of increasing concern given the harsh rhetoric from Beijing toward the leadership in Taipei.

Taiwan recently passed its 2019 defense budget, which will fund foreign and indigenous acquisition programs as well as near-term training and readiness. Consistent with the TRA, USINDOPACOM engages with the Taiwan military to enable Taiwan to maintain a sufficient self-defense capability that is credible, resilient, and cost-effective.

*Mongolia.* Mongolia is a strong partner and contributor to the United States' regional and global policy objectives. Mongolia supports missions in Afghanistan and United Nations Peace Keeping Operations, making Mongolia a model for emerging democratic countries that want to be more active globally. Ulaanbaatar's "Third Neighbor Policy" intends to balance Russian and Chinese influence by developing relationships with the United States and other like-minded countries. USINDOPACOM and Mongolia have had inaugural land forces talks, developed a five-year security cooperation plan, and laid the groundwork for Airman-to-Airman Talks. The United States is helping Mongolia improve their special operations forces, peacekeeping operations, and Air Forces.

*Southeast Asia.* USINDOPACOM's objective in Southeast Asia is to strengthen the sub-region's ability to deny adversaries' attempts to dominate or disrupt the gateway between the Pacific and Indian Oceans, while enabling the region to promote their sovereign interests, resist economic pressure from others, and preserve conditions for continued economic growth. USINDOPACOM is setting conditions in the security environment that support this goal, which ensures that all nations can freely access shared domains. Adversary militaries will be unable to dominate the global commons that enable trade and the global economy. The command's efforts will improve the region's awareness and capability to enforce their borders, territorial waters, and exclusive economic zones. USINDOPACOM will advocate for multilateral venues like the Association of Southeast Asian Nations (ASEAN) to advance collaboration, settle disputes equitably, and strengthen resolve against the malign influence of state and non-state actors. We are very grateful to Congress for its continued support for the \$425 million Maritime Security Initiative for Southeast Asia which enables Thailand, Philippines, Vietnam, Malaysia, and India to increase their capability and capacity in continued maritime domain awareness over the next five years.

*ASEAN.* The United States and ASEAN share the common principles of a rules-based international order, respect for international law, and the peaceful resolution of disputes. The ten ASEAN member states, under the chairmanship of Singapore in 2018 and Thailand in 2019, continue to seek ways to improve multilateral security engagements and advance stability in the Indo-Pacific. USINDOPACOM is committed to strengthening regional institutions such as ASEAN, the ASEAN Defense Ministers' Meeting-Plus, and the ASEAN Regional Forum. USINDOPACOM participates in ASEAN exercises, key leader engagements, and multilateral cooperation on a number of shared transnational challenges, and will host an ASEAN-U.S. Maritime Exercise in 2019. USINDOPACOM co-chairs the ASEAN Defense Ministers' Meeting-Plus Experts' Working Group on Humanitarian Assistance and Disaster Relief with Malaysia through the end of 2019. USINDOPACOM's engagements with ASEAN, and with the respective ASEAN member states, build and strengthen relationships, and convey the United States' steadfast commitment to the region.

*Cambodia.* USINDOPACOM reduced the number of engagements with Cambodia. During these limited engagements the command reaffirms the importance of strengthening democratic institutions and maintaining an independent foreign policy. The United States and other countries in the region are concerned about the possible construction by a Chinese state-owned enterprise of a facility in Cambodia. USINDOPACOM appreciates the statements by the Prime Minister noting that foreign military facilities are prohibited under their constitution. However, the command remains concerned about the possible militarization of Cambodia's coast including the prepositioning of military equipment, the stationing of military units on long term rotations, and the construction of dual use facilities.

*Indonesia.* This year, the United States and Indonesia celebrate our 70th anniversary of bilateral relations, which provides an opportunity to highlight our growing strategic relationship. USINDOPACOM is committed to a strategic partnership with Indonesia. Indonesia's strategic location, its status as the third largest democracy, fourth most populous country, and its expanding economy all underscore its essential role in the regional security architecture. Indonesia is the largest recipient of United States training and education programs in the region. We continue to support the Indonesian military's focus on external threats and national defense, particularly maritime domain awareness and maritime security.

*Laos.* After decades of stagnation in the United States-Lao relationship following the Vietnam War, we have seen some significant advancements over the last two years. In 2016, the United States and the Lao People's Democratic Republic signed a Comprehensive Partnership that resulted in a surge of bilateral military engagements. The command's engagement goals are to partner and assist Laos in becoming a stable, prosperous, and independent member of ASEAN that is willing and able to promote its sovereign interests and respect international law. These engagements focus around unexploded ordnance (UXO) clearance, POW/MIA recovery, and military medicine. Laos actively supports the Defense Personnel Accounting Agency (DPAA) in the search for 290 missing United States servicemembers with an aim to honorably conclude war legacy issues (UXO and POW/MIA recovery missions) by 2030. USINDOPACOM is expanding engagements with the Lao military.

*Malaysia.* Malaysia remains a critical partner of increasing importance in the region ever since the United States elevated the relationship to a Comprehensive Partnership in 2014. USINDOPACOM is exploring expanded collaboration in the areas of maritime security, counterterrorism, information-sharing, and defense institutional reform. Malaysian Armed Forces have demonstrated the professionalism,

capacity, and resolve to contribute to regional security, and we continue to evolve our defense relationship on mutual areas of interest.

*Philippines.* The Philippines is a treaty ally and a partner in preserving a Free and Open Indo-Pacific and our military-to-military relationship has never been stronger. USINDOAPCOM has increased the number and scope of exercises in recent years, to include the resumption of live-fire exercises. Terrorism continues to pose a security challenge in the Philippines, and USINDOPACOM is committed to helping the Philippines ensure that the southern Philippines does not become a safe-haven for terrorists that would threaten the entire region. I am also focused on helping to develop the territorial defense capability of the Armed Forces Philippines (AFP) and look forward to re-engaging with the Philippines National Police Maritime Group to continue improving their ability to protect their sovereign interests.

*Singapore.* Singapore remains a steadfast security cooperation partner in Southeast Asia with a strong commitment to promoting a Free and Open Indo-Pacific. Though not a formal ally, Singapore provides valuable access to the strategically-located entrance of the Malacca Straits and South China Sea. Singapore supports a strong United States presence in the region as well as a deep and broad defense relationship between our two countries. Singapore supports our objectives on North Korea, and in 2018, Singapore hosted the historic United States-North Korea summit between President Trump and Chairman Kim Jong-un. Singapore also hosted the transit and rotational deployment of more than 1,500 U.S. military aircraft and vessels (2015–2018), making the United States the heaviest foreign user of Singapore's facilities at Sembawang Port, Paya Lebar Air Base, and Changi Naval Base. Singapore maintains training facilities at Luke Air Force Base (AFB), Arizona (F-16); Mountain Home AFB, Idaho (F-15SG); Marana, Arizona (Apache AH-64D); and Fort Sill, Oklahoma (High Mobility Artillery Rocket System (HIMARS)). Moreover, USINDOPACOM and Singapore steadily increased interoperability through increasingly complex exercises, and we continue to strengthen cooperation in counterterrorism and maritime security. Singapore annually sends 1000 students to training and education courses in the United States, representing the largest training presence in the United States from any foreign military.

*Thailand.* Last year marked 200 years of friendly United States-Thai relations, and Thailand remains a key ally and security partner. In 2019, I am focused on advancing our alliance and restoring elements of our military-to-military relationship following the restoration of a democratic government after elections in March. Thai facilities provide vital training opportunities for USINDOPACOM personnel, and logistical nodes that are essential to operate throughout the Indo-Pacific region. Thailand assumed the chairmanship of ASEAN in 2019 and continues to play a vital leadership role in the Indo-Pacific region.

*Vietnam.* Vietnam has emerged as a key partner in promoting a secure and rules-based international order in the Indo-Pacific region. USINDOPACOM's defense partnership with the Vietnamese military is among the strongest aspects of our growing bilateral relationship. As a symbol of closer ties between the United States and Vietnam, the aircraft carrier USS *Carl Vinson* made a port call in March 2018 to Vietnam, the first of its kind since the end of the war in 1975. Vietnam shares many of the United States' principles on issues such as international rule of law and freedom of navigation, and Vietnam is one of the loudest voices on South China Sea disputes. USINDOPACOM's and the Vietnamese military's military-to-military engagements prioritize enhancing Vietnam's maritime capacity, which will be bolstered by Vietnam's acquisition of Scan Eagle UAVs, T-6 trainer aircraft, and a second U.S. Coast Guard cutter. I look forward to Vietnam assuming the ASEAN Chairmanship in 2020 and increasing its leadership across the region.

*Burma (Myanmar).* Ongoing human rights abuses, including growing restrictions on freedom of expression, including for members of the press, and atrocities [including ethnic cleansing], and instability in some ethnic minority areas comprise threats to Burma's democratic transition. Due to credible information of serious human rights violations and abuses, especially in relation to Rohingya, as well as restrictions that remain in place based on decades of military rule, United States-Burma security cooperation is minimal. The United States-Burma security relationship is limited to lower-level engagements at select regional security events and conferences, and participation in multilateral exercises focused on HA/DR. Burma military personnel are not attending academic exchanges, including at the region's DOD academic institute, despite the importance of engaging the next generation of officers.

*South Asia.* USINDOPACOM's goal in South Asia is to create and seize opportunities to broaden critical partnerships to ensure shared domains remain open to all. In conjunction with India's contributions to regional security, these actions will pre-

vent adversaries from establishing an effective military presence in the Indian Ocean that threaten the security of vital commerce and continued economic growth and development. As a result, the regional states will be able to reduce internal conflicts, respond to regional security challenges, and resist adversaries' military and economic coercion.

*India.* The United States-India strategic partnership continues to advance at an historic pace as we continue to increase our interoperability and information-sharing capabilities. The inaugural 2+2 Ministerial and signing of the COMCASA in 2018 were pivotal moments in our relationship. USINDOPACOM expects this trajectory to continue and that 2019 will be a significant year in bilateral relations. The United States and India are natural partners on a range of political, economic, and security issues. With a mutual desire for global stability, support for the rules-based international order, and a Free-and-Open Indo-Pacific region, the United States and India have an increased agreement on interests, including maritime security and maritime domain awareness, counter-piracy, counterterrorism, humanitarian assistance, and coordinated responses to natural disasters and transnational threats. Over the past year, the United States and Indian militaries participated in five major exercises, executed more than fifty other military exchanges, and further operationalized the 2016 Logistics Exchange Memorandum of Agreement (LEMOA). The LEMOA enables the United States Navy to replenish supplies from Indian navy logistics platforms. USINDOPACOM is working with the Indian military to operationalize the COMCASA, which will boost interoperability between our militaries. Defense sales are at an all-time high, with India operating United States sourced platforms such as P-8s, C-130Js, C-17s, AH-64s, CH-47s, and M777 howitzers. Additionally, India recently agreed to a \$2.1-billion purchase of MH-60R multi-role sea-based helicopters and is considering a number of additional U.S. systems for purchase. USINDOPACOM fully supports the purchase of U.S. systems, F-16 and F/A-18E aircraft, a reorder of 12-15 P-8Is, and a potential purchase of Sea Guardian UASs.

*Bangladesh.* Bangladesh is an important security partner with strong potential to enhance regional stability and advance United States interests in South Asia on counter-terrorism, Muslim outreach, countering violent extremism, supporting humanitarian assistance and disaster relief, and supporting United Nations Peacekeeping Operations (UNPKO). The humanitarian crisis caused by the presence of more than 700,000 Rohingya refugees from Burma (Myanmar) in Bangladesh has strained the government of Bangladesh. Bangladesh's December 30 elections point to concerning trend of consolidation of power by the ruling Awami League and raise fears that PM Hasina is aiming to achieve a de facto one-party state. Military-to-military engagement with Bangladesh fits into a broader strategy and commitment to uphold an international, rules-based order in the vital Indo-Pacific region and contributes to building a regional security framework.

*Sri Lanka.* Sri Lanka remains a significant strategic opportunity in the Indian Ocean, and our military-to-military relationship continues to strengthen. However, political turmoil and ethnic tension between the Tamil and Sinhalese populations remain drivers of instability and potential obstacles to continued growth in our partnership. Moreover, Sri Lanka has handed over the deep water port of Hambantota to China on a 99-year lease due to its mounting debts to China, which has caused international concern. Despite the political upheaval, it is in our interests to continue military collaboration and cooperation with Sri Lankan Forces. USINDOPACOM cooperation with the Sri Lankan Military centers on building capacity in maritime security and maritime domain awareness, humanitarian assistance and disaster relief as well as humanitarian de-mining, medical assistance, and peacekeeping operations. Increasing navy-to-navy engagement with Sri Lanka will be a USINDOPACOM focus in 2019. The Sri Lankan Navy is a well-trained and professional force with the potential to contribute to multi-lateral maritime interoperability in the Indian Ocean. The recent transfer of an excess United States Coast Guard cutter to Sri Lanka in August 2018, along with additional platforms from Japan and India, provide the Sri Lankan Navy greater capabilities to contribute to regional maritime domain awareness initiatives. Going forward, it is necessary to sustain engagement with Sri Lanka, particularly the navy, and construct a multi-lateral approach to capacity building with like-minded partners to rapidly enhance the Sri Lankan Navy's capabilities.

*Oceania.* USINDOPACOM is deepening engagement with the Pacific Island Countries (PICs) of Oceania to preserve a Free and Open Indo-Pacific region, and we are committed to strengthening the region's future security and prosperity with our partners and allies. In close coordination with Australia, Japan, France, and New Zealand, USINDOPACOM is working to strengthen the resilience of the PICs by tackling common challenges: drug trafficking, Illegal, Unreported, Unregulated



(IUU) fishing; the existential threat of rising ocean levels; natural disasters; and the heavy debt burdens that threaten their sovereign interests.

*Australia.* Our alliance with Australia underpins our relations across Oceania, and Canberra plays a leading role in regional security and capacity-building efforts for a Free and Open Indo-Pacific. Australia is increasing its diplomatic presence, military and economic assistance, and infrastructure investments in Fiji, Papua New Guinea, and the other PICs to enhance security in the region. Australia is a key supporter of UNSCR enforcement operations against North Korea as well. The U.S. Marine Corps completed its sixth successful Marine Rotational Force-Darwin deployment, and we expect to reach the full authorized strength of 2,500 marines later this year. These deployments maintain significant combat power west of the International Date Line with an ally. Moreover, Australia is procuring high-tech United States platforms, such as the F-35, that will increase interoperability.

*Compact of Free Association (COFA) States.* The Republic of Palau, Federated States of Micronesia (FSM), and the Republic of the Marshall Islands (RMI), collectively referred to as the “Compact” states, are threatened by external pressures including the pernicious use of Beijing’s economic leverage. The Republic of Palau, FSM, and RMI entered into a Compact of Free Association (COFA) with the United States more than 25 years ago, allowing the United States to foreclose access or use of those countries by third-country militaries. Under the COFAs, the Compact States receive economic assistance, including grants, access to various U.S. Federal programs, and for many citizens of the Compact States, visa-free travel to the United States. U.S. contributions to the trust funds established by the COFA are scheduled to end after 2023. Moreover, these island nations are under increasing pressure from Beijing’s economic strategy. Additionally, the changing climate represents an existential threat to these nations as they urgently seek to mitigate damage from higher tides and rising sea levels, shifting patterns of fishing populations essential to economic livelihood, and greater intensity of natural disasters such as tropical storms and droughts. The continued support that the COFA has engendered also benefits the United States. We provide support to these countries and they support the United States. The patriotic citizens of these nations join the U.S. Armed Forces in larger numbers per capita than most U.S. states, and I value their service. The Compact states rely on continued support from the United States to mitigate these threats and the United States would like to continue to benefit from the good will of these Pacific Island Countries to further our strategic interests in Indo-Pacific region.

*Fiji.* USINDOPACOM’s relationship with the Republic of Fiji is thriving and robust, and we were pleased to see a credible election process there in 2018. Australia’s decision to invest in the Black Rock International Peacekeeping Center was welcomed, and will ensure that Fiji continues to play an important role in peacekeeping missions around the world. USINDOPACOM is postured to provide engineering support for improvements and new construction to the Ground Forces Training Center and to assist Australian engineers with the Black Rock International Peacekeeping Center. In 2018, Fiji signed a United States ship-rider agreement, opening up new opportunities for maritime security cooperation between our two countries. Additionally, the establishment of Fiji as a partner in the National Guard’s State Partnership Program opens up another door for our two militaries to train and work together. The \$5 million plus-up in foreign military sales (FMS) allows USINDOPACOM to deepen our military relationship with the Fijian military.

*France.* France, a NATO ally with significant territory in the Indo-Pacific, is increasing its operational activities in the region and is a key contributor to the multilateral efforts. The United States, Japan, Australia, New Zealand, and France coordinate operational support and capacity-building with the PICs. The primary operational engagement provides support to the Forum Fisheries Agency to address IUU fishing. France is also becoming increasingly active across the broader Indo-Pacific region, and I welcome both French support to UNSCR sanction enforcement activities against North Korea, and increased French activity in the South China Sea.

*New Zealand.* New Zealand remains a steadfast and key partner who, in 2018, increased investment, foreign assistance, and infrastructure support to the South Pacific. USINDOPACOM greatly appreciates this commitment of additional resources to the PICs. For the last six years, the United States and New Zealand, through bilateral defense dialogues, have increased interoperability collaboration headlined in 2018 by New Zealand’s purchase of P-8 Poseidon maritime patrol aircraft to replace aging P-3 Orion aircraft. Additionally, New Zealand has provided key support to UNSCR sanctions enforcement against North Korea.

*Papua New Guinea (PNG).* USINDOPACOM’s engagement with PNG improves regional posture and demonstrates the U.S. commitment to the region. With security support from Australia and the United States, PNG hosted the Asia Pacific Eco-

conomic Cooperation (APEC) summit in 2018. During APEC, Vice President Pence announced that Australia and the United States would partner with Papua New Guinea to develop the Lombrum Naval Base on Manus Island in the northern part of PNG. USINDOPACOM looks forward to assisting Australia and PNG in developing options for this base.

#### *Additional Allies*

*Canada.* Like the United States, Canada is a member of NATO and a Pacific nation. Canadian policy in the Indo-Pacific focuses on cooperation and building partnerships as they increase operational activities in the region. By focusing on consistent engagement with all willing parties, Canada hopes to deepen its relationship with Australia, New Zealand, and the United States. Canada wants to provide a continued presence in the Pacific to enhance regional stability, specifically citing tensions on the Korean Peninsula in their National Defence Policy. Ottawa provides support to ongoing North Korea UNSCR sanctions enforcement as well.

*United Kingdom (UK).* The UK, another NATO ally, remains one of the strongest defenders of a Free and Open Indo-Pacific, and sees prosperity and security in the Indo-Pacific as an essential driver of global economic growth. The UK recently established three new diplomatic posts in the Pacific and increased foreign aid to the Pacific by 6 percent in 2018. The recently concluded cooperative deployment with the HMS Argyll and USS *McCampbell* in the South China Sea highlights the value of multinational operations and, more importantly, the international message to those who seek to infringe on the ability to fly, sail, and operate wherever international law allows.

#### CONCLUSION

In the 21st century, U.S. security and prosperity will increasingly depend upon a peaceful and stable Indo-Pacific region—one that features respect for states' sovereignty, freedom of the seas and skies, and adherence to international norms, rules, and behavior. In short, it is in our vital national interests to ensure a Free and Open Indo-Pacific over the short- and long-term. As the Commander of USINDOPACOM, my focus is first and foremost on preserving and advancing the security and stability of the region, over the short- and long-term.

I will ensure the 375,000 men and women of USINDOPACOM remain ready to fight and win, if necessary, while also focusing on competing and winning below the level of armed conflict. It is in this so-called "gray zone" between peace and war where many of our adversaries currently operate, and we must be equally prepared to compete with our adversaries before and after the initiation of hostilities. To do this, we need a comprehensive approach across multiple U.S. Governmental departments, and partnerships with civil society and the private sector, to engage in areas that transcend traditional military core competencies. Our armed services must be manned, trained, and equipped to overcome the full spectrum of challenges presented by state and non-state actors. With the continued support of Congress, and together with our allies and partners, I believe we will be successful at this important mission.

Chairman INHOFE. Thank you, Admiral Davidson.  
General Abrams.

#### **STATEMENT OF GENERAL ROBERT B. ABRAMS, USA COMMANDER, UNITED NATIONS COMMAND/COMBINED FORCES COMMAND/UNITED STATES FORCES KOREA**

General ABRAMS. Mr. Chairman, Ranking Member Reed, and distinguished Members of the Committee, thank you for this opportunity to appear before you today.

I've had the privilege to serve in this position for just over 90 days. In that short time, I have assessed the ROK–United States military alliance to be stronger than ever. Our combined force is a strategic deterrent, postured to respond to potential crisis or provocation and, if called upon, ready to defend the Republic of Korea and our allies in the region.

Today in Korea, we have tremendous opportunities before us as well as some great challenges. Ongoing diplomatic engagement between the Republic of Korea, the DPRK, and the United States has

led to a significant reduction in tension compared to the recent past marked by missile launches and nuclear tests. Diplomacy is creating the opportunity for North Korea to choose the path of denuclearization, forge a lasting peace, and build a better future for its people.

The first steps towards realizing that future have already begun. We have witnessed multiple presidential summits, inter-Korean dialogue, and international support to sanctions. The steps agreed to at Panmunjom and specified in the Comprehensive Military Agreement, combined with the aforementioned diplomatic efforts, have all contributed to a marked reduction in tensions on the peninsula and created mechanisms for the development of cooperation and confidence building, central ingredients to the incremental process of making history on the peninsula.

Still, I remain clear-eyed about the fact that, despite a reduction in tensions along the DMZ [Korean Demilitarized Zone] and a cessation of strategic provocations, coupled with public statements of intent to denuclearize, little to no verifiable change has occurred in North Korea's military capabilities.

For instance, we are watching the ongoing Korean People's Army Winter Training Cycle, including a slate of full-spectrum exercises, which is progressing along at historic norms, meaning that we have observed no significant changes to size, scope, or timing of their ongoing exercises compared to the same time period over the last 4 years. Further, North Korea's conventional and asymmetric military capabilities, along with their continued development of advanced conventional systems, remains unchecked. These capabilities continue to hold the United States, the Republic of Korea, and our regional allies at risk. As such, I believe it is necessary to maintain a postured and ready force to deter any possible aggressive actions.

Fielding our force in Korea requires a foundation of support and sustainment to meet our war-fighters' needs. Today, that foundation is sound. It serves as the bedrock from which we deter aggression and ensure stability, not only on the Korean Peninsula, but in Northeast Asia. Our posture allows our diplomats to speak from a position of unquestioned strength as they work to achieve enduring peace and final full denuclearization of the DPRK.

I want to thank you for the support we have received from the Congress over the last 2 years, as we have significantly improved the posture and readiness of our forces on the peninsula, from munition stocks to additional ballistic missile defense capabilities and more. I can't underscore enough the importance of the on-time appropriation in 2019, as it has enabled us for the first time in many years to make smarter investments, improve our planning, and provide predictability to our commanders in the field so they can sustain the hard-earned readiness that is essential to being a fight tonight force.

The readiness required to be a credible deterrent is perishable. We must continue to exercise the core competencies necessary to the planning and execution of joint and combined operations under the strain of crisis. However, we must also strike a balance between the need to train and the requirement to create space for diplomacy to flourish. As such, we are innovating our approach to

training and exercises by tuning four dials that modify exercise design and conduct: size, scope, volume, and timing. Adjustments to these dials enable us to remain in harmony with diplomatic and political requirements without sacrificing war-fighting readiness to unacceptable levels.

Our combined forces, the Republic of Korea and United States, continue to train using this new construct so they can be ready should the call come for them to respond to crisis, defend the Republic of Korea, and prevail against any threat. The ROK–United States alliance remains ironclad. It has been tested multiple times over the last 65 years and has only become stronger. Our military partnership continues to deepen and broaden the long-standing relationships that exist at every echelon. On behalf of the servicemembers, civilians, contractors, and their families on the peninsula, we thank you for your unwavering support. I am extremely proud to be their commander and to work hand-in-hand with the Republic of Korea to protect our great nations. I look forward to answering your questions.

[The prepared statement of General Abrams follows:]

PREPARED STATEMENT BY GENERAL ROBERT B. ABRAMS

#### INTRODUCTION

Chairman Inhofe, Ranking Member Reed, and distinguished Senators of the Committee, thank you for the opportunity to report on the posture and readiness of our forces in the Republic of Korea (ROK). Thank you as well to the Congress, and in particular this Committee's leadership, for delivering the fiscal year 2019 National Defense Authorization Act and related Appropriations on time. Predictable, stable resourcing, more than any other factor, allows us to sustain the military readiness we have rebuilt over the last few years. In 2018, the Services, under the leadership of Chairman Dunford and former Secretary Mattis, made significant strides to improve the overall readiness posture of United States Forces Korea (USFK) and our ability to "fight tonight." We are grateful for their continued support.

I have had the distinct honor to command the United Nations Command (UNC), the Combined Forces Command (CFC), and USFK for nearly 90 days. During that short time, I have prioritized firsthand visits and a personal review of the posture, readiness, and character of the warriors and organizations of these three commands. My assessment is that the ROK–United States military Alliance is stronger than ever, and that our combined force stands as a strategic deterrent, postured to respond to potential crisis or provocation and, if called upon, ready to "fight tonight" in the defense of the Republic of Korea. The alliance between South Korean and American forces is ironclad—forged in blood, shaped over 65 years of combined military operations and training, and hardened by the crucible of war. Shared sacrifice and mutually agreed principles underpin our Alliance and ensure it endures the winds of change.

This posture statement, along with my testimony before the Committee in open and closed session, is my first opportunity to provide you my personal assessment and measurement of progress within our four enduring priorities: sustain and strengthen the Alliance, maintain the armistice, transform the Alliance, and sustain the force. To that end, this statement provides a summary of the changes in our operating environment, an assessment of our posture and readiness, an overview of our exercise planning and conduct, a discussion of how we take care of our warriors and their families, and a review of our current resourcing priorities. The continued support of this Committee for the incredible men and women of UNC/CFC/USFK is appreciated. We are a better postured force because of your unwavering commitment to military readiness on the Korean peninsula.

#### OPERATING ENVIRONMENT

Ongoing diplomatic engagement and summitry among the leaders of the ROK, United States and the Democratic People's Republic of Korea (DPRK) in 2018 led to a palpable reduction in tension when compared to the recent years of missile launches and nuclear tests. The inter-Korean Comprehensive Military Agreement

(CMA) has produced a number of nascent confidence-building measures: demilitarization of the Joint Security Area (JSA), demining small areas of the Demilitarized Zone (DMZ) in preparation for ROK–DPRK joint remains recovery operations this spring, mutually-verified removal of select guard posts along the DMZ, and increased interaction between UNC forces and Korean People’s Army (KPA) forces operating within the JSA. All of these measures support improved military-to-military communications among the ROK, DPRK, and UNC, and some have sparked limited cooperation. These steps, regardless of size or scope, are positive indicators of the impact sustained diplomatic efforts have begun to bring about. Current modifications in atmospherics, however, do not represent a substantive change in North Korea’s military posture or readiness. The North Korean military remains formidable and dangerous, with no discernable differences in the assessed force structure, readiness, or lethality my predecessor reported in 2018.

While Kim Jong-un’s (KJU) 2019 New Year’s speech called for South Korea to halt joint military exercises with the United States, the KPA’s Winter Training Cycle this year commenced as it has for the past five years—with a force of over one million engaged in individual and unit-level training throughout the country. Notably, the size, scope, and timing of training events are consistent with recent years. The only observable change has been a reduction in the attention and bellicosity the regime layers onto its military activities. Since the end of 2017, Pyongyang has reduced its hostile rhetoric and halted media coverage of KJU attending capstone events such as large-scale, live-fire training or special operations raids on mock-up Alliance targets. It is, however, too soon to conclude that a lower profile is indicative of lesser risk.

The hard work of diplomacy continues to reduce tensions and create the environment necessary for North Korea to choose the path of denuclearization, forge a lasting peace, and create a brighter future for its people. Still, I am clear-eyed about the fact that little to no verifiable change has occurred in North Korea’s conventional and asymmetric capabilities that continue to hold the United States, South Korea, and our regional allies at risk. For these reasons, the security situation continues to demand an appropriately postured and ready force.

Amid shifting atmospherics, 2018 was also a seminal period for all three commands as initiatives for setting the force matured, dramatically changing the geography of three headquarters. The USFK and UNC Headquarters relocated to Camp Humphreys, joining Eighth Army and 2nd Infantry Division in new state-of-the-art facilities on the largest U.S. Army facility outside of continental United States. The headquarters for CFC remains in Seoul at Yongsan and the combined ROK–United States staff is redefining normal operations based upon this change in geography. While distance will not erode the strength of the Alliance, it has forced, and will continue to require, deeper thought about how to sustain operational readiness across the components and at each echelon. For any member of Congress who has not been to Korea in the past 24 months, we have reset the force significantly and consolidated tremendous capability in Pyeongtaek—the conditions for the development and sustainment of combat readiness have changed.

#### *The Armistice Agreement and United Nations Command*

The significantly changing environment along the DMZ, and within the JSA specifically, is proving the inherent utility, adaptability, and importance of the UNC. Over the past 14 months, we have evolved as the CMA and inter-Korean dialogue birthed several of the confidence-building measures summarized above. CMA-related activities are important to the development of the confidence and trust necessary to diplomatic progress and are proving to be value-added reinforcements to the tools which have helped ensure the security of Korean peninsula for the last 65 years—the 1953 Armistice Agreement and the command that fulfills it. UNC was formed to organize and operationalize the international community’s defense of South Korea during the war and has, since 1978 when South Korea assumed armistice operational control, endured as the body explicitly tasked with “ensur[ing] a complete cessation of hostilities and of all acts of armed force in Korea until a final peace settlement is achieved.” The events of 2018 highlight UNC’s critical role as the home for international commitments on the Korean peninsula while simultaneously driving the command toward a marked increase in activity, exposure, and international engagement.

While enforcing the Armistice Agreement, securing the JSA as a place for diplomacy, and acting as a principal partner with ROK and KPA in the trilateral military talks, the UNC Military Armistice Commission (UNCMAC) approved 13,066 border crossings in 2018 (compared with five in 2017), passed 152 official messages (56 in 2017), and participated in several staff-level and General Officer-level negotiations. UNC staff met the dramatic increase in requirements while simultaneously

continuing the work of evolving the command by increasing UN Sending State staff and senior officers and simultaneously executing the move from the legacy facilities at Yongsan to a new facility on Camp Humphreys. Today, UNCMAC is a vital participant in the ongoing negotiations and it provides international legitimacy and validation to all of the ongoing confidence building measures. UNCMAC has adapted to new conditions and remains the vital tool envisioned in the 1953 agreement. UNC as a command, enabled during armistice by the UNCMAC, the Neutral Nations Supervisory Commission, and UNC-Rear in Japan, also remains prepared to be the critical link between the international community and the other two commands during periods of crisis or contingency as the home for Sending State force contributions.

#### POSTURING AND SUSTAINING A READY FORCE

Fielding a ready force requires establishing a foundation of support and sustainment capable of meeting the warfighters' needs in the dynamic and uncertain environment of the 21st century. On the Korean peninsula, we operate at the distant edge of our military's global logistics chain. Our position requires tight integration with our South Korean ally, meticulous planning, and organized efforts to forward-position adequate capabilities and the materiel essential to power projection and contingency response. Today, that foundation is sound and serves as the bedrock from which we deter aggression and are prepared to defeat, if necessary, any adversary. Moreover, our posture supports this period of détente and negotiation by permitting our diplomats to speak from a position of unquestioned strength and capability.

Sustaining a combat-ready force requires focused investments, and South Korea is an exemplary ally in that regard. President Moon's administration is committed to resourcing the Republic of Korea's defense and has increased annual spending by bringing total outlays to 2.7 percent of GDP. Further, the Moon administration has pledged to raise ROK defense spending to 2.9 percent of its GDP by 2022. South Korea's 2019 Defense Budget increased 8.2 percent from the previous year and it apportions funds to programs necessary to advance the Conditions-Based OPCON Transition Plan and the Defense Reform 2.0 initiative. The ROK has invested more in its defense over the past 15 years than it had in the previous 50, increasing foreign military procurements from the United States such as the KF-16 and PATRIOT battery upgrades, AH-64E Apaches, the F-15K, RQ-4 Global Hawk variants, and the F-35A Joint Strike Fighter. This level of investment funding traditionally exceeds the commitment of other allies and regional partners. In 2018 alone, the ROK signed \$2.160 billion in Foreign Military Sales cases (including a purchase of P-8A aircraft) in support of our shared security commitments as allies.

Since 1991, a key element of sustaining the force has been the Special Measures Agreement (SMA), whereby the South Korean Government shares the cost of sustaining the USFK force posture. The SMA assures essential readiness-related personnel and activities, such as the contributions of 9,000 Korean National employees serving in crucial roles of public safety, health care, emergency response, and quality-of-life delivery operations. The most current SMA expired on December 31, 2018; as of this writing, the United States and the Republic of Korea have reached an agreement, in principle, on a new SMA. Both sides are committed to resolving remaining technical issues as quickly as possible. The United States appreciates the considerable resources our ROK ally provides, including SMA contributions toward the cost of maintaining United States Forces in Korea.

Similarly, South Korea's continued investment in military construction and modernization helps ensure our forces are postured, prepared, and properly set for the future. The Land Partnership Plan (LPP) and the associated Yongsan Relocation Plan (YRP) are two bilateral agreements that provide the foundation for streamlining USFK's footprint while returning facilities and valuable land to the South Korean Government for future development. USFK and UNC took a major step forward in 2018 by relocating both commands from United States Army Garrison Yongsan, a legacy cantonment in the heart of Seoul, to Camp Humphreys, a large, modern base, which serves as the fulcrum for the enduring United States presence in Korea. In total, USFK has returned 49 sites to the ROK since 2003 while simultaneously moving the majority of our forces and families away from the DMZ and closer to centralized support hubs located near major air and sea ports.

With the support of this Committee, the Secretary of Defense, and INDOPACOM, in 2018, USFK improved its posture by forward-locating onto the peninsula certain capabilities, improving others, and increasing the capacity of the most crucial warfighting functions. Significant gains in posture during 2018 include essential munitions, ballistic missile defense systems, and pre-positioned wartime stocks. Our

efforts, with assistance from the Services, have reduced stocks of forward-positioned, outdated munitions by over 214,000 tons. We are on track to complete the required retrograde by December 2019. The Department continues to apply the \$784 million appropriated since 2017 towards resolving our joint emergent operational need statement related to improving the posture, sustainment, and integration of our missile defense systems. The recent draw, operational testing, and turn-in of 14 M1A2 tanks from our prepositioned stocks was the first in a series of exercises validating the concept and improving our preparedness to rapidly execute similar activities during contingency conditions. Additionally, rotational forces augment the 28,500 member baseline, bringing with them high-end systems and leaving with invaluable experience in the theater operating environment and combined interoperability.

The aggregate result of seven decades of committed partnership under our Mutual Defense Treaty is our ironclad Alliance and capable forward presence, the elements directly responsible for creating and sustaining an environment conducive to both deterrence and diplomacy. As we sustain readiness for any potential provocation or conflict, we support those working toward enduring peace and denuclearization.

#### EXERCISING THE FORCE FOR JOINT AND COMBINED COMPETENCY

Last year we commemorated the 40th Anniversary of the establishment of the CFC, which has played a central role in deterring war on the Korean peninsula and defending the ROK since November 7, 1978. During 2018, the CFC made significant advances to ensure the long term relevance of our combined warfighting capability. The Alliance Guiding Principles, a framework to ensure a unified, ready defense posture following OPCON transition, was bilaterally developed and endorsed by our two governments. Progress in operational concept refinement, military plans, and strategic documents has further enhanced our combined defense capabilities. Advances across CFC, the heart of the ROK–United States Alliance, serve as evidence of the ironclad nature of the ROK–United States Alliance and reinforce my view that our combined force relationship is stronger than ever.

Planning is regarded as an indispensable element of military readiness, and in 2018 the Joint Staff and INDOPACOM worked diligently with USFK to assess and refine plans for potential contingency operations on the Korean Peninsula. A bottom-up review of force requirements, unit-level readiness, and global mission impact has been accomplished. In accordance with the National Defense Strategy, we stand prepared to rapidly receive and integrate the personnel and materiel necessary to buttress the forward-deployed force in Korea during periods of crisis or conflict.

Combat readiness is perishable. This fact is especially true of forces in Korea due to the high-turnover among our servicemembers, American and Korean alike, across the spectrum of missions and roles. The benchmark for readiness is demonstrating the competencies necessary to plan and execute joint and combined operations under the strain of crisis or wartime conditions. Tactical training sharpens the baseline skills essential to success on the modern battlefield for our soldiers, sailors, airmen, and marines. Exercises provide the venue to coordinate and synchronize operational-level headquarters like CFC (the warfighting command on the peninsula) and the service Components across time and space in a dynamic environment—a critical operational competency during times of crisis. This is true for militaries the world over, all of whom strive to exercise under conditions anticipated in potential conflict. To succeed in war, we must train hard in peace. To succeed in Korea, we must train the CFC in the essential tasks necessary to credibly deter aggression and readily deliver victory if challenged.

However, we must continuously strike a balance between the clear need to train and exercise military capability and the requirement to create space for and support strategic diplomacy. To help achieve this equilibrium, we are innovating and evolving our approach by tuning 4 dials that adjust exercise design and conduct—size, scope, volume, and timing. Adjustments to these dials allows exercise design to remain in tune with diplomatic and political requirements without sacrificing the training of essential tasks. Additionally, such fine tuning allows for the mitigation of impacts inherent to rapidly switching from our traditional large-scale exercise program to one of more targeted events.

USFK and CFC are working closely with our South Korean partners and INDOPACOM to conduct exercises routinely, both joint and combined, to test the preparedness and resiliency of our foundation, refine operational concepts, and sustain proficiency of mission essential tasks. Recent examples include Combined Staff Training (CST) and the on-going Korean Marine Exercise Program (KMEP). CST stresses the CFC and USFK headquarters and networks to respond to crisis by effectively coordinating and communicating activities from the tactical to the strategic

level. The KMEP series puts combined marines through their paces in simulated wartime conditions testing a full spectrum of essential tasks and core competencies. Since October 2018, we have conducted dozens of small-scale exercises among the components—our air, ground, naval, and marine forces train habitually with their ROK counterparts on the fundamentals of warfighting.

Together, these exercises provide the benchmark from which we are evolving our program and mitigating the near-term effects of recently suspended traditional, large-scale training events. We continue to aggressively pursue innovative approaches to joint and combined training and are committed to demonstrating that creating space for diplomacy need not impede military readiness.

#### *Taking Care of our Warriors and their Families*

Servicemembers, civilians, and families are our most precious resource, and I am committed to providing the best possible quality of life for them as they serve their nation while stationed in South Korea. Among my priorities of effort are sexual assault prevention and response, command sponsorship, and high quality medical care.

United States Forces Korea is committed to strict compliance with all Secretary of Defense and Service Chief Requirements and is working toward the goal of eliminating sexual assault by fostering a culture of dignity and respect across the Command. Our approach is prevention-focused with an uncompromising adherence to commander involvement and victim assistance guided by five critical focus areas: prevention, victim assistance, investigation, accountability, and assessment.

My personal philosophy is ensuring personnel understand they are responsible for fostering a climate where sexist behavior, harassment, and assault are not tolerated. Additionally, victims' reports are to be treated with the utmost seriousness and bystanders are expected to intervene—offensive or criminal conduct is neither tolerated nor condoned.

I continually assess the wellbeing of the 7,600 Department of Defense dependents living in Korea. The Command Sponsorship Program enables 24–36 months accompanied tours for servicemembers. These tour lengths are far superior to 12-month unaccompanied tours and benefit our warriors, our families, and the commands. Serving in Korea accompanied by one's family improves quality of life and morale while simultaneously increasing continuity and heightened levels of theater-specific competency. I fully support our Command Sponsorship Program and assess South Korea to be among the safest locations for servicemembers and their families to serve abroad.

Among the most important quality of life issues in South Korea is access to high quality medical care for servicemembers and their families. TRICARE beneficiaries in South Korea have access to the entire spectrum of healthcare services through Department of Defense hospitals and clinics plus a TRICARE network of 30 first-class host nation hospitals. In addition, the construction, validation and certification of the new, state-of-the-art Brian Allgood Army Community Hospital at Camp Humphreys, once delayed by as much as 8-months, has now been placed on track for completion by November 2019. Before year's end, we will deliver a new facility for our families, one that meets or exceeds all U.S. medical requirements and standards.

#### RESOURCING READINESS

I wish to thank the Committee for their continued commitment to the readiness of UNC/CFC/USFK and for supporting the development and fielding of capabilities critical to sustaining our edge and mitigating asymmetric threats. To further harden our posture and improve our readiness to act, my prioritized areas of concentration for future investment are: the network, situational awareness, lethality, and interoperability.

The dynamic nature of conflict, particularly in a combined setting, applies unique stress on the networks upon which command and control, communication, computers, and intelligence rely. Our networks must remain impervious to cyber intrusion or effect; the DPRK demonstrates increasing cyber capacity that must be matched and thwarted. Intelligence, surveillance, and reconnaissance (ISR) assets along with sensors capable of detecting a broad array of threats and activities provide the situational awareness that informs decision-making during both armistice conditions and crisis. We require persistent ISR that overcomes the inherent challenges of geography and allows for reliable operational indications and warning that prevents strategic miscalculation. Increasingly lethal capabilities, from the tactical to operational, are required for unquestioned power projection in a region with rapidly advancing competitors and adversaries. Our superiority in the air remains vitally important; our ability to rapidly counter aggression and defend South Korea



relies upon dominant air power. Lastly, interoperability remains essential if we are to derive the benefits of joint and combined warfighting.

We are making progress in each of these areas by working in close coordination with the Department of Defense, INDOPACOM, our South Korean ally, UN Sending States, the interagency, industry, and academic partners. I look forward to answering your questions concerning these initiatives and providing you with all relevant information required to inform this Committee's work.

#### CONCLUSION

I remain confident that our four enduring priorities are correct in the short term: sustain and strengthen the Alliance, maintain the armistice, transform the Alliance, and sustain the force. The central themes of my 90-day personal assessment will underpin my continued review of readiness in an ever-changing strategic environment and will help us remain focused on these priorities.

The men and women, military and civilian alike, who serve within the UNC, CFC, and USFK have the tools required for success. They are highly motivated, capably armed, and well supported by their parent service, the Department of Defense, and this Committee. The force is sufficiently postured to deter aggression and defeat any adversary, if necessary. We continue to train at echelon to maintain the readiness required to translate a strong military posture into decisive victory on short notice.

Our Alliance with the Republic of Korea remains ironclad and stands as a testament to our shared history of service and sacrifice. The combined strength of that alliance is formidable as our warriors embody our slogan—*Katchi Kapshida* (*We go together*)! As soldiers, sailors, airmen, and marines of both nations make the daily sacrifices inherent to uniformed service, we strive to ensure we provide for them and their families. A well postured, ready, and nurtured force strikes fear in the heart of those who would challenge it.

We are in a historic period on the Korean Peninsula. While the near-term future is unclear, the significance of this moment cannot be overstated. In the midst of dynamic change, UNC/CFC/USFK stands as a steadfast, stabilizing presence in the region. This has been the case for over 65 years and will continue into the decades ahead. I am proud to lead the men and women who carry on the noble work of generations past. I am confident that our actions—our readiness—directly contributes to the defense of the United States and the security of South Korea, while providing the credible military strength from which our distinguished diplomats can negotiate and advance lasting peace for the Korean peninsula and the region.

Chairman INHOFE. Thank you, General. Let me first of all mention something that we've talked about quite a bit of times.

You know, the American people are not really aware of the threats that we face. I think we all understand that. The problem with this is for us to have the proper priorities for our military, I think it's necessary for the American people to understand why we're having to do all of this. You still see things that are happening, that they still believe that we have the best of everything and nothing to worry about because that's how it's always been and so forth, but they don't realize how fast China has modernized and the problems that we're facing out there.

Admiral Davidson, what do you think can be done? Our military has come forth—General Dunford, when he said, "We have lost our qualitative and quantitative edge over the adversaries." Milley said, "In terms of artillery, the Army is outranged and outgunned by our adversaries."

Same thing was true with Moran in talking about the Hornet Fleet. You know, I've been on the Senate and the House Armed Services Committee for many, many years. I don't ever remember a time when the military has come forth with the shot of realism like they have recently. I'd like to know, what can you guys do more to make the American people more aware of the threats that we face?

Admiral DAVIDSON. Thank you very much, Senator, for your question. The advances made by China, especially, but the other

threats I articulated in the region, Russia specifically in the 21st century, have really been profound. While our Nation has been focused on the efforts of land wars in Southeast Asia, these advances have been basically unchecked with the economic power that China has brought to bear, and they have greatly advanced their capability truly in all domains.

You mentioned space. What was essentially a handful of satellites at the turn of the century has now become hundreds of satellites—capabilities and communications and surveillance and reconnaissance and other capabilities in space. If I move it all the way down through air, they've now got fourth- and fifth-generation fighters, which were not there at the beginning of the century, and they have now advanced surface and submarine assets that they also did not enjoy at the turn of the century.

The time to invest in these things is now. I'm quite encouraged by all the concepts that you've seen come forward from the services, from Multi-Domain Task Force to the distributed maritime operations, as well as the commitments and the profiles that the services have begun to make and being able to operate in these multi-domains where these advances have taken place.

Chairman INHOFE. Yeah, I think you're right on that, but we're also seeing them rubbing our noses in it. We've not seen this before. Admiral Greenert wrote a recent paper that his Chinese counterpart, the head of the PLA [Chinese People's Liberation Army] Navy, was surprised that "the United States did not have a more"—and I'm quoting now—"a more forceful reaction" when China began its island building in 2013.

They're actually talking about us. Where this is reflected is with our allies. Several of us on this Committee were in the South China Seas just a short while ago, and our allies, you know, they're almost looking at what's happening in the South China Seas, with the island building and all of that, as the Chinese preparing for World War III and, you know, which side are we going to be on?

That's something that does bother me. I think, also, it's affecting a lot of the attitudes. I know that Xi Jinping said that he would not—and this is his quote—"abandon the use of force as a potential means of achieving the unification of Taiwan."

Now, what more can we do to try to overcome this attitude that's out there and is having an adverse effect on our allies? Any thoughts on that?

Admiral DAVIDSON. In the operational space, one of the things we've been able to do in just the last 5 months, Senator, is get our allies and partners to join us in the South China Sea. Not all of their operations are defined as freedom of navigation operations as we would define them, but their willingness to sail independently in there, to work with us on exercises demonstrates the international commitment to maintaining the freedom of those seas and airways. I think it's critically important to message China that it's not just the United States that is concerned about the freedom of the South China Seas, but indeed all nations. I expect allies and partners to continue to help here in the months ahead, both with some combined operations that we'll be executing, as well as some individual operations as well.

One of the other factors that we're working on in the diplomatic space is to help ASEAN [Association of Southeast Asian Nations] in this discussion about Code of Conduct negotiations with China. China has essentially delivered a draft that dictates to those ASEAN nations when and where and who they would sail with in the South China Sea. Helping them protect the international freedoms of the seas and airspace that have been long established in maritime law that the United States and others have fought for over the centuries is quite important.

Chairman INHOFE. Yeah, well that's good.

My time is expired, General Abrams, but I will have a question for the record having to do with South Korea and what's going on.

Senator Reed.

Senator REED. Well, thank you very much, Mr. Chairman.

General Abrams, there's been discussions about the cost of our forces on the Korean Peninsula. President Trump suggested a few times that it's expensive. These negotiations with the Special Measures Agreement seem to be more controversial than previous years and, interestingly enough, it's just for a term of 1 year, where typically it's a 5-year term, so we're going to be right back in the saddle of talking about supporting forces and the South Korean support for our forces on the peninsula.

Can you talk about the significance of maintaining our force presence there? Is it critical or can we afford to draw down?

General ABRAMS. Senator, our presence and our posture is appropriate in terms of providing an adequate deterrent against the DPRK. It provides a force structure in numbers and capability that's capable of responding to hostilities and provocations and prepared to defend the Republic of Korea if they are called upon. Our posture there also serves as a stabilizing factor, stability in Northeast Asia. It provides reassurance to not only the Republic of Korea, but to Japan and other partners in the region, and serves as a bulwark against the expansion of China, as Admiral Davidson just outlined. Our presence there serves multiple purposes.

Senator REED. One purpose I suspect also, too, is to give confidence to our allies, the South Koreans and the Japanese particularly. Would they be concerned if we drew down our forces in any way?

General ABRAMS. Senator, I hesitate to speak on behalf of the Republic of Korea or Japan, but in my dealings with both of them I would say yes, they would be concerned if we were to do that.

Senator REED. One of the other aspects in this relationship between the South Koreans and Japanese is there is a long, long history there. There are at times some difficulties between that relationship. Can you characterize the relationship? I think many people assume it's just completely harmonious, but I've observed comments and issues in which there was some friction. Is that still the case?

General ABRAMS. Senator, as you stated, there are long-term items of friction between those two countries. In my experience, it's difficult for Westerners to appreciate the breadth and depth of some of that tension as these are very old countries, ancient societies, and many of their tensions go back hundreds and hundreds of years. Occasionally, it flares up with misunderstandings between

the two that are exacerbated by topics of the current day. Those only serve to re-inflate those old grievances.

Having said that, militarily we continue to see cooperation and commitment on both sides because they both understand that there are much bigger concerns for them to worry about than some of their long-term friction points. They've got some mutual goals that they've got to work together on.

Senator REED. Thank you, sir.

Admiral Davidson, again, thank you for your service, too. One of the proposals consistent with the National Defense Strategy that the Marine Corps is advancing is to occupy islands forward of their present position and use them not only to protect them from seizure by anyone, but also to help defend the fleets and our air forces operating in the region. Is that a concept that you support?

Admiral DAVIDSON. Sir, all the services have put forth expeditionary concepts like that. They all have slightly different names—the EABO [Expeditionary Advanced Base Operations] concept, the Multi-Domain Task Force—but those are capabilities that I think serve a deterrent basis in the region and they're also fight-and-win capabilities that we may have to utilize in the future.

Senator REED. Let me just, in general, are you satisfied in terms of the weapons systems that you have available given what the Chinese, in particular, are developing so quickly? You alluded to them in your comments repeatedly—new generations of fighters, long-range precision missiles that threaten our carriers that 10, 15 years ago were not even on the—certainly not deployed. Are you satisfied you're getting kind of the weapons that can counter those weapons?

Admiral DAVIDSON. Sir, we speak frequently about the erosion of our advantage in the theater, which is really the case here. China has seriously eroded that quantitative advantage—the number of assets that they have—but they're also eroding that qualitative advantage is what I'm talking to you about fourth- and fifth-generation. Are we now making progress, I think, in that budget? Yes. We do have the roots of some capabilities, many capabilities, that would be applicable in any warfare scenario as I see the future play out. But the investments, I think, need to come more rapidly, and we need to be willing to innovate to get there as well.

There is much to be done in this space. I don't want to give the impression that last year's budget necessarily is putting us on the track to regain that advantage. On-time budgets and the kind of investments that we've been talking about in the Department for the 2020 and 2021 budget to come, which I haven't seen the final 2020 budget, I think are critically important to regaining that advantage.

Senator REED. Just a final comment. If there is a particular system that is being developed that you think that would be very applicable, but it's not being adapted by the services from your standpoint, both of you as combat commanders/field commanders, please let us know. Thank you.

Chairman INHOFE. Thank you, Senator Reed.

During the course of this hearing, we are going to have some subjects come up that would be better addressed in a closed session. There will be a closed session at 2:30 this afternoon.

Senator Wicker.

Senator WICKER. Thank you, Mr. Chairman.

Senator Reed has touched on an issue that is surprising to many of us and I believe that needs some more attention. He asked General Abrams about the worsening relations between two of our great allies, the Republic of Korea—South Korea, and Japan. I would submit for the record, Mr. Chairman, two articles; one from the February 9th Washington Post entitled “Japan-South Korea ties worst in five decades as United States leaves alliance untended” and also a February 10 article from The Nelson Report entitled “Japan, ROK crisis gets worse.”

[The information referred to follows:]

JAPAN-SOUTH KOREA TIES ‘WORST IN FIVE DECADES’ AS UNITED STATES LEAVES  
ALLIANCE UNTENDED

By Simon Denyer  
February 9

TOKYO—Leaders have turned their backs on each other. They have traded barbs. Military and business ties are fraying, and the media is up in arms.

Relations between Japan and South Korea, the most important United States allies in the Asia-Pacific region, are unraveling fast. And while the leaders of both countries share the blame, the Trump administration has taken its eye off the ball, experts say. This has allowed spats to grow that could undermine United States efforts to sustain a coalition of Asian democracies and contain China.

Japan ruled over South Korea from the beginning of the 20th Century until the end of World War II, and Seoul and Tokyo’s complicated history has always loomed large in the background.

But the rancor that has soured relations lately is among the worst in generations.

“The relationship between South Korea and Japan is suffering a compound fracture unprecedented in the five decades since the two countries established diplomatic relations,” said Shin Kak-soo, a former South Korean ambassador to Japan. He added, “The Trump administration did not pay attention to the alliance.”

The rift came after a South Korean Supreme Court decision in October ordering a Japanese steel producer to *compensate Korean workers forced into labor* during Japanese colonial rule, but the root of the crisis runs much deeper and its effects have reverberated in all directions since.

In November, South Korea *shut down a foundation* established to help care for the Korean women—more commonly known as “comfort women”—who were forced into sexual slavery in Japanese military brothels during World War II. The foundation was funded by Japan as part of a 2015 deal intended to put the issue to rest.

*[Japan’s Abe stakes out new regional identity]*

Then Tokyo went public with *accusations* that a South Korean warship had locked its fire-control radar onto a Japanese patrol plane, a move seen as a precursor to actually firing.

Seoul denied the accusation and *countered* with the charge that the Japanese plane had been flying dangerously low. Japan’s conservative Prime Minister Shinzo Abe and South Korea’s liberal President Moon Jae-in come from opposite ends of the ideological spectrum.

In South Korea, Abe is an unpopular figure, seen as reluctant to express genuine remorse for Japan’s behavior during its colonial rule over the peninsula.

In Japan, Moon is seen as the latest in a long line of South Korean leaders who have exploited popular resentment of Japan to shore up their own flagging popularity and reneged on agreements reached by previous governments.

Tokyo says the Supreme Court decision violates a 1965 deal establishing diplomatic relations, under which Japan gave South Korea much-needed economic aid as compensation for forced labor. But if Japan takes a legalistic position, then many South Koreans are more concerned with what they see as justice, said Shin. Moon himself was a human rights lawyer who once represented claimants in a case against Mitsubishi over forced labor.

Liberals in South Korea tend to see the 1965 agreement as an unequal treaty imposed by Japan on a weak country still recovering from the ravages of war, led by military strongman Park Chung-hee, who trained in the Japanese puppet state in Manchuria during the final stages of World War II.

To outsiders, the antipathy between the two countries—both free market democracies with close relationships to the West—can come as a surprise.

But the tragedy of the current crisis, according to Yasushi Kudo of the Japanese think tank Genron NPO, is that this antipathy had been gradually subsiding, especially among young people, thanks in part to booming tourism and a mutual affinity for the other country's popular culture.

A territorial dispute over a group of small islands, administered by South Korea but claimed by Japan, has also inflamed passions, notably when then-President Lee Myung-bak visited the islands in 2012.

But the relationship is also complicated by the immense changes that have swept through South Korea over the past five decades, as the country has emerged from Japan's shadow to become a thriving democracy and economic powerhouse in its own right.

South Korea grew up, and Japan never really accepted that, according to Koichi Nakano, a political science professor at Tokyo's Sophia University.

"Many Japanese leaders are still caught up with a condescending, or even perhaps bordering on a racist, attitude toward South Korea as a smaller and less developed country," he said. "There is this attitude among conservatives that, at the end of the day, we can bully Korea into submission."

South Korea, fiercely nationalistic in its own right, is far from overawed. In fact, it's preoccupied with other issues—its relationships with North Korea, the United States and China are today seen as more important than its relationship with Japan.

Liberals in Seoul tend to place less value than conservatives on the alliance with the United States, and so less value on the triangular relationship with Japan, said Junya Nishino, director of contemporary Korean studies at Keio University in Tokyo.

At home, though, both leaders are playing populist tunes, and the media in both countries is dancing to it.

Nishino fears the situation is about to get worse. Despite tensions, the relationship was founded on strong ties between the two militaries, civil society contacts and extensive business and trade links.

All three have suffered in the latest dispute.

Former U.S. president Barack Obama played an important role in mending ties between the two countries earlier in the decade, arranging a trilateral summit in 2014 and brokering the comfort women agreement the following year. By contrast, Trump has shown much less interest in or affinity for America's Asian allies, experts in both countries said. The crisis is bad news for the United States, experts say, and undermines United States efforts to gather like-minded nations under the banner of a free and open Indo-Pacific and counter China's rising influence.

However, it also undermines Japan's "brand" in Asia, Nakano said, with its ability to play a leading role in the region hobbled by its failure to resolve disputes over its wartime past, especially with a fellow democracy.

"Japan can't continue to have the influence it used to have in the region without getting along with Korea," he said. "As a democracy, we were supposedly at the forefront of progress in Asia in the postwar period, but we are becoming more and more reactionary, a declining power."

Admiral Davidson, I don't want to spend the whole time on this, but General Abrams commented on it. This is a serious problem which potentially affects our ability to gain cooperation between our allies; is that correct?

Admiral DAVIDSON. I think both nations recognize, Senator, that the future in the Indo-Pacific is going to require great democracies like Korea, Japan, the United States and others to work together here for the very long term.

I can tell you, to the point about whether the alliance is being tended to, I've spoken to both the chiefs of defense in Korea and Japan in the last week. I will return a call to the chief of defense in Korea later this week. I've talked to both our ambassadors in the last week there, met with one of them—both of them, actually—personally. Much is going on to help facilitate our mutual concerns in the region and our alliances.

Senator WICKER. Does State and DOD, do they both understand the seriousness of this deterioration, and are they both tending to it?

Admiral DAVIDSON. I would say the answer to that is yes, sir.

Senator WICKER. Thank you. Very good. That's, I think, surprising to hear and good to know there are efforts made.

Now, after the USS *Fitzgerald* and *McCain*, tragic collisions resulting in fatalities and the loss of hundreds of millions of dollars, there were two investigations. Senator McCain and I introduced the Surface Warfare Enhancement Act asking that many of the recommendations of these investigations be implemented. This led to inclusion of most of our legislation in the Fiscal Year 2019 NDAA [National Defense Authorization Act].

Are we on track to fully implement the Surface Warfare Enhancement Act? The reviews that caused so much concern were that demand for naval power was far outstripping the supply of ships and submarines. That was what led in part to these collisions and tragedies. What's the state of that imbalance today,

Admiral Davidson, and what do you need compared to what you have now?

Admiral DAVIDSON. Thank you, Senator. I have been quite pleased with the progress that Navy has made on the recommendations that I made in the Comprehensive Review. I'll be watching the 2020 budget when it comes together. There are a couple of items in there, investment in schoolhouses, that I want to make sure are followed through on.

I'm quite confident in Admiral Aquilino's approach to the OPTEMPO [Operating Tempo] out in Seventh Fleet right now. We've had the good fortune of being able to relieve some of the responsiveness based on the easing of some of the tensions on the peninsula, as well as reshuffling some of the priorities there in the region. He continues remediation efforts of the Seventh Fleet in terms of training and maintenance there in Yokosuka, particularly in the Cruiser-Destroyer Force, and so I'm quite pleased with how he's managing that force.

Senator WICKER. Just to make sure, the previous NDAA placed a 355-ship requirement that the Navy had established as a statutory policy of the United States. Are you still committed to that 355-ship Navy and do you still view it as the statutory law of the land?

Admiral DAVIDSON. Sir, in the Indo-Pacific region, I think we need more capacity in the maritime, to be sure. The Navy is undergoing another force structure review I think to look at that number again and affirm that for the Department.

Senator WICKER. Thank you, sir.

Chairman INHOFE. Thank you, Senator Wicker.

Senator SHAHEEN.

Senator SHAHEEN. Thank you, Mr. Chairman, and thank you both for being here today and for your service to our country.

General Abrams, North Korea transferred 55 boxes of remains of missing United States servicemen from the Korean War after the last summit between the President and Kim Jong-un. Can you tell me if we're still cooperating with the North Koreans on trying to return more missing servicemen? My understanding is we think

about 5300 of the 7700 soldiers who are missing are believed to have died someplace in North Korea.

General ABRAMS. Senator, the short answer is yes, we are. I am aware of the DPAA's [Defense Prisoner of War/Missing in Action Accounting Agency] efforts to continue dialogue with North Korea to move forward in execution of our solemn responsibility to do everything that we can to bring home our missing in action.

Senator SHAHEEN. Do you know if that's on the agenda for the President's upcoming summit?

General ABRAMS. Senator, I'm not aware specifically. I am aware that there is a commitment to continuing that dialogue that came out of the June summit, but I have not seen the specific agenda for this upcoming summit yet.

Senator SHAHEEN. Thank you.

Admiral Davidson, our office was contacted by several United States employees who had been stationed at our embassy in China who have medical documentation to indicate that they are suffering from traumatic brain injury and the same symptoms that we saw from embassy personnel who were evacuated from Havana, Cuba.

Are you aware of any Americans in China who have been affected by those same symptoms, and are you aware of any DOD personnel who have experienced the symptoms?

Admiral DAVIDSON. No, Senator, I am not.

Senator SHAHEEN. Thank you.

General Abrams, you talked about the DPRK currently engaging in very extensive military exercises and also about what we continue to do to train with the Republic of Korea. Do you believe it would be helpful to resume military exercises with the Republic of Korea?

General ABRAMS. Senator, to be clear, there have been cancellations of some exercises that have been well publicized. But as I mentioned in my opening statement, at least since I've been there in November, we are continuing to train, conducting combined training and exercise, with our ROK counterparts. That is continuing unabated. But it's adjusted in accordance with some innovative things that we've done by adjusting size, scope, volume, and the timing so that we can continue to preserve space for Mr. Biegun and the Department of State to do their job.

Senator SHAHEEN. Again, do you believe it would be helpful, in terms of our readiness, to resume the previous kinds of exercises?

General ABRAMS. Senator, I have been given authority to continue planning for those type exercises typically characterized as large-scale exercises. Historically, we've conducted one in the spring and one in the summer, and I have continued planning for execution of one in the spring. I worked very closely with the ROK JCS [Joint Chiefs of Staff] and the ROK chairman himself in that new construct and have forwarded that up to the Department of Defense and received full support to continue with our planning.

Senator SHAHEEN. Thank you.

Admiral Davidson, you talked about Russian influence in the Indo-Pacific area in your testimony, and you lay out some pretty extensive activities that the Russians are doing in your written testimony. Are we seeing the kind of cyber intrusions and



disinformation from Russia in this area of operation that we've seen in Europe?

Admiral DAVIDSON. They are on the same scale, yes, ma'am. I would say though that their conventional activities, their air and maritime activities especially, are a little less than what's been going on in Europe.

Senator SHAHEEN. Are we seeing any kind of an effort to destabilize the democracies, some of which are fragile, in that region?

Admiral DAVIDSON. Using cyber means?

Senator SHAHEEN. Or disinformation, using whatever means they have available. Do we expect any kind of gray zone issues like we've seen in Ukraine and other parts of Eastern Europe?

Admiral DAVIDSON. Russia is maneuvering in the region, and I think globally, using information to subvert the international rules-based order and our objectives in the region.

Senator SHAHEEN. Do we have a response to that in the same way that we have a response to what's going on in Europe?

Admiral DAVIDSON. I think, ma'am, that when we talk about an information campaign that's global, it is a global response that it takes, and the United States Indo-Pacific Command is a part of that global response, yes.

Senator SHAHEEN. Thank you.

Chairman INHOFE. Thank you, Senator Shaheen.

Senator Cotton.

Senator COTTON. Thank you, gentlemen, for your appearance and your continued service.

General Abrams, let's dig down a little bit deeper into this training question. At what level would your troopers recognize a difference from what was happening, say, a year ago, to what's happening now? Would a new rifleman in his first tour on the Korean Peninsula notice a difference in his training level or the training exercises he conducts?

General ABRAMS. No.

Senator COTTON. A squad leader?

General ABRAMS. No.

Senator COTTON. Platoon leader?

General ABRAMS. No.

Senator COTTON. Company commander?

General ABRAMS. No.

Senator COTTON. Battalion commander?

General ABRAMS. Senator, he has not noticed a difference yet, but he might in the upcoming months.

Senator COTTON. Then, presumably, the command levels above battalion might notice a difference in the kind of exercises they conduct?

General ABRAMS. Yes, within those four dials. They would—at that echelon, they would notice it.

Senator COTTON. Is it fair to say that the commanders at that level, the full bird colonel level up to the General Abrams level, are pretty well versed in the demands of their job from their previous levels of command?

Admiral DAVIDSON. Absolutely.

Senator COTTON. That's good to know.

Admiral Davidson, the INDOPACOM is characterized by the longest distances in any of our combatant commands. I presume that places a premium on long-range precision strike for you and your forces?

Admiral DAVIDSON. It does, absolutely. Yes, sir.

Senator COTTON. Currently, those are predominantly maritime and air based systems?

Admiral DAVIDSON. That's correct.

Senator COTTON. There's been a lot of news coverage recently about the President's decision—long overdue, in my opinion—to withdraw from the Intermediate-Range Nuclear Forces Treaty [INF Treaty], and it's focused, understandably, on what it means for Europe and Russia since that was a treaty between the United States and Russia back when it was the Soviet Union. But what does it mean for you and your theater to have the prospect of intermediate-range missiles available for ground basing.

Admiral DAVIDSON. China, since they are not party to the INF Treaty, has been investing in the kind of weapons that create a serious challenge to us. Over 95 percent of their ballistic missiles would not be permitted under the INF Treaty. For us to have a land-based component with that kind of capability restores maneuver to the force, meaning it'll make the air, the maritime, and the land component much more viable in any warfare scenario and present a much greater challenge for our adversaries to threaten.

Senator COTTON. All those land-based systems are presumably cheaper, easier to operate since they just sit there on land, they don't have to move around on a ship or an aircraft all the time?

Admiral DAVIDSON. Well, one of the things that will be required, Senator, is mobility out of those assets. I think land-based assets will be that way. In this day and age, if it is fixed on the planet, it is dead. You don't even need space assets to support that. The globe has been mapped and a ballistic missile can find its way there based on its own internal targeting. We would have to have some mobility in those land-based assets.

Senator COTTON. Your counterparts sitting in the People's Liberation Army, do you think it makes them happy that you may soon have land-based missiles that can reach intermediate ranges?

Admiral DAVIDSON. No, I think it makes them unhappy.

Senator COTTON. General Abrams, what about your counterparts in North Korea; do you think they're happy or unhappy that they may soon face land-based intermediate-range missiles?

General ABRAMS. I can't characterize whether they're happy or not, but I'm certain that it makes them very nervous and it is certainly changing their calculus.

Senator COTTON. Complicates their planning.

General ABRAMS. Absolutely.

Senator COTTON. Okay. Gentlemen—well, I'll address this to Admiral Davidson. You can reserve specific details for our closed session, but one point of criticism we've heard is that we may not have places to base these systems. As you point out, they're mobile, they're not often much bigger than a tractor-trailer. Do you think we'll be able to identify places in the INDOPACOM where we can base land-based intermediate-range missiles?

Admiral DAVIDSON. Yes, sir, I think they'll be viable assets for us, but it's probably a conversation better to have in closed session.

Senator COTTON. We'll talk about that in greater detail this afternoon. Thank you, gentlemen.

Chairman INHOFE. Thank you, Senator Cotton.

Senator KAINE.

Senator KAINE. Thank you, Mr. Chair, and thanks to the witnesses.

I want to ask a question about North Korea and then about China. On North Korea, I'm struck by the fact that as a member of the Foreign Relations and Armed Services Committees, we have still not had a briefing about any details about commitments that were made in the Singapore summit, which was nearly a year ago, in either of the Committees.

I note, General Abrams, your testimony, and I just want to read it, "I am clear-eyed about the fact that little to no verifiable change has occurred in North Korea's conventional and asymmetric capabilities that continue to hold the United States, South Korea, and our regional allies at risk."

What I'm looking for is what real evidence is there of any changed trajectory on behalf of North Korea? I applaud the President, actually, for having the dialogue with North Korea leadership. Dialogue guarantees nothing, but the absence of dialogue often guarantees a bad outcome. I appreciate dialogue. But what I'm looking for is what is the evidence that we would want to see to determine that North Korea is serious about denuclearization?

In the Foreign Relations Committee, the testimony we've received pretty consistently is the evidence that shows they're serious is if they agree to provide some kind of inventory of their nuclear assets. Until there is transparency and disclosure, we have no reason to believe they're serious. If there is transparency and disclosure, they might be serious. That would be sort of the first step to show they're serious; more work to be done, obviously.

To this point, February 12, 2019, are you aware of any commitment that North Korea has made to provide an inventory of nuclear infrastructure or assets that they have?

General ABRAMS. Senator, I am not aware of that.

Senator KAINE. Admiral Davidson, are you aware of any?

Admiral DAVIDSON. No, I'm not.

Senator KAINE. That's what we really need to see coming out of a next summit in Vietnam, or hopefully soon. Until we see it, I think this issue about no verifiable progress, we have to be skeptical. North Korea has made promises in the past, they've been willing to talk in the past, but the question of what shows progress, we've got to see some willingness to disclose. Let me move to China.

Admiral Davidson, you talked a little bit about, in your testimony and in response to some of the questions, that some nations are starting to realize that China may seem friendly up front, they may have assets and resources to offer up front, but the terms kind of overly debt-burdening. Nations like Sri Lanka and others have started to appear very onerous. Malaysia has canceled projects and basically has criticized China's way of dealing with them as sort of a new form of colonialism.

We hear this all over the world, not just in Asia—we hear it in South America, we hear it in Africa—that the strings attached to Chinese assistance, up front they may seem fine, but they start to really chafe, and nations are starting to be wary. But you can't fight something with nothing. If China is there promising resources, a lot of the military posture of the United States does also involve what soft power we bring to the table to try to encourage nations to not accept the sugar-high promise up front only to regret it later.

What would your advice to us be, not just as Armed Services Members, but we're on all kinds of other committees as well, what would your advice to us be in terms of the kinds of additional focus the United States should be offering in the INDOPACOM area to try to wean nations away from over-reliance on this dangerous Chinese strategy of kind of getting claws in other nations?

Admiral DAVIDSON. Sir, I think when we look back in history, I think it will look very kindly on the passage of the BUILD [Better Utilization of Investments Leading to Development] Act here last fall. The transition from OPIC [Overseas Private Investment Corporation] to the Development Finance Corporation, the consolidation of some independent foreign financing mechanisms in the country, the doubling of the investment, the freeing of private investment, these are critically important efforts. When we talk about whole-of-government, that's the kind of thing that we're talking about.

The other key factor is——

Senator KAINE. Just, BUILD Act, if anybody wonders if Congress can do things bipartisan, very bipartisan, really was to try to amass the governmental resources but also enable them to better attract private resources so if we go into nations in your or any part of the world, we have more to offer to counter the Chinese strategy.

Admiral DAVIDSON. Absolutely. We're also working quite closely with allies and partners in the region—Australia, New Zealand, Japan, especially—particularly in some of the areas that are in key competition with China. Leveraging their investments and their interests, I think, on this will be critically important for the free and open Indo-Pacific as well.

Then I'd say lastly, right now, the Indo-Pacific Command gets just a small portion of the foreign military financing; really, less than 5 percent of that overall. We need to take a look at where we can better port that money in the region to help compete in this whole-of-government environs that we're talking about.

Senator KAINE. Thank you, gentlemen. Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Kaine.

Senator Rounds.

Senator ROUNDS. Thank you, Mr. Chairman.

Gentlemen, thank you both for your service to our country.

Admiral Davidson, you indicated in your opening statement that there was not just China as a threat or the Republic of North Korea, but you also indicated that Russia was playing a role. Could you expand on that just a little bit and explain to us where you see them and what their role is today and how they make an impact?

Admiral DAVIDSON. It's not unlike what's happening in the Atlantic in Europe. They're certainly engaging in the region diplomatically and in the information space to act as a spoiler, really to undermine the rules-based international order. They're doing almost nothing to help sanctions with North Korea. I can't say that they're specifically opposed to them in this forum, I mean actively opposing them, but they are doing little to help there.

One of the key things that occurred last fall is they ran a combined portion of their very major exercise, Vostok, in 2018. They invited the Chinese to attend that as well, which I think is also problematic in signaling to the region.

Senator ROUNDS. If you were to look at their activity within the cyber realm, within the domain, are they active with regard to cyber activity, actively involved in cyber activity in the Indo-Pacific region?

Admiral DAVIDSON. You know, that capability that Russia has is a global threat, sir.

Senator ROUNDS. With regard to ISR [Intelligence, Surveillance, and Reconnaissance], you have some resources. I would assume, as all commanders would suggest, you could use a lot more. Do you see any activity or improvements, and can you expand a little bit on the discussion of ISR threats to our well-being and to the safety and security of our forces in your region by all three—Korea, China, and Russia?

Admiral DAVIDSON. ISR is a critical need in the region, sir. Less than half of my requirements are served by the ISR that's available the region. Some of that will be investment over time. Some of it is the balance globally between the combatant commanders, what's required to facilitate our overall interests in those regions. I'm thankful for some of the tools that Congress has given. There is a contracting tool that was activated last year and I'm in conversation with the Department of Defense to see if I can gain some of those assets, and I'm grateful for that.

Senator ROUNDS. General Abrams, same question with regard to ISR. How do you see your ISR capabilities as compared with that of the anticipated adversary in this particular case?

General ABRAMS. Senator, our ISR capability—well first off, it outpaces the DPRK's. But that should not change our own commitment in terms of calculus because our ISR is what gives us not just intelligence, but really, early warning. It provides us clarity so that we can begin to see early and with some clarity and conciseness so we can prevent miscalculation on either our part or their part. That's really the importance behind the ISR requirements that we have on the peninsula.

Senator ROUNDS. Thank you.

Admiral Davidson, with regard to our allies in the region, and we have a number of them there, could you sum up for us, if they were expressing concerns to you about our commitment to the region, could you share with us what you believe their thoughts are with regard to our commitment to the Indo-Pacific region?

Admiral DAVIDSON. I think certainly in conversations with my counterparts, sir, there's been a general convergence around the idea that a free and open Indo-Pacific is going to take all of our efforts working together. I think the United States' commitment in

a variety of operations, whether it's our freedom of navigation operations in the South China Sea, our total totality of the exercise program in the United States, the assistance that we provide to partners in addition to allies, and then the commitment that our allies understand in the basis of our treaty alliances and our support to those treaties, I think, is unquestioned.

Senator ROUNDS. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Rounds.

Senator Manchin.

Senator MANCHIN. Thank you, Mr. Chairman, and thank you all for your service.

General Abrams, the United States-Republic of Korea military exercises, they've been scaled back or canceled as part of a wider diplomatic effort to ease tensions with North Korea and push them towards denuclearization. What is your confidence level that the talks with North Koreans over denuclearization will make any improvements?

General ABRAMS. Senator, a couple of data points.

First off, today is day 440 since the last strategic provocation from the DPRK, the last time since we've had a missile flight test or a nuclear weapons test. As I mentioned in my opening statement, the reduction in the tension on the peninsula, it's palpable. If you have not been on the peninsula in a while, along the DMZ there has been significant reduction that has enabled nation confidence-building measures, it has increased prevention—I should say it's decreased the chance of mistakes, miscalculation, and it's continued to preserve space for the main effort, the Department of State to continue along this road of negotiations and discussion with the DPRK.

I think my personal opinion is the announcement of a second summit between President Trump and the supreme leader Kim is a positive sign of continued dialogue because it certainly beats the alternative of what we were living with in 2017.

Senator MANCHIN. Thank you, sir.

Admiral Davidson, you stated in your confirmation hearing that China is already capable of controlling the South China Sea in any scenario short of war with the United States. So my question would be what's stopping them right now from exercising this capability whenever they feel like it, and what are we as the United States or our allies in the region doing to continually discourage them from exercising this power?

Admiral DAVIDSON. One of the things that I think has set them back was the international community coming together in the South China Sea here in about the beginning of September time frame. We've had allies and partners in the region, the UK, Japan, Australia, New Zealand, Canada, France, all in one form or another step up their operations in the South China Sea, and I think that shows the international community's willingness to push back.

Senator MANCHIN. Sir, do we currently have the logistical capability to surge necessary combat power to the Indo-Pacific region if needed to combat Chinese aggression?

Admiral DAVIDSON. Any discussion of the logistics and sustainment that's required depends on the total scale and scope

of what might be happening. That's true both in our ability to defend it from sabotage, special operations attacks, you know, conventional maritime and air attacks, as well as cyber attacks that might disrupt our logistics networks and prevent all those assets from arriving.

One of the other key needs for the region, sir, is—and you're hearing this from other combat commanders as well as the services—is the need to recapitalize our sealift fleet. It is decades old now and needs to be replaced nearly desperately.

Senator MANCHIN. Also, according to the World Economic Forum, by 2030, your AOR [Area of Responsibility] will be home to many of the world's mega-cities. This will continue to present vast complicated governance issues, and my fear is that these governments will look to an authoritarian China as a model over the United States.

The question would be, from the military perspective, what are some meaningful steps that can be taken to help leaders in India, Indonesia, Japan, and the Philippines so that they don't start looking at authoritarianism as the way to go?

Admiral DAVIDSON. Well, I think one of the things that we can do is to continue our whole-of-government approach on a free and open Indo-Pacific. We have a burgeoning relationship with India. We've made significant defense progress on that relationship just in the last year with the cosigning of the COMCASA [Communications, Compatability and Security Agreement]. We are working to operationalize that—it's essentially an IT [Information Technology]-sharing agreement—in a way that shows India the power of being able to link with us in a tactical sense and an operational sense as well.

Committing to that rules-based international order and working to that free and open Indo-Pacific ends will attract these nations along with us. I can't imagine any country would be willing to have an international order led by a nation that has a closed and authoritarian internal order. It's just not to the benefit of any of us.

Senator MANCHIN. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Manchin.

Senator ERNST.

Senator ERNST. Thank you, Mr. Chair. Thank you, gentlemen, for being here today.

We've seen a lot of discussion about China, North Korea, a revisionist China, and a nuclear North Korea. We also have extremist groups that exist within your regions, as well, with ties to ISIS and other types of terrorist groups.

Admiral Davidson, I'd like to start with you. I understand that there are a couple of countries or a few countries out there, like Micronesia and the Marshall Islands, that operate under Compacts of Free Association. We have financial assistance that's provided through that, and we've talked about a number of different ways that we're cooperating with various countries, allies in the region.

These Compacts of Free Association, some of them will be expiring in four to five years. Can you maybe talk us through why those are so important? What do we realize out of those types of com-

pacts and should they be funded or should we allow them to expire?

Admiral DAVIDSON. In short, Senator, those compacts are the connective tissue between the United States and the physical air and maritime and terrestrial space to 60 percent of the world's economy. The compacts obligate us to defend those nations as we would defend ourselves. It also gives them some financial assurances and the ability to participate and work in our countries without immigrant classifications.

I can tell you that these nations contribute way out of proportion to their population in our defense. I meet servicemembers from Palau and the Marshall Islands, all over the Indo-Pacific, and they have served quite bravely and honorably, in the last 15 years in Southwest Asia.

Those compact agreements are going to expire in—at least the financial mechanism is going to expire in 2023, and 2024 for Palau. I think the need for us to sustain those obligations is important because of the freedoms that it gives us. It allows us to keep any third-party nation from taking military, from occupying it, from them making a military agreement with them. It gives us the strategic flexibility to block that.

The financial mechanisms are going to expire in the 2023/2024 time frame. But the fact of the matter is these nations are at risk from the very pernicious approach that China has taken with their economic vehicles in the region. To prevent that from happening, we should look at the long-term need on those COFA states, what the financial mechanisms are that retain this strategic alliance for us and the benefits that it accrues to the United States military and, truly, the defense to the United States. Without those three countries and our strategic alliance, the logistics and sustainment of our operations in the Western Pacific would be severed.

Senator ERNST. So bottom line, those agreements are very important, correct?

Admiral DAVIDSON. Absolutely, ma'am.

Senator ERNST. Outstanding. That's a great explanation. I appreciate that very much.

General Abrams, in looking at the threat that's been talked about with North Korea, I also want to talk about North Korea's special forces, their special operations forces. They presented a tactical operational threat to South Korea and the role of our own special operators in countering that threat. Could you maybe just briefly describe the threat that is being posed by North Korean special operators?

General ABRAMS. Senator, thank you. In this unclassified setting, here's what I can say. Since Kim Jong-un assumed responsibility for leading his regime, this has been one of his specific investments in terms of increasing the size and capability of his special operations forces, and secondly, they spend a considerable amount of time doing training. I'm happy to give you more detail in the classified session.

Senator ERNST. We can talk about that later, and I appreciate that very much. Are we integrating our own special operators to specifically train to push back on the North Korean special operators?



General ABRAMS. Senator, we are. We have a very small Special Operations Command Korea, but extraordinarily capable. They punch way above their weight class. We're lucky; we're fortunate enough to have a rotational U.S. Army Special Forces ODB [Operational Detachment-Bravo]. So for instance, today on the peninsula, we have five ODAs' [Operational Detachment Alpha] persistent presence embedded with ROK-SOF [Republic of Korea Special Operations Forces] training and partnering every single day.

Senator ERNST. That's outstanding. My time has expired.

Thank you, Mr. Chair. Thank you, gentlemen.

Chairman INHOFE. Thank you, Senator Ernst.

Senator Warren.

Senator WARREN. Thank you, Mr. Chairman.

We hear a lot of testimony in this Committee about the threats posed by China, Russia, rogue states, transnational terrorist groups. A strong military is critical to addressing those challenges, but there's some threats that can't be solved by traditional military power at all. One of those is climate change.

The unclassified Worldwide Threat Assessment by the director of national intelligence said, and I'm going to quote here, "Global environmental and ecological degradation, as well as climate change, are likely to fuel competition for resources, economic distress, and social discontent through 2019 and beyond." That assessment also said, "Damage to communication, energy, and transportation infrastructure could affect low-lying military bases, inflict economic costs, and cause human displacement and loss of life."

Admiral Davidson, do you agree with the intelligence community's assessment of the climate change threat?

Admiral DAVIDSON. Yes, ma'am.

Senator WARREN. How does climate change impact operations in your area of responsibility and what are you doing to prepare for climate change?

Admiral DAVIDSON. Well, the immediate manifestation, ma'am, is the number of ecological disaster events that are happening. I've just wrapped up after some 3½-months of assistance in Tinian and Saipan, a contribution of title 10 forces in significant numbers, to help clear debris, to help fix roofs, to help restore the infrastructure there writ large.

I've also been called to respond and assist in Indonesia in the wake of the earthquake and the tsunami that happened last year. A little separate from climate change. But our assistance in terms of humanitarian assistance and disaster relief, our ability to command and control, to marshal troops, to deliver logistics is important training for the region and something that they all need. One of the things that my headquarters does is we run a center for excellence in disaster management. That training is available not just to the title 10 folks but also our interagency here in the United States, and we export those courses, as well, to countries throughout the Indo-Pacific and, really, globally, to help assist them in these matters.

Senator WARREN. Thank you. You know, adapting to climate change impacts our military readiness. I'm glad that our military commanders take the threat of climate change seriously. I think we, your civilian leaders, owe it to you to enact policies here in

Congress that recognize that climate change is happening and that we need to do more to stop it. So thank you. I appreciate it, Admiral.

I want to, in my remaining time, ask about one other area. In this Committee, we also talk a lot about strategic competition between the United States, China, and Russia. I want to focus on China for just a minute.

China is challenging the United States and our interests in a variety of domains. Our intelligence community's unclassified Worldwide Threat Assessment said, and I'm going to quote again, "China's leaders will try to extend the country's global, economic, political, and military reach while using China's military capabilities and overseas infrastructure and energy investments to diminish United States influence."

Admiral Davidson, do you agree with the intelligence community's assessment on this?

Admiral DAVIDSON. Yes, ma'am, I do.

Senator WARREN. Well, in a recent hearing, a former deputy of national security advisor and State Department official responsible for China policy, Ely Ratner, told this Committee that regardless of whether we're talking about Chinese economic coercion, human rights, or the South China Sea, the United States needs a comprehensive strategy that enhances all aspects of our competitiveness. We can't pick just one strategy—military or economics or technology or diplomacy—and hope that that's going to be the silver bullet.

Admiral Davidson, do you agree with that?

Admiral DAVIDSON. Yes, I do. It's going to take a whole-of-government approach.

Senator WARREN. Can you just say a word more about that quickly—we're about to run out of time—about why it's important to use all of our tools of national power and not just military power?

Admiral DAVIDSON. I speak quite frequently in the region about this, madam, and one of the things that competes so strongly for the United States in the region is our values. Whether they're allies, partners, or nations that merely aspire to have the values that we have, they compete in a more pronounced manner than any handful of dollars ever could. But it has to be proactive, and we have to move out in the diplomatic and the information space, as well as the economic space, quite briskly because China is spreading dollars around very perniciously through corruption, through the mechanisms that you talked about earlier, and we've got to be willing to work in these other realms.

Senator WARREN. Yes, and to project our power abroad, we have to be strong here at home. Military power is important, but we need strong, sustained investments in education, in research, and other domestic priorities if we are going to maintain a competitive advantage.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Warren.

Senator Scott.

Senator SCOTT. Could each of you give us your thoughts on what the Congress could do to help you better fulfill your missions? What do you need from us?

Admiral DAVIDSON. Sir, the support we've had the last 2 years have been incredible. Having those budgets administered on the 1st of October so they can be executed is critically important to the efficiency of the Department of Defense and the execution of all the things that we do, from contracting to steaming on a day-to-day basis, to use my Navy parlance.

The other thing we can do is lift the BCA caps. The threats that are out there challenge the sovereignty of the United States in a way that has not existed since the Cold War. The investments that are going to be required to do that, I think, are going to be significant.

General ABRAMS. Senator, I'd like the opportunity to foot-stomp. In my view, the single most important thing is a timely appropriation. In my previous assignment as the Army's force provider for 3 years, I can't overstate the impact of a continuing resolution at every level. Most importantly, those that should have to worry about it least, we put it on their backs, and that's on soldiers and families, because we did not have a timely, on-time appropriation. That would be point number one.

Point number two, I'd say for those programs that we have that have reached furthest along in their development and we have committed to them, that we have worked on for multiple years and are testing shows that it is capable and it's meeting those key requirements, continued support of those so that we can see them through. One in particular for me is in the missile-defense business, and this is one we are keen to. It's a key capability. We're grateful for the support of this Committee and the Congress. We just need to see it through.

Senator SCOTT. Thank you.

Admiral Davidson, China has been a big supporter and a big, I guess lender, to Venezuela. Why is Venezuela of any strategic interest to China, and how is that helping them?

Admiral DAVIDSON. China is challenging and threatening the rules-based international order. It's not a regional thing for China; it's a global approach. Anywhere that they can make inroads on that international order, they will take it. They've been moving quite rapidly. I think as Admiral Faller indicated last week, in Southern Command as well.

Senator SCOTT. Do you anticipate that they would use any military resources in Venezuela?

Admiral DAVIDSON. In the very near term, I don't think China would, no.

Senator SCOTT. How reliable a partner do most of the democracies in Asia perceive America right now?

Admiral DAVIDSON. I think in our alliances, I think they're quite confident in those five treaty allies that we have there in the region. This is another area, though, that's under threat from China. China maneuvers in the information space in a way that undermines everything we do; factually, informationally, everywhere.

Sir, when we all used to read newspapers every Sunday, you used to get up and you used to have the Parade magazine as a

Sunday insert. Throughout the region, there is a China daily insert which is Chinese propaganda appearing in newspapers, over more than half the population of the globe. It's quite pernicious.

Senator SCOTT. Are we doing anything to counteract that?

Admiral DAVIDSON. I would say in the information space we do more. We've talked about the BUILD Act, what we are doing in the military space. One of the key factors here is the fact that we're working with allies and partners in key areas of the region.

You've seen Australia step up, and Papua-New Guinea recently, Fiji. New Zealand has made it clear that their very near-abroad is going to take some investment. We are working on an Indo-Pacific strategy with Japan and looking for opportunities of where our economic investments can cooperate and collaborate. In just my space alone, just last week we had a trilateral at the planning level between Japan, the Philippines, and the United States. These are all constructs that will help combat China's influence. Senator SCOTT. Thank you, and thanks for your service.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Scott.

Senator Jones.

Senator JONES. Thank you, Mr. Chairman, and thank you, gentlemen, both for being here today and for your service.

Admiral Davidson, I'd like to ask you a little bit about the freedom of navigation operations that we have in the South China Sea. I know that there were some that occurred back in January and even, if I'm not mistaken, this past Sunday there was a couple of our fleet near the Spratly Islands. In response, the Chinese foreign minister has accused the United States of trespassing, infringing on China's sovereignty, and damaging regional peace, security, and order, even though it is my understanding these operations are going on in international waters.

With that, I think it's important that we continue these. But what's not clear to me is how we're resolving the conflict between China's stance on these, on our operations, and the international community. Are you aware of any conversations or discussions that are taking place on this specific issue, and, you know, can you talk about contingency plans? Obviously a lot of saber rattling can lead to some bad consequences. Are there contingency plans if the impasse continues this way?

Admiral DAVIDSON. Sir, to your last point about contingency plans, I'd rather hold that for the closed hearing, if I could.

Senator JONES. Certainly.

Admiral DAVIDSON. To be clear, not all our freedom of navigation operations happen in international waters. Sometimes they happen in disputed waters, which was the case this past weekend—I won't comment on every one—but was the case this past weekend. Other nations lay claim to those waters. Then the legal construct of what those features are dictate as to whether we can operate and how close we can operate them and in what mode, whether it's solely innocent passage, which is the way any ship would move through the region, or whether normal operations that military assets could use would be effective.

I'd also like to hold off on a discussion about the rhetoric that China responds with in the wake of these operations. But I will say

this. The vast, vast majority of interactions in the South China Sea, that China responds professionally and safely.

These operations are critically important, not for the United States, and they're not about two destroyers passing safely in this region. This is about the free flow of communications. That's oil. That's trade. That's economic means. It means the cyber connectivities on the cables that travel under the South China Sea, which are deep and profound, coming out of Singapore. It includes the free passage of citizens between all the great nations of the world.

If you're taking a flight from Singapore to San Francisco, from Sydney to Seoul, from Manila to Tokyo, you are flying over the South China Sea. Each time that happens, there is somebody with a surface-to-air missile and a Chinese soldier evaluating whether that traffic can go on a day-to-day basis. It's quite hazardous to the global security, and I think it's quite pernicious that China would take such action.

Senator JONES. Thank you, Admiral.

General Abrams, let me ask you about, there's been a lot of discussion over the years and more recently about the transfer of the Combined Forces Command to the ROK. That's been discussed a lot. There are conditions, I think, that are out there. Can you talk a little bit about the transfer of command, what it might mean to the United States presence on the peninsula, and specifically, what it would mean to the forces, the manning levels that we have on the peninsula?

General ABRAMS. Senator, we refer to it as conditions-based OPCON [Operational Control] transition. It was most recently ratified again in 2015 with the specific conditions that you outlined—there's three key areas. The Republic of Korea is making good progress towards meeting those conditions.

This last set of consultative meetings that we had in October, there was a reaffirmation from then-Secretary Mattis and our brand new minister of defense for the Republic of Korea to look for opportunities to accelerate the conditions-based OPCON transition. I'm working very closely with the ROK chairman, General Park Han-ki, to do just that, look for opportunities, understanding that the conditions will have to be met. We're working on ways to ensure that we have a shared vision as to the way ahead.

To your specific question about what is the potential impact to troop presence, that is not part of the equation for conditions-based OPCON transition. This is merely about putting a ROK commander, a Republic of Korea commander, in command of Combined Forces Command, that position that I currently serve in in one of my three positions on the peninsula.

Senator JONES. Great. Thank you.

Back to you, Admiral Davidson. You mentioned in your testimony some sanctions against North Korea, and there's some ongoing ship-to-ship transfers that take place primarily in the East China Sea. Can you tell me what's the biggest challenge that you have in investigating these ship-to-ship transfers, what have we done to maybe stop these, and particularly, is China involved? What role might China be playing in these transfers?

Admiral DAVIDSON. I should say to your last point, Senator, that China is neither helping nor hurting the effort at least in the maritime space.

We have an ongoing multinational ISR and ship effort to disrupt refined oil that's going in by sea into North Korea. This requires a significant amount of network work to cut it off at the supply. The fact of the matter is that you're not going to deter the DPRK from pursuing fuel. They have to have it. They've been adapting their tactics as we've been adapting ours—adding ships, doing transfers in their own territorial waters or near their own shores and, occasionally, there have been some transfers in Chinese territorial waters.

We are going to have to go after these things at the source. I've got partnership across the DOD, with cyber command, especially, to make sure that we understand what's happening so that we can disrupt these things at the source, refer providers, whether it's shippers, whether it's oil brokers, whether it's the oil companies themselves, notify the United Nations of those contributions, and then have them pursued both by State demarche and Treasury action to prevent their future transfers.

Senator JONES. Great. Well, thank you both.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Jones.

Senator Hawley.

Senator HAWLEY. Thank you, Mr. Chairman.

Thank you, gentlemen, for being here. Thank you for your exemplary service and for the service under your command. Admiral, it's a particular privilege to welcome you here as a native Missourian. We're very proud of you and very proud of your service. Thank you for what you do.

You have a tough job, Admiral, as the commander of what the National Defense Strategy tells us is perhaps the decisive theater in our current set of priorities that we have, strategic priorities as a nation. I want to ask about some of the challenges that we're facing. Help us think, if you could, about the forward defense posture that the NDS tells us is absolutely critical for this AOR, and, if you could, tell us what you need from this Committee in order to ensure that we have the forward defense posture that is necessary in order to prevent a *fait accompli* in the South China Sea or in Taiwan.

I just want to pick up on—Senator Manchin mentioned a little earlier about surging into the region, but of course we know from the NDS that our ability to surge into the region after aggression by China is difficult given China's A2/AD [Anti Access/Area Denial] capacities and capabilities. Could you tell us what is our progress in adopting that offense posture that we need in order to prevent a *fait accompli* and what you need from us to ensure that we get there?

Admiral DAVIDSON. Thank you very much, Senator.

Some of what we need to talk about I'd like to do in the closed hearing this afternoon. But in an unclassified sense, the NDS really asked me to lift my eyes and take a longer view of the region and how it's evolving. So much of our basing and rotation has been

focused on what's been transpiring in Northeast Asia, not just in the last couple of years, but really over the last several decades.

This is going to require us to revisit some of the places in which we operate and rotate forces, absolutely. It's going to require us to think about some places, if not bases in areas. We are in conversations with partners and allies about what some of the opportunities might be there. But it also speaks to concepts, the kind of capabilities that we can bring forth, and what you're seeing, new concepts from the services, Multi-Domain Task Force operations, distributed maritime operations, and the logistics that are going to be required to supply that. There is going to be requirements for investments across all domains, from the bottom of the sea to space. We have to accept the fact that the environment is changing so drastically in the South China Sea that it's going to require new approaches in many cases and not just iterative ones.

Senator HAWLEY. Just to be clear, the level of investment that we have seen in these force capabilities and technologies over the past 5 years has not been adequate to the challenges that we face; is that fair to say?

Admiral DAVIDSON. I think that's correct.

Senator HAWLEY. Let me ask you in the time I have remaining, and I want to come back to the subject, the subject we were just talking about, in a closed session, but let me ask about the Philippines, if I could. Given, again, our unique strategic challenges in your AOR and the significance of the Philippines to us in order to meet those strategic challenges, let me ask you just about your sense of our relationship there.

I know that last fall, I think it was, we announced a new agreement to hold an increased number of exercises this year in 2019 instead of 2018, but President Duterte has also announced plans for joint oil and gas exploration with China and has made other entrees to China. Can you give us an assessment of the state of the bilateral relationship and what direction you think it's heading for this critical ally in this region?

Admiral DAVIDSON. Sir, I think the relationship is trending in a positive direction. I can tell you in the military space, since 2017 when we were able to manifest some of our indirect assistance to their fight in Marawi, it has restored the military relationship in a way we haven't seen in a couple of decades. It has led, in fact, to things like the EDCA [Enhanced Defense Cooperation Agreement] as well as the advancement in the exercises here in 2018 and 2019.

There is no doubt that at the political level, some of the relationship has been politically fractious. But I take as a positive sign the vagueness of the agreements that President Duterte signed with President Xi last fall. I think we should take a little bit of comfort in that, that we can continue to advance this relationship moving forward. Senator HAWLEY. Let me just ask you one other question about that in my time remaining. The 1951 Mutual Defense Treaty (MDT) is a flashpoint, as it has been for some time, but political leadership in the Philippines has been talking about it a lot more it seems recently, including saying that they may need to review it and consider leaving it if the United States does not make various security commitments related to the South China Sea.

Can I just ask you what a review by the Philippines and potential departure of the MDT might mean for us and our relationship with them and our strategic posture in your AOR?

Admiral DAVIDSON. Thank you, Senator. That's been reported pretty widely. I think what's been absent from that discussion is some of the context in which the Philippine defense minister responded to some questions. But to me, the Mutual Defense Treaty is quite clear. It says that an armed attack on either of us, on the metropolitan territory or on the island territories under Philippine jurisdiction in the Pacific, where it's armed forces, our public vessels, or our aircraft, activates Article 5 of that treaty.

I think the Philippines should be quite confident in our support and our alliance. I'll tell you, I'm quite confident in Philippine support, which—and frankly, in our defense, that support begins in the Philippines.

Senator HAWLEY. Thank you very much.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hawley.

Senator BLUMENTHAL.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

Thank you both for your service and also to the men and women under your command, and thank you for your clear-eyed testimony today, if I may use the word that you did, General Abrams, in describing what I view to be a stark and stunning lack of any action, any progress, any steps to slow or suspend the North Korean nuclear program. Would you agree with me that they are proceeding full pace with their nuclear program?

General ABRAMS. Sir, I'd say two things. First, as I said earlier, it's been 440 days since the last strategic provocation from the DPRK, so since a missile test or a nuclear weapons explosion or test. The reduction in tensions and nascent confidence-building measures along the demilitarized zone and across that part of the Korean Peninsula, those reductions are palpable, they're real, and they are having a significant positive effect to begin to prevent additional low-level—additional confidence-building measures.

Senator BLUMENTHAL. But do you—

General ABRAMS. Having said all that, we have not observed activity that's consistent with a full-court press on denuclearization.

Senator BLUMENTHAL. Or any slowing of the nuclear program. You said no verifiable progress, I believe.

General ABRAMS. I'd say the activity we see is inconsistent with that. Senator, we can talk about that in detail during the closed session.

Senator BLUMENTHAL. Well, let me ask you this. Because Admiral Davidson, you state, "North Korea is continuing efforts to mitigate the effects of international sanctions and the United States-led pressure campaign."

I assume you would agree that sanctions are important in bringing pressure to bear on North Korea?

Admiral DAVIDSON. Absolutely.

Senator BLUMENTHAL. Has there been a reduction in the effect of those sanctions so far as you know?

Admiral DAVIDSON. In many aspects, yes.

Senator BLUMENTHAL. Why is that?



Admiral DAVIDSON. I'm sorry, can you restate your question?

Senator BLUMENTHAL. Yeah, I apologize for interrupting.

Admiral DAVIDSON. I want to make sure I understand the question you're asking me. Have sanctions taken some effect? Yes.

Senator BLUMENTHAL. That's a good question.

Admiral DAVIDSON. I'm sorry, sir. It has. We do observe raised fuel prices in Korea. That's been evident really since before sanctions. The prices have gone up. There have been some restrictions on luxury goods and some other things in there. The impact and its ability to force them to denuclearize, it's tough to say whether that's making any progress.

Senator BLUMENTHAL. Has there been a reduction in the effects of sanctions because of lack of consistent application of them, either by ourselves or by our allies or others?

Admiral DAVIDSON. No, we're on a sustained level of effort just on the ship-to-ship transfers realm. I stepped it up in the September time frame and expanded the concept of operations. We've had a number of allies come alongside to help—Canada, Australia, New Zealand, Japan, Korea. Japan and Korea are sitting side-by-side with us in Yokosuka right now, working on this effort. I'm quite grateful for all the contributions they've made. I should add that UK has been there as well.

Senator BLUMENTHAL. Thank you. In terms of our capabilities in that part of the world, I note that your testimony focuses on our undersea warfare advantages. Do you see those advantages are eroding, and how important is it that we continue to build submarines?

Admiral DAVIDSON. I think continuing to build submarines is critically important, sir. Our most significant advantage in all domains right now is in the subsurface. But some of those diversions I'd rather discuss in closed hearing, if you don't mind.

Senator BLUMENTHAL. Sure, and again, maybe more appropriately for a closed setting, although I think, really, the American people need to know answers to a lot of these questions. Our adversaries know the answers. We know the answers after we're briefed in closed sessions. The only ones who don't know the answers to many of these questions are the American people.

I regret that so much has been kept from public view. Not to be critical at all of you or the Pentagon in that respect. I recognize that you operate under rules that may constrain you from talking publicly. But I hope we'll have an opportunity to explore in greater detail these questions and also the vulnerability of our aircraft carriers.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Blumenthal.

Senator Sullivan.

Senator SULLIVAN. Thank you, Mr. Chairman and General, Admiral, good to see you. Thanks for your great service and thanks for being here today.

Admiral Davidson, I wanted to begin just kind of making sure we have very, very clear understanding of what's going on in the South China Sea. I think it's pretty obvious, but just having you state this to the American people, to our allies in the Asia-Pacific.

Standing next to President Obama in the Rose Garden in 2015, President Xi Jinping said, “China does not intend to pursue militarization of the South China Sea.” That was a quote from the president of China next to the president of the United States.

Just a few months ago in January, China’s major state-run newspaper, the People’s Daily, stated, “As China’s military size and quality improve, so does its control of the South China Sea. China is able to send more naval vessels as a response and can take steps like militarizing the islands.” This is the mouthpiece of the Communist Party.

President Xi, obviously he didn’t keep his word when he made that statement in the Rose Garden next to President Obama; is that correct?

Admiral DAVIDSON. That’s correct, sir. In the most liberal interpretation of militarizing those islands, China in April of 2018 populated those islands with antiship cruise missiles, with surface-to-air missiles, and electronic jammers.

Senator SULLIVAN. Ten-thousand-foot runways?

Admiral DAVIDSON. Those were already there. But now they have the weapons, they’ve got sufficient military cadre, and they’ve stepped up their operations both in the maritime and with bomber sorties and fighter sorties in a way that makes it clear that those islands are to support them militarily.

Senator SULLIVAN. Just to be clear, 2015, two presidents, Rose Garden, and President Xi obviously didn’t keep his word on that issue.

Admiral DAVIDSON. I agree with that. Yes, sir.

Senator SULLIVAN. Well, I appreciate what you’re doing in terms of regular FONOPs [Freedom of Navigation Operations] our allies. The more we can do, the more regular—the previous administration seemed to be a little reluctant to do these. I think you guys are doing a much better job, so I commend you for continuing to do that. The more we can bring our allies—a lot of talk about allies here—with regard to those FONOPs or some of the operations you described, the better.

General Abrams, I wanted to turn to the issue that Senator Reed raised and just get your professional military views on what would be the tactical effects of removing a large portion, or all, of United States Forces from the Korean Peninsula?

General ABRAMS. Senator, just for clarity, under the current set by the DPRK?

Senator SULLIVAN. I’m talking about our forces——

General ABRAMS. No, I understand. But nothing’s changed on the North side of the MDL [Military Demarcation Line]?

Senator SULLIVAN. Correct. Correct.

General ABRAMS. It would impose significant tactical and operational risk if there’s no change on the other side of the MDL.

Senator SULLIVAN. Strategically, hasn’t Russia and China sought the removal of United States Forces from the Korean Peninsula for decades as a core strategic goal of theirs?

General ABRAMS. Yes.

Senator SULLIVAN. China and Russia and North Korea would be pleased by such a withdrawal?

General ABRAMS. Again——

Senator SULLIVAN. If, say, it happened tomorrow?

General ABRAMS. There's actually some debate. You know——

Senator SULLIVAN. Really?

General ABRAMS. Yeah.

Senator SULLIVAN. There's debate?

General ABRAMS. There is some debate——

Senator SULLIVAN. China wouldn't be happy that——

General ABRAMS. No, sir; it's on the DPRK. There's some mixed views on whether the DPRK really wants us down.

Senator SULLIVAN. How about China and Russia?

General ABRAMS. Absolutely.

Senator SULLIVAN. You might recall we passed a law, the NDAA last year, that actually states that the significant removal of United States military forces from the Korean Peninsula will not be supported in terms of authorized appropriated funds by the Congress below 22,000 troops unless the secretary of defense first certifies to this Committee that it would be in the national interest of the United States to do so.

I just want you to remind everybody who's working on that that that's actually in the law right now.

Senator SULLIVAN. Finally, Admiral, I just wanted to touch base, and I think we can do it in a better sense in a classified setting this afternoon, but there is, I think, a lot of concern, and a lot of concern on this Committee, on the force posture of how our forces are deployed throughout the region to be ready for what is really kind of the big strategic challenge facing the United States, which is the rise of China over the next 50 to 100 years.

I'll be interested in going into a lot more detail on the force posture issues, but I think there's a lot of good work that's been going on, but some of it seems to get stuck in the Pentagon. I would welcome your views on that. But I think we need to be a little bit more creative on how we're looking at force posture.

I would want to remind you, and I know you know it, but Alaska is not necessarily in your AOR, but the forces there, which are significant, your Reserve forces, for example, General, on the Korean Peninsula, our OPCON to PACOM, and a lot of those forces are actually closer to the Korean Peninsula and other places than forces, say, in Australia. Thank you very much.

Chairman INHOFE. Thank you, Senator Sullivan.

Senator King.

Senator KING. Thank you, Mr. Chairman.

Admiral Davidson, are you familiar with the ProPublica publication this past week on the analysis of the accountability for the collisions with the McCain and the Fitzgerald?

Admiral DAVIDSON. I saw the first article, Senator.

Senator KING. There's, I believe, a second one. I commend it to you. It's one of the most sobering analyses of a disaster that I've ever seen. It takes responsibility all the way up through the very top of the Navy to this Congress, I should say. Sequestration in 2013 was one of the contributors.

But I would like, if you could—and perhaps I'll prepare a question for the record—I would like to see specific data on where we stand with issues like certification of sailors and personnel on the ships, maintenance status of the ships, training rules, staffing lev-

els. I want real numbers. I don't want general "we're working on staffing" or "we're working on more training." Because these were avoidable tragedies. I would like to drill down on the specific data points that indicate the level of readiness for these, for our fleet generally, the Seventh Fleet and other naval assets in the region.

Is that something that you can do? You're the handiest, highest naval officer I have here today. I don't mean to say that you have to be the specific one to respond, but I would like to see specific responses from the Navy, not promises and not good feelings. This was a—this story is terrible.

Admiral DAVIDSON. Sir, if I could, a couple of points. One, there's a quarterly review that was provided over here to the professional staff members by the Vice Chief, Admiral Moran. All those numbers are available.

The idea that there's not transparency in this readiness I think is appalling, or that it was some kind of secret or that only a few knew about it in the Navy is incorrect. I personally testified before the House Seapower and Personnel Subcommittees with Chairman Thornberry there in 2016 on the kind of things that it took, you know, to keep the fleet going.

We can't forget one other thing. These two collisions were a tragedy. There's no doubt about it. All the senior leadership of the Navy feels an immense amount of accountability for that, and I'll come back to it. But the fact of the matter is 280-odd other ships weren't having collisions. More than a dozen of those ships were performing exceptionally well——

Senator KING. I'm sorry, that doesn't——

Admiral DAVIDSON. Excuse me, Senator.

Senator KING. Airplanes are landing all over America, and just because they aren't all crashing doesn't mean they don't need a high level of maintenance. To tell me that isn't very convincing. I think it was 40 years since we've had collisions of this nature. Are you saying that there were no failures that led to these collisions because there were 280 ships that didn't have collisions? Isn't that the standard, no collisions?

Admiral DAVIDSON. Yes, sir. No collisions is the standard. Certainly it's been 40 years since we had lost life to that extent, but there had been collisions in the recent past.

The other thing that we have to remark upon is the combat performance. We've had ships in the Red Sea shooting down antiship cruise missiles, we've had extraordinary Tomahawk performance in this time frame, we had aviation squadrons shoot down a MiG aircraft from Syria. You know, these units have been tested in combat and doing quite well.

Senator KING. I'm not suggesting otherwise. What I'm suggesting is—and I urge you to read that study—I'm suggesting that we had a preventable problem; there were multiple warnings, it wasn't acted upon, and I want to be reassured that it is being acted upon, and I'll be glad to review those reports.

Admiral DAVIDSON. But sir, this is why I'm saying the Navy feels a huge amount of accountability for this. They tasked me to review those two collisions, I produced a 170-page report with 58 recommendations, and the Navy has been moving out on those recommendations to provide the kind of unit personnel training, to

provide advice and resources to the type commanders, the fleet commanders, the Naval Systems Command, all with recommendations to improve this situation in a way that eliminates the variance that I'm talking about.

Senator KING. I'm delighted to know that, and I've heard that before. I just want to see the data that backs up the fact that these recommendations are in fact being executed.

Admiral DAVIDSON. Okay. All right. I'll be sure to do it. I mentioned earlier in testimony, there are some recommendations in the Comprehensive Review that I made that I'm watching closely for the 2020 budget to make sure that they're accommodated as well.

Senator KING. I don't mean to imply—I said in my opening that the responsibility goes all the way up to this Congress. Continuing resolutions, which you talked about, are pointed out to be part of the problem, and the sequester was part of the problem. There's responsibility to go around. But I just, as I say, want to see where we are in terms of the data on executing on those recommendations. Thank you, Admiral. I appreciate it.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator King.

Senator Blackburn.

Senator BLACKBURN. Thank you, Mr. Chairman, and thank you to each of you for being here today, for your service to our country, for the testimony that you've prepared and presented to us, and for taking the time to take our questions here and again as we go into a closed session this afternoon.

I thought it was so interesting this morning reading Wall Street Journal; there is a book review in the opinion section and it's on the future of Asia: "The Future is Asian." It made me think a little bit about something we talked some about in this Committee. It is how the commercial complex and the military complex in China have a tendency to be one and the same. You see this reflected in their Belt and Road Initiative, the Thousand Talents Program, things of that. They even talk a little bit about building that dual-use sectors. This is something that is going to have an impact on their power in the coming years.

There will be some of this that you can answer now and some we'll need to take up in a closed session, but one of the things, Admiral Davidson, that I think as you look at this from where you sit and you hear the term "expanding the competitive space" for China, how do you interpret that to your mission? I know Senator Hawley asked what your needs are going to be, what changes you need to see in the force.

Then for you, and also, General Abrams, for you, when you look at the cyber capabilities that they are using to push themselves to information dominance, which would be a goal for them, how do you see that slowing our warfare activities and how would they use that as a force-multiplier for their conventional capabilities and use it to target the links and nodes in our mobility system?

With that, I will give you the time, and thank you for your—

Admiral DAVIDSON. Quickly, ma'am, it is going to take a whole-of-government approach on our behalf as well. We talked a little bit earlier today about the kind of tools like the BUILD Act provides in this whole-of-government approach. I'm quite encouraged

by all the concepts that are coming forth from those services. It's our obligation to knit that together in a war-fighting concept out there in the Indo-Pacific.

It's going to require some investments and some capabilities that are, I would say, nascent in our country right now, and it's also going to require us to invest in a way across the region, the posture of how we are situated, and then some of the capabilities from the training apparatus and how that might support all this new capability that's coming online, as well as the way in which we share and collaborate with information with our allies and partners in the region to make this whole. But some of the specifics of all of this is better discussed in closed hearing.

Senator BLACKBURN. Correct.

Admiral DAVIDSON. Thank you.

General ABRAMS. Senator, I'd just like to talk a little bit specifics about cyber. As you mentioned, it's one of the key components in our interest of achieving information dominance.

First and foremost, I'll tell you that the creation of U.S. Cyber Command has given us now the right level of command integration. He is a supporting commander to all of the combatant commands, and General Nakasone's done a fantastic job and I'm personally appreciative of all the efforts that he's done to support our efforts to integrate cyber as part of our holistic campaign on the peninsula.

It is a critical capability. We're still working on getting the appropriate authorities delegated to the right level should we need them in a period of hostilities, and we can probably talk about that in greater detail during the closed session.

Senator BLACKBURN. Thank you. I yield back.

Chairman INHOFE. Thank you, Senator Blackburn.

Senator HIRONO.

Senator HIRONO. Thank you, Mr. Chairman, and thank you to both of you. General Abrams, good to see you again.

Just as a mention, Senator Wicker asked you, Admiral, about the 355-ship Navy, and as you undergo a review of the appropriate number of ships for our Navy, I hope that that will be a continuing commitment for that number of ships at least, and also that we have the resources necessary to repair and maintain the ships we already have.

The Defense Department recently released a 2019 Missile Defense Review, which, among other items, noted the installation of a Homeland Defense Radar in Hawaii, very important to us as a way to improve the performance of our current missile defense system and increase the protection of Hawaii.

Admiral Davidson, are you satisfied that with the installation of the Homeland Defense Radar in Hawaii, the defense of Hawaii is optimized for the current and near-term threats?

Admiral DAVIDSON. Yes, ma'am. It fills in a gap in our detectability that I think is critically important not only to the defense of Hawaii, but really, the defense of all the continental United States as well, and Alaska.

Senator HIRONO. Of course I'd ask you to continue to pay attention to the timing of when the installation will occur. I think it's set for 2023 or somewhere in there.

Admiral DAVIDSON. Yes, ma'am. That's correct.

Senator HIRONO. General Abrams, do you believe that our current missile defense system in place in and around the Korean Peninsula serves as an effective deterrent against North Korean ballistic missile threat?

General ABRAMS. Yes, I do.

Senator HIRONO. Admiral Davidson, you noted in the testimony that your command only gets 5 percent of foreign military funds. What command gets the largest percentage of these funds?

Admiral DAVIDSON. I would say Central Command.

Senator HIRONO. Central Command?

Admiral DAVIDSON. Yes, ma'am.

Senator HIRONO. When you get only 5 percent of these funds, how do you prioritize with the small amount of funding, how do you prioritize where the funding goes in a region as large as your AOR?

Admiral DAVIDSON. My own approach is to make sure that where we're investing is complementary to our capability and also advances the capability of the countries in which we're providing this assistance.

Senator HIRONO. Getting only 5 percent of these funds in an area as large as yours seems like an underinvestment to me. Does this kind of underinvestment in a partner or potential partner with these funds provide an opportunity for China to increase its influence in these nations?

Admiral DAVIDSON. Yes, ma'am. Both China and Russia.

Senator HIRONO. Who makes the decision as to the percentage of these funds that goes to all of our commands?

Admiral DAVIDSON. It's an interagency decision the way all these things come together, between Defense recommendations, State disbursements at the end of the day. I think as you examine the budgets that will be coming in the next few years, you'll see a shift in priority for Pacific Command.

Senator HIRONO. That's good news. Thank you.

I'm glad that Senator Ernst asked you, Admiral Davidson, about the importance of our COFA and the fact that China is very much in these nations, Oceanic nations, to widen their influence and certainly their economic activities in this area. What more can we do as a whole-of-government approach to counter China's influence in Oceania?

Admiral DAVIDSON. We're continuing to work along those ends already, ma'am. I can tell you we're partnered with Australia, New Zealand, certainly on what I would call their very nearest-abroad. I think the United States feels an immense amount of responsibility for the COFA states themselves. You know, Japan has done a lot across Oceania. In just the last 3 months, France has made it clear that their interests—New Caledonia to Polynesia, the two bookends there, they want to be part of this conversation to make sure that our efforts are all working collaboratively and cooperatively.

We've also stepped up our engagements, not just from Indo-Pacific Command, my own visits to the region, but we've helped to facilitate visits by the Department of Interior and attended some forums like the Pacific Island Forum on providing some assistance

to make sure that the security in Palau for the Oceans Conference in 2020 is going to be sound as well. We have to step those things up additionally.

Senator HIRONO. I agree, because these are very small nation states. As you mentioned that the citizens of these compact nations can travel to our country to any state without a visa requirement, and they mainly come to Hawaii and they go to Guam. Whatever we can do to provide the kind of support for these citizens I think will be very much appreciated because I know they feel that we have not done quite what we should be doing with regard to their needs.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hirono.

Senator TILLIS.

Senator TILLIS. Thank you, Mr. Chairman.

Gentlemen, thank you for being here. General Abrams, it's great to see you again. I appreciated all your hospitality and time that we spent together back when you were down at Fort Bragg.

Admiral Davidson, I'll start with you because the subject of the 355-ship Navy has come up. To be honest with you, I'm not obsessed with a set number. In fact, I think it could be dangerous for us to say you've just got to check off until you get to 355 because I'm more concerned with capabilities. It would seem to me that over time, you're going to determine that we need more or less, depending upon how we match up against the increasing capabilities.

Could you talk a little bit about how you could get to a point where you start describing the aggregate capacity of a 355-ship Navy and that that may ultimately manifest itself in a very different footprint over the period of time that you could actually get to 355?

Admiral DAVIDSON. As I mentioned earlier, Senator, the chief of naval operations and the Navy, they've undertaken another force structure assessment, I think to get after precisely what you're talking about, make sure that they understand not only the capability mix of platforms themselves, but what the opportunity is for autonomous and unmanned vehicles as they come into this as well, and then how that might adjust those numbers going forward.

Senator TILLIS. Well I would think so, because I think if you take a look at the inherent cost and survivability with manned vessels versus unmanned vessels, the multiplier that you could get through relying on different platforms is something we should all look at. I get that there are supply chain issues and there are shipyards across the country that can see and touch and feel a target number for the number of ships that are going to be built in a given place, but I don't care about that. What I care about is projecting the maximum capabilities for the minimum cost based on what the experts believe is the best way to match up against the adversary.

One other question for you. It has to do with the 58 recommendations and the exchange that you had with Senator King. I'd be very curious when you respond to that, in terms of progress, the ones that require statutory action. I'd also be very curious to see, of the 58 recommendations, maybe why they were necessary based on a lack of funding or other factors that are clearly the responsibility of Congress at the end of the day, I believe rooted, and much of



the problems are really congressional inaction or inconsistency with funding, being able to do something I know is very important to General Abrams, readiness, and I don't know how many times you chanted the mantra of readiness when you were down at Forces Com. But most of that's rooted in inaction or inconsistency on our part. We need to put a mirror down there when we're looking at those recommendations and recognizing the folks in suits caused a lot of those problems.

General Abrams, you mentioned 440 days with respect to Korea in terms of any—we were at a point to where it seemed like every week we were watching a missile get launched or some sort of test being executed. On the one hand, we'll say that they're moving at the current pace and speed, but isn't it fair to say that if they're no longer launching missiles, some of which failed and they learn a lot from failed tests, they can accelerate their program; isn't it fair to say that just that lack of activity has had some impact on their rate of growth?

I know we'll go in the closed session for specifics, but it just seems logical from the outside observer, not something we would discuss in the closed hearing, that that lack of outward activity, that data collection that comes from missile launches and tests, has to have some dampening effect on their rate of growth unless they've figured out how to do something in a test tube versus these “when we test, it has to be perfect, we don't like to test and learn from failure, we want all of our tests to succeed.”

There's an inherent cost in that. But it would seem to me that some of the benefit that North Korea was getting from that pace that they had up until about 440 days ago has diminished now that they're changing their approach. Would you agree with that?

General ABRAMS. Senator, I'm not the expert on missile flight tests nor on nuclear weapons testing, but I have spoken to a number of them. It gets to a point in programs, and we can talk more about it this afternoon, that when you get to a certain point in that volume of testing that they did, and it's that point where the mature programs, if they are mature, then they can transition to simulation and modeling.

Senator TILLIS. They've captured enough to actually go to simulation.

General ABRAMS. There's potential of that, Senator, and we can talk more about it this afternoon.

Senator TILLIS. Fair enough.

Last thing. If you could tell me the progress you're making, we're talking about more extended deployments in Korea to create a work-life balance versus the 1-year iterations that we typically have. Have you made any progress on that?

General ABRAMS. Senator, we have, and we're working very closely with the services to find the right balance so that we can do just that. We're looking at different force mixes as a possibility in the future to do exactly what you're talking about.

Senator TILLIS. Thank you.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator.

Senator DUCKWORTH.

Senator DUCKWORTH. Thank you, Mr. Chairman.

Gentlemen, we've already discussed throughout this hearing today the tyranny of distance in the Pacific and some of the challenges that we face. I myself grew up in Southeast Asia, living in Singapore, Thailand, Indonesia, so I am personally familiar with the tyranny of distances.

You talked a little bit to, Admiral, the need for increasing our sealift capabilities. Could you discuss a little bit other requirements, such as airlift, heavy lift aircraft, that sort of thing, that we might need to plus up in order for you to be able to more efficiently and able to react more quickly to any type of changes in the situation in the Pacific?

Admiral DAVIDSON. Thank you, ma'am. I would just add, you know, one of the key areas we need to do is better cyber defenses of our logistics networks, which touch commercial industry so profoundly, both in terms that the people that we help contract for their support both in the United States, but overseas as well. Some of the inroads with ZTE and Huawei in some of these other countries are going to challenge our ability to use our existing logistics network without adapting it in a cyber sense moving forward.

Senator DUCKWORTH. Are you speaking to upgrading and improving the capabilities of organizations like TRANSCOM [United States Transportation Command] in addition to the cyber capabilities itself?

Admiral DAVIDSON. Absolutely. TRANSCOM bears some responsibility for those networks that support their logistics operations; that's absolutely one of them. As you mentioned earlier, airlift is going to be critically important out there in the Indo-Pacific region.

Senator DUCKWORTH. Thank you.

General Abrams, can you expand a little bit on the work we've done and the work that still needs to be done to ensure we have the necessary logistical tail to support United States Forces Korea in any contingency?

General ABRAMS. Senator, there's been extensive investment by the services over the last couple years under the leadership of Chairman Dunford and then-Secretary Mattis to properly not only posture the force to improve our posture in terms of munitions and other key supplies to appropriate levels based on where we were in 2017, but also made the right investments now in the supply chains to be able to sustain that if we ever had to get to a point of hostilities.

Senator DUCKWORTH. Thank you.

Can both of you give me your brief assessments of how the recently-passed Asia Reassurance Initiative Act (AKIA) will affect our relationship in the region and what more needs to be done to make sure it's effectively implemented?

Admiral DAVIDSON. I'm sorry, Senator, could you repeat that? I apologize.

Senator DUCKWORTH. Sure, no worries. I'm the last questioner, so totally understandable.

Can you speak a little bit about the recently-passed Asia Reassurance Initiative Act and how that will affect our relationships within the region? You know, the importance of our alliances in INDOPACOM, particularly Republic of Korea and Japan. I don't think it's something we stress enough.

I think that the successes that we're having in the region diplomatically and politically really also stems from the fact that we have a solid alliance militarily between United States, Korea, and Japan, and that must remain strong in order for us to move forward on the other fronts.

Admiral DAVIDSON. I couldn't agree more, ma'am. We've talked frequently about the whole-of-government approach in the region, it can't just be in the military space, that we're competing out there. The ARIA Act is going to be one of the key vehicles in which to advance these relationships going forward.

Senator DUCKWORTH. Thank you. General?

General ABRAMS. Senator, the only thing I'd add to that, specifically in Northeast Asia: no stronger allies than the Republic of Korea and Japan. So I absolutely agree with what Admiral Davidson said in terms of it's a whole-of-government approach that can only serve to strengthen those two great democracies as well as our own.

Senator DUCKWORTH. Thank you.

Finally, my last question. Admiral, could you speak a little bit to the role of the State Partnership Programs in terms of the forces and the work that you do in countries like the Philippines and the like and the availability of those troops to augment your Active Duty forces?

Admiral DAVIDSON. The State Partnership Programs not only in the Indo-Pacific Command region, but speaking for the other combatant commanders——

Chairman INHOFE. Excuse me, Admiral. Before you answer, Senator Reed presiding. Go ahead.

Admiral DAVIDSON. Have been quite important to us building military-to-military relationships. The frequency at which those State Partnership Programs can touch some of these other nations is quite good, and we've been able in just the last few months to expand one of those State Partnership Programs in the Oceania region. I don't want to say where and who just yet because we haven't announced the final selection of who the State partner will be. But it's an area in which I'm looking to expand some relationships in the region as well.

Senator DUCKWORTH. Thank you. Thank you, gentlemen.

Senator REED. [Presiding] Chairman Inhofe indicated that Senator King requested another question.

Senator KING. Thank you.

General Abrams, in thinking about Korea and the history, we're currently focused on the nuclear threat of course, but we had troops there, a substantial troop commitment, for 50 years before the nuclear threat became what it is today. What I'm getting at is will we necessarily be able to remove those troops if the nuclear threat is reduced or eliminated given the conventional power that the North Koreans have, the array of artillery along the border, the threat to Seoul, and all of that? I want to try to put this discussion into some historical perspective.

Admiral DAVIDSON. Senator, no, you're absolutely right. Our troop posture——

Senator KING. Could you say that again? I like hearing that. [Laughter.]

Senator KING. I'm just teasing.

Admiral DAVIDSON. Our troop posture, you know, it's been modulated since the armistice in July of 1953, and it's been modulated based on that conventional threat that you're talking about as well as other commitments that we had. For instance, we had a reduction in forces on the peninsula during the Vietnam era, and in fact, the Republic of Korea, really as a sign of solidarity to the United States committed two ROK divisions to South Vietnam in that conflict.

So it has, but our conventional capability on the peninsula is essentially, as I said earlier, the deterrent against the DPRK's conventional threat and their asymmetric threat.

Senator KING. Which may well be necessary even with the elimination of the nuclear threat or the reduction of the nuclear threat unless there is a concomitant reduction in the conventional threat.

Admiral DAVIDSON. Yes, Senator, and until there is a peace treaty. Because we still remain in a state of armistice, a cessation of hostilities, until such time that there is a peace treaty between all the parties.

Senator KING. Thank you. Thank you, Admiral.

Thank you, Mr. Chairman.

Senator REED. Thank you very much, gentlemen, and thank you for your testimony.

On behalf of Chairman Inhofe, I will adjourn the hearing and see you later at the closed session.

Thank you, gentlemen.

[Whereupon, at 11:44 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR ROGER F. WICKER

##### OKINAWA STRATEGIC REALIGNMENT

1. Senator WICKER. Admiral Davidson, the United States and Japan are working together to complete the strategic realignment of United States Marine forces from Okinawa to Guam and other locations. Okinawa has historically hosted a large share of United States servicemembers deployed to Japan including about 19,000 marines. Please provide the Committee with a detailed update on the progress on the realignment of Marine forces.

Admiral DAVIDSON. Relocation of U.S. marines from Okinawa to Guam remains an INDOPACOM area of emphasis. Over the past few years with Congress' help, we have made notable progress in this strategic realignment. On Okinawa, the pace of construction of the Futenma Replacement Facility (FRF) at Camp Schwab increased over the last year with steady progress made on the seawall and the start of landfill work in December 2018. Prime Minister Abe has repeatedly reaffirmed his strong commitment to FRF. Guam's main cantonment construction has commenced following a favorable report from the U.S. Fish and Wildlife Service to protect newly identified endangered species. Clearing work is underway in support of utilities and site improvements. The fiscal year 2018 NDAA included several projects for the Guam relocation, including Marine Aviation Logistics Squadron facilities, a corrosion control hangar, and a second aircraft maintenance hangar at Naval Support Activity Andersen; a water well field to feed the new Marine Corps Base Guam; and a medical clinic at Apra Harbor Naval Station. Also, the fiscal year 2019 NDAA includes ordnance operations, a machine gun range, and a combination high intensity tactical training facility and dining hall for the air component all located on Naval Support Activity Andersen. The Commonwealth of Northern Mariana Islands (CNMI) Joint Military Training (CJMT) Environmental Impact Statement (EIS) is under revision due to comments received during the public comment period in 2015. As you will recall, CJMT will provide for large scale U.S. Marine Corps forces training. The new CJMT Revised Draft EIS will go through another

comment period after public release of the draft. Due to competing interests with the USAF divert program on the island of Tinian—and at the request of the Governor of CNMI—we paused engagement with CNMI officials and agencies, causing progress on the CJMT EIS to slow. In late February 2019, INDOPACOM met with the CNMI Governor to set the conditions for re-engagement on CJMT.

#### UNACCOMPANIED TOUR HOUSING AT OSAN AIR BASE

2. Senator WICKER. General Abrams, the vast majority of servicemembers deploy to Osan Air Base on an unaccompanied 1-year assignment. Osan has the largest dormitory inventory in the operational Air Force. Please provide the Committee an update on unaccompanied tour housing for servicemembers stationed at Osan Air Base. What are your specific plans to improve the quality of housing?

General ABRAMS. There are approximately 4,547 unaccompanied airmen assigned to Osan with 3,228 residing on-base and 1,319 off-base. Osan Air Base currently has 37 dormitories consisting of 4,711 rooms, including two dorms ready for demolition and two unoccupied dorms under renovation. The average age of Osan dormitories is 24 years with the oldest being 34 years old and the newest built 5 years ago. In the last 10 years, 2 new dorms valued at \$42 million were funded with Military Construction funding (MILCON) and 1 new \$67 million dorm was built with Republic of Korea (ROK) funds. In the last 10 years there have also been 71 United States-funded projects using Operations and Maintenance (O&M) funding valued at \$52 million and 14 ROK funded “O&M” projects valued at \$4 million. The overall quality of Osan dorm rooms is good, and the average facility condition index of the dorms is 80 (on a scale of 0–100, worst to best). However, the average condition of the HVAC systems for the dorms is 60, and the majority of problems that exist in Osan’s dorms relate to aging infrastructure, particularly when it comes to boilers and HVAC systems. This drives the engineers at Osan to work around the clock responding to routine and emergency work orders (e.g. completing 14,050 corrective maintenance tasks between 1 Mar 2018 and 1 Mar 2019). Due to the aging infrastructure in Osan’s dorms and ongoing HVAC issues, the base will continue to rely on portable chillers, space heaters and small A/C units to assist with Quality of Life standards until all programmed projects are funded and complete. Osan wing leadership has consistently focused on maintaining suitable living conditions for all base residents and they will continue to pursue initiatives to ensure quality housing for our airmen, soldiers, and marines into the future.

3. Senator WICKER. General Abrams, what resources are required and are those resources accounted for in your budget plans?

General ABRAMS. Osan Air Base currently has 6 Facility Sustainment Restoration & Modernization (FSRM) projects for dorms in active construction or design valued at \$24 million (2x FY16, 2x FY17, 2x FY20). These projects are in-depth repairs targeting a broad array of issues, such as electrical and mechanical systems. An additional 35 projects valued at \$69 million are planned and programmed for future years and will compete with other AF priorities for funding. Four of the 35 FSRM projects, valued at \$11.9 million, were programmed for fiscal year 2019 execution and have currently been placed in the fiscal year 2020 program due to higher priorities in the fiscal year 2019 Air Force budget. A new Military Construction project for a 528 room, \$71 million dormitory is programmed and has been submitted through the Air Force MILCON process annually since 2012. This new construction is much needed and would replace six aging facilities. It is currently the base’s second MILCON priority and twenty-sixth in Pacific Air Forces’ (PACAF’s) fiscal year 2021 MILCON program. Osan continues to mitigate issues as it competes for AF MILCON funding.

---

#### QUESTIONS SUBMITTED BY SENATOR MIKE ROUNDS

##### TERRAIN SHAPING OBSTACLES ON THE KOREAN PENINSULA AND WITHIN THE INDPACOM AOR IN GENERAL

4. Senator ROUNDS. General Abrams, I’d like to discuss your perspective of the importance of terrain shaping on ground maneuver on the Korean peninsula. As a commander, you possess the last stock of landmines in the U.S. inventory—a capability that has renewed relevance in a fight with peer competitors. Can you comment on the importance of these capabilities to provide standoff for United States ground forces in a conventional war on the Korean peninsula, both to allow maneu-

ver and protect soldiers on the battlefield—especially in light of USFK’s [United States Forces Korea] priority to “be ready to fight tonight”?

General ABRAMS. USFK and CFC’s continued use of land mines as part of our arsenal of terrain shaping measures is critically important to our defensive posture. Despite the ROK–United States Alliance qualitative military advantage, DPRK maintains a quantitative lead in fielded land forces of nearly two to one. Terrain shaping munitions, such as land mines, mitigates the challenge presented by DPRK’s force posture by permitting Alliance forces to create operational dilemmas for the enemy by restricting their maneuverability while increasing the targeting opportunities of our more lethal systems. It must be noted, the aging arsenal of scatterable mine delivery systems (e.g. Gator and Volcano) leave the joint and combined force insufficient munition capacity to cover a doctrinal division front or shape the deep fight.

5. Senator ROUNDS. General Abrams, in your professional military opinion, how important is it for the Army to field terrain shaping obstacles to enable maneuver, protect friendly forces, and ultimately require less of a prohibitively expensive force structure?

General ABRAMS. Fielding terrain shaping obstacles, to include land mines, is critically important in Korea. The quantitative advantage held by DPRK land forces creates both risk to force and risk to mission. These risks are mitigated through the collective use of terrain shaping obstacles and combined fires. The continued use of land mines as part of our arsenal of terrain shaping measures also contributes to near-term cost savings. However, of concern is the modernization efforts on the part of near-peer competitors in the area of mines, munitions, and breaching capabilities, while we continue to operate with 1980s technology. Existing non-materiel solutions to mitigate this growing capability gap have been evaluated and determined to be impractical. Ceding the qualitative advantage in any area increases underlying risk to force and risk to mission.

6. Senator ROUNDS. Admiral Davidson, can you comment on the need for these capabilities in other places in your area of responsibility?

Admiral DAVIDSON. United States policy prohibits the use of anti-personnel land-mines outside of the Korean Peninsula and I support this policy. However, another subset of terrain shaping obstacles, anti-vehicular mines, could improve joint force lethality and agility in the region. With the Indo-Pacific home to seven of the world’s ten largest armies and significant time-distance challenges, anti-vehicular mines could provide advantages by facilitating effective maneuver for forces even when outnumbered. Further, these will also help to enhance the protection of bases and other critical infrastructure.

7. Senator ROUNDS. Admiral Davidson, are you concerned with the United States capability gap in this area, which has grown exponentially since 2001?

Admiral DAVIDSON. Yes, I am concerned about growing terrain shaping obstacle capability gaps particularly with China, Russia, and North Korea. I support service efforts to develop the next generation of mine capability—particularly “man-in-the-loop” “discriminatory systems—which could help close the advantage held by other countries in this area.

#### TACTICAL EXERCISES ON THE KOREAN PENINSULA

8. Senator ROUNDS. General Abrams, during the hearing, multiple Senators addressed the impact of the cancellation of military exercises in the Republic of Korea [ROK], especially Ulchi Freedom Guardian and other command post exercises. I, too, believe those exercises are critical to maintaining readiness, building relationships, and integrating friends and allies, but I am also very concerned about the cancellation of tactical exercises. Can you comment on the overall impact that the cancellation of tactical exercises in the Republic of Korea has on the readiness of USFK/ROK–United States Combined Forces Command?

General ABRAMS. The suspension of large-scale exercises coincident with senior-leader engagements in 2018 was a prudent action in support of diplomacy. Following those suspensions, and in accordance with guidance provided by the Secretary of Defense, we have worked to modify our exercise design and execution to maintain readiness through combined training and exercises while preserving space for ongoing diplomacy. To achieve this balance, we have adjusted four dials—size, scope, volume, and timing. Adjustments to volume (projecting exercise details and atmospherics into the information domain for effect) have been key as the design of legacy Key Resolve, Foal Eagle, and Ulchi Freedom Guardian purposefully maxi-

mized volume in order to leverage combined exercises as an element of our military deterrence strategy. As we have moved from an environment of provocation to détente, it is appropriate to change our active messaging posture to achieve the same deterrent effect. What is unchanged is the readiness and posture of our forces to act as a strategic deterrent postured to respond to potential crisis or provocation, and if called upon, ready to defend the Republic of Korea and our allies in the region. This “Fight Tonight” posture is maintained through the regular conduct of tactical and operational combined Field Training Exercises paired with two Command Post Exercises. These training and exercise events focus on ensuring operational and support units, staff, and senior leaders are well trained in their core competencies and are prepared to conduct the planning and execution of joint and combined operations under the strain of crisis.

9. Senator ROUNDS. General Abrams, can you also comment on the specific impact the cancellation of tactical exercises has on individual soldiers, leaders, and units from squad to brigade level, especially on gaining/maintaining detailed knowledge of the terrain they would potentially be fighting on and integration into combat-effective combined arms task forces?

General ABRAMS. We continue to conduct combined and unilateral tactical and operational training at the unit and component command level. In some cases, we have actually increased this level of training (e.g. combined Marine training has increased 20 percent over the last six months) and I am comfortable with the state of core competency and warfighting readiness among our joint and combined force. Additionally, we continue to rotate Brigade Combat Teams through nine-month rotations, thereby creating a depth of experience across our formations.

---

QUESTIONS SUBMITTED BY SENATOR MARSHA BLACKBURN

CHINA / CYBER

10. Senator BLACKBURN. Admiral Davidson, how does INDOPACOM's concept of operations need to change in order to account for Chinese electronic warfare and cyber capabilities?

Admiral DAVIDSON. Beijing has developed significant electronic warfare and cyberspace capabilities. In the event of armed conflict, the PRC will employ these capabilities to create a degraded and contested operational environment—something the U.S. has not had to persistently contend with for over 25 years. INDOPACOM's concept of operations must emphasize agility and resilience across all domains of operations to enable the Joint Force to operate effectively in this kind of environment. Below the threshold of armed conflict, China continuously operates in and through cyberspace to achieve strategic advantage. INDOPACOM must collaborate and share information with a broad array of partners in order to build situational awareness and enable a proactive posture to defeat malicious cyber activity at the source.

11. Senator BLACKBURN. Admiral Davidson, could you expand on your statement that INDOPACOM is exploring “capabilities that are nascent”?

Admiral DAVIDSON. USINDOPACOM in coordination with USCYBERCOM has changed our approach to countering Chinese actions in cyberspace. This new approach emphasizes stopping attacks before they penetrate our cyber defenses, taking actions that influence adversary behavior, and introducing uncertainty into competitor or adversary calculations. Full implementation of the approach requires innovative thinking about and experimentation with promising, though nascent, tactical, technical, and procedural cyberspace capabilities.

12. Senator BLACKBURN. Admiral Davidson, what is your assessment of China's capabilities in electronic attack or electronic warfare?

Admiral DAVIDSON. China considers electronic warfare (EW [of which electronic attack is a component]) an integral component of modern warfare. The PLA has fielded an impressive array of ground-, sea-, and air-based EW systems that are capable of operating against a wide swath of the electromagnetic spectrum. As part of the late 2015-early 2016 force-wide reorganization, the PLA created the Strategic Support Force to command, operate, and synchronize space, cyber, and electronic warfare elements. PLA EW units routinely train to improve their technical proficiency. More importantly, they are integrated into most major PLA training events, both supporting friendly forces with EW capabilities and acting as adversaries to opposing forces, creating a complex electromagnetic environment within

which PLA forces must operate. PLA capabilities include the ability to impact adversary systems operating in radio, radar, microwave, infrared, and optical frequency ranges, as well as computer and information systems. Like all PLA capabilities, their EW force is progressing rapidly but still faces challenges effectively integrating into complex, modern combat operations.

13. Senator BLACKBURN. Admiral Davidson, what practical operational implications does this have for U.S. military forces in a potential conflict?

Admiral DAVIDSON. In the South China Sea, the PLA has constructed a variety of radar, electronic attack, and defense capabilities on the disputed Spratly Islands, to include: Cuarteron Reef, Fiery Cross Reef, Gaven Reef, Hughes Reef, Johnson Reef, Mischief Reef, and Subi Reef. These facilities significantly expand the real-time domain awareness, ISR, and jamming capabilities of the PLA over a large portion of the South China Sea, presenting a substantial challenge to United States military operations in this region.

14. Senator BLACKBURN. Admiral Davidson, what is your assessment of China's capabilities in cyber and space?

Admiral DAVIDSON. China is developing cyber reconnaissance and cyberattack capabilities to support a range of objectives, from collecting intelligence and stealing intellectual property to manipulating data and posturing for destructive actions. China has targeted United States DOD networks to fill gaps in its research programs and to gather intelligence on our strategies and plans. In addition, China is suspected of targeting neighboring countries—particularly in Southeast Asia—focusing on political, military, and economic issues—as well as on disputed territories, and media organizations and journalists. China continues to strengthen its military space and counterspace capabilities—including space-based intelligence, surveillance, and reconnaissance (ISR) platforms, satellite jammers, antisatellite missiles, and directed-energy weapons—despite its public comments against the militarization of space. China's national policymakers emphasize the importance of its space program in bolstering the country's scientific and technological modernization and growing its high-technology industrial base. China has increasingly sought to integrate its civil and military space efforts to streamline research and development processes and develop dual-use technologies. The consolidation of space, cyber, and other capabilities under the Strategic Support Force is probably intended to generate synergies between these capabilities to make each more effective.

15. Senator BLACKBURN. Admiral Davidson, how would you characterize the level of risk to U.S. space-based assets?

Admiral DAVIDSON. China's space surveillance sensors are capable of searching, tracking, and characterizing United States satellites. China has already demonstrated ground-launched weapons capable of destroying satellites in orbit. Additionally, China is developing satellite jamming capabilities, directed-energy weapons, and offensive cyberattack capabilities, all of which could be used to support military operations against United States space-based assets. The vast geographic expanse of the Indo-Pacific AOR, makes INDOPACOM highly reliant on the global coverage provided by space services to accomplish our mission. China recognizes our dependence on space and has fielded these counter-space systems to hold the majority of United States and allied satellite systems at risk. U.S. assets at risk include critical communications networks, navigation, weather and intelligence sources vital to steady state and contingency operations.

16. Senator BLACKBURN. General Abrams, could you expand on your statements about command and integration of Cyber Command on the peninsula, including delegation of authority?

General ABRAMS. USCYBERCOM is fully integrated into USFK and provides Direct Support to the USFK and the Joint Cyber Center. USCYBERCOM provided personnel as part of the Cyberspace Operations—Integrated Planning Element (CO-IPE). USCYBERCOM provides tremendous cyber capability to USFK and as the supporting command to USINDOPACOM, the USCYBERCOM CDR is on record as having all the required authorities to carry out their mission in support of USFK and USINDOPACOM.



## QUESTIONS SUBMITTED BY SENATOR JACK REED

## CLIMATE

17. Senator REED. Admiral Davidson and General Abrams, the most recent Worldwide Threat Assessment from the DNI [Director of National Intelligence] states that "Extreme weather events, many worsened by accelerating sea level rise, will particularly affect urban coastal areas in South Asia, Southeast Asia, and the Western Hemisphere. Damage to communication, energy, and transportation infrastructure could affect low-lying military bases, inflict economic costs, and cause human displacement and loss of life." Please comment on our preparedness to respond to future extreme weather events in South Asia, Southeast Asia and the Pacific Islands.

Admiral DAVIDSON. USINDOPACOM stands ready to support partner nations, in coordination with the lead federal agency USAID/OFDA, in response to future extreme weather events. I would note that the number of times we have responded to these events have declined in recent years because of increased partner nation resiliency and capacity. However, for the most extreme events, we are typically the only entity with the resources and capabilities to respond quickly in order to minimize loss of life and suffering.

General ABRAMS. USFK works closely with our ROK and regional allies and partners, USINDOPACOM, and the interagency to maintain the posture and readiness necessary to surge the operational and logistic capability and capacity necessary to contend with an extreme weather event. The same posture and readiness essential to our ability to deter aggression and defend South Korea prepares us for the challenges of humanitarian assistance and disaster response missions. Further, USFK participates in regional training and exercise events which focus on that mission set and the core competencies required for rapid and in-depth response. Of note, USFK recently provided support to fighting wildfires in northeastern province of Gangwon-do. The training and capabilities which facilitated that response are an example of the ability to conduct rapid response resident throughout the combined ROK-United States readiness posture. Additionally, USFK serves as a forward postured arm of USINDOPACOM in the event of regional humanitarian assistance/disaster response missions.

18. Senator REED. Admiral Davidson and General Abrams, what are some of the risks to regional stability that such extreme weather events might pose and can you comment on the demands that such events have placed on U.S. Forces over the last few years?

Admiral DAVIDSON. In general, the frequency, timing, and severity of extreme weather events all factor into the impact a disaster might have locally and regionally. Mega-earthquakes, mega-tsunamis, and super-typhoons hold the potential to cause massive casualties and damage. The resulting widespread human suffering, food and water shortages, and extensive power outages could serve as precipitating events for regional instability, if not properly managed. Over the past several years, U.S. Forces have been called upon and less and less for assistance because our partners and allies have, with our help, built up their own capabilities to respond to these kinds of events.

General ABRAMS. Extreme weather events threatening stability on the Korean peninsula, and in the broader NE Asia region, include tropical storms and typhoons but also periods of sustained drought. The storm surge and torrential rains associated with tropical storms and typhoons are particularly impactful to South Korea given the topography of the peninsula and the associated high population density in low-lying and coastal areas. Critical infrastructure and sources of food and commerce such as fisheries, crops, and livestock are all vulnerable in the event an extreme storm overwhelms existing waterways and containment systems. Likewise, communities in the heavily forested and mountainous central and northeastern highlands are at risk from wildfires fueled by dry, windy conditions and localized drought. Recently, USFK provided support to fighting wildfires in northeastern province of Gangwon-do. While episodes such as this have been limited, USFK exercises its ability to rapidly deliver operational and logistic support to humanitarian assistance and disaster response missions. Training and exercising to conduct rapid response improves the combined ROK-United States readiness posture to provide relief in the event of a natural disaster. Additionally, USFK serves as a forward postured arm of USINDOPACOM in the event of regional humanitarian assistance/disaster response missions.

19. Senator REED. Admiral Davidson and General Abrams, the recently published Worldwide Threat Assessment from the DNI indicates that: "Global environmental

and ecological degradation, as well as climate change, are likely to fuel competition for resources, economic distress, and social discontent through 2019 and beyond.” For example, there are indications water shortages will induce stress in South Asia, especially given the rapid decrease in Himalayan glaciers. What is your assessment and the extent to which decreasing water resources could inflame tensions within INDOPACOM, USFK, and the surrounding regions?

Admiral DAVIDSON. I believe the availability of fresh water is, and will continue to be, one of the largest threats to stability in SE Asia and beyond. Wars have and will be fought over fresh water. The potential for supply side decreases at the same time as potential increases in demand would make this issue more challenging. Additionally, there are pressures being placed on countries downstream who are often denied access to clean water through upstream activities increasing pollution and/or flow control for hydroelectric, agricultural or other purposes. The nation that controls the water flow might use that to control the countries who require access to that water. Decreasing water resources could have significant economic and food security implications. For example, the area of Kashmir sits in a geographic location highly susceptible to climate-change induced drought. Climactic instability there could trigger conflict between nuclear-armed countries over water rights. Urbanization likewise is changing risk profiles for millions in this AOR, compounded by uncertainty due to climate change.

General ABRAMS. Given the availability of fresh water stores and the plentiful rainfall in much of Korea, the competition over water is unlikely to be a significant driver of tension in the near future. Instead, based on its unique topography and extensive coastline, South Korea’s exposure to rising sea levels and increased annual coastal rainfall is placing at risk the housing and infrastructure throughout the eastern and southern lowlands. This creates the potential for internal socio-economic and political disruptions should there be an extreme environmental event which leads to excessive flooding and the inundation of either or both agricultural land and metropolitan areas.

---

QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

PACIFIC FLEET COLLISIONS

20. Senator BLUMENTHAL. Admiral Davidson, recommendations that you helped author in the Comprehensive Review of Surface Force Incidents included enhanced reporting processes to share lessons across the surface force, improved safety programs across the Navy, and enriched individual navigation skills and training opportunities. Last April, you testified that the Vice Chief and the Under Secretary of the Navy were leading an oversight council to ensure that these recommendations are appropriately implemented. Is the Navy implementing the review recommendations in a timely manner? Please share any updates you have.

Admiral DAVIDSON. In incorporating the CR/SRR recommendations, the Navy is implementing and institutionalizing the lessons learned in 2017. To date, the Navy has implemented 91 of 111 CR/SR actions and there are clear paths forward for the remaining items.

21. Senator BLUMENTHAL. Admiral Davidson, the collisions of the USS *Fitzgerald* and the USS *McCain* were both deemed avoidable, for several reasons. Are you confident that implementing the recommendations will prevent future unforced errors that lead to tragic collisions?

Admiral DAVIDSON. I am confident that these measures will minimize the risk of these types of errors in the future. However, due to the nature of the mission and operations in the Indo-Pacific, the element of risk cannot be completely eliminated.

22. Senator BLUMENTHAL. Admiral Davidson, are there any additional measures or investments that Congress should consider during this year’s budget cycle to address the recommendations of this report and support naval operations throughout INDOPACOM?

Admiral DAVIDSON. The Navy’s fiscal year 2020 budget request includes funding to establish Maritime Skills Training Centers in the fleet concentration areas in San Diego, CA and Norfolk, VA. I ask Congress to support this initiative which implements specific recommendations from the Comprehensive Review.

## INTERMEDIATE RANGE NUCLEAR FORCES TREATY

23. Senator BLUMENTHAL. Admiral Davidson, the United States can reach both Asia and Europe with sea-based and air-delivered missiles, neither of which violate the INF [Intermediate-Range Nuclear Forces] Treaty. You noted in your testimony that ground based systems must remain mobile to be a viable military option. Why are ground-based missile systems necessary to counter Chinese aggression in the South China Sea when the United States is already investing in the construction of *Virginia*- and *Columbia*-class submarines that are mobile by nature?

Admiral DAVIDSON. Land-based precision fires would complement sea and air based systems but not replace them. These systems would provide the following military advantages: increase our deterrence posture with respect to Beijing and improve regional security present a persistent, credible threat to the PRC forcing PRC investment in costly defensive systems, provide a relatively inexpensive augmentation to air and maritime strike platforms, helping to restore their freedom of action, create a multi-domain targeting dilemma for Chinese planners, further demonstrate United States resolve against PRC military coercion.

24. Senator BLUMENTHAL. Admiral Davidson, why not continue this investment in order to maintain our asymmetric advantage in undersea warfare?

Admiral DAVIDSON. I fully support continued investment in undersea capabilities and do not view this issue as an “either/or” proposition between ground- and sea-based systems. We must have sufficient numbers of technically advanced, reliable, and integrated air-, sea-, and land-based systems available to add depth to our defenses and to counter the increasingly sophisticated threats we face.

25. Senator BLUMENTHAL. Admiral Davidson, many of our allies—including Japan—oppose withdrawal from the INF. Others, such as South Korea and Australia, do not want to host United States offensive missiles. NATO [North Atlantic Treaty Organization] allies also oppose the treaty withdrawal. How is INDOPACOM managing this opposition?

Admiral DAVIDSON. Many of our allies, Japan included, would optimally like to see a multi-lateral treaty with China involved and also for Russia to return to INF compliance. Pragmatically the prospects for this seem slim. In my view, land-based precision fires would increase our deterrence posture with respect to Beijing and improve regional security and safety of all people. We believe that, through dialogue, our allies and partners will see this, too.

26. Senator BLUMENTHAL. Admiral Davidson, if regional allies will not support the deployment of ground-based missiles, how will INF withdrawal impact regional stability?

Admiral DAVIDSON. If regional allies are unwilling to host ground-based missiles then the Chinese military (PLA) might continue to enjoy the unchallenged advantage they have gained by not being an INF signatory China has never been restricted by the treaty and has fielded approximately 1900 land-based missiles with ranges between 500–5500 km; we have none. Deploying land-based missiles would increase our deterrence posture with respect to Beijing and improve regional security.

27. Senator BLUMENTHAL. Admiral Davidson, given the significant United States military presence on Guam, the island is already deeply vulnerable during any conflict with China. If the United States deploys land-based missiles on Guam upon withdrawal from the INF treaty, how will this compromise regional security and the safety of United States servicemembers stationed on the island?

Admiral DAVIDSON. Guam is already at risk to PRC intermediate range missiles. Deploying land-based missiles to Guam would increase our deterrence posture with respect to Beijing, improving regional security and the safety of all people on Guam.

28. Senator BLUMENTHAL. Admiral Davidson, how do you anticipate that China would react to the deployment of ground-based missiles in your command?

Admiral DAVIDSON. I suspect China would protest loudly and stridently. They would be losing a significant military advantage and would do everything in their power to try to maintain that edge. This includes exerting diplomatic and economic pressure—including veiled and overt threats—against our regional allies and partners to attempt to force them to deny our access.

## CLIMATE CHANGE

29. Senator BLUMENTHAL. Admiral Davidson, DOD's [Department of Defense] Climate Change report mentioned that "at Naval Base Guam, recurrent flooding limits capacity for a number of operations and activities ... that support mission execution." How does this flooding jeopardize INDOPACOM operations?

Admiral DAVIDSON. Specific operational impacts from flooding on Naval Base Guam are currently limited, and in general, present a low impact to operations and activities that support mission execution. Those impacts are primarily the result of a slightly wetter climate compared to historical standards and recently, an increase in tropical storms. Overall, major impacts to operations on Guam result from tropical storms and typhoons. Guam lies in one of the world's most active regions for tropical storms. In addition to the destructive nature of these storms, they often force the dispersal of aircraft and ships from the island, resulting in lost training opportunities and follow-on operational impacts.

30. Senator BLUMENTHAL. Admiral Davidson, do you require additional resources to effectively combat the effects of climate change?

Admiral DAVIDSON. No, we do not require additional resources to effectively combat the effects of climate change at this time.

31. Senator BLUMENTHAL. Admiral Davidson, the DOD Climate Change report failed to list the 10 most vulnerable military installations for each service, and did not list a single United States military installation outside the United States. In addition to Naval Base Guam, which military bases throughout INDOPACOM are most vulnerable to the impacts of climate change?

Admiral DAVIDSON. I have concerns about the vulnerability of military installations on Guam, Kwajalein Atoll in the Republic of Marshall Islands, and Kaneohe Bay in Hawaii to the impacts of climate change. At this time, DOD lacks sufficient data to identify installations as more vulnerable to climate change than others. Working with the National Oceanic and Atmospheric Administration (NOAA), the DOD expects to complete a study in the next two years that will help us better understand how to analyze the vulnerabilities of military installations to climate change.

32. Senator BLUMENTHAL. Admiral Davidson, the Pentagon's climate change report briefly mentioned that flooding and earthquake-induced tsunamis in Indonesia contribute to instability throughout INDOPACOM. How does this instability impact your mission?

Admiral DAVIDSON. In general, the frequency, timing, and severity of these types of disasters may impact our overall mission. However, humanitarian assistance and disaster response (HADR) missions have a positive impact on our strategic relationships with allies and partners. Our HADR efforts are a visible, tangible demonstration of America's goodwill in the region and come with no strings attached, putting us in stark contrast with China. Additionally, we have expended a lot of effort toward helping our allies and partners build their own capability and capacity to effectively respond to disasters, lessening their dependence on U.S. assistance. Indonesia is a key partner in the region and sits at the center of vital transportation routes susceptible to many types of significant natural disasters. In the last fifteen years, Indonesia has made significant progress in developing the capabilities to mitigate these kinds of disasters. For example, the two 2018 tsunamis that the country faced—one from tectonic activity and the other from an underwater landslide—required minimal U.S. Government/military assistance.

## NORTH KOREAN DENUCLEARIZATION, SANCTIONS, AND CYBERSECURITY

33. Senator BLUMENTHAL. Admiral Davidson and General Abrams, do you think there is a common definition for denuclearization and how would you define a denuclearized North Korean peninsula?

Admiral DAVIDSON. The United States and the international community have a shared understanding of what final, fully verified denuclearization—or FFVD—entails. FFVD means the removal of all key components of North Korea's nuclear fuel cycle, removal of all fissile material, removal of North Korea's nuclear warheads, removal or destruction of all intercontinental ballistic missiles, and permanently freezing any other weapons of mass destruction programs.

General ABRAMS. The definition of denuclearization, as noted by our State Department, is nothing short of the final and fully verified dismantlement of North Korea's nuclear program. Shortly after his July 2018 visit Pyongyang, Secretary Pompeo in

responding to a similar question said that he had “lengthy discussions about the scope of what complete denuclearization means” during his visit, and that denuclearization is broad in nature: “weapons systems to fissile material to the production facilities, enrichment facilities, across the range of weapons and missiles.” Again, Secretary Pompeo noted that “The North Koreans understand that and have not challenged that,” and also that “they also understand that denuclearization makes no sense absent verification, and they acknowledge that as well. There will be a verification connected to the complete denuclearization.”

34. Senator BLUMENTHAL. Admiral Davidson, in your testimony, you state: “North Korea is continuing efforts to mitigate the effects of international sanctions and the United States-led pressure campaign.” What indicators would you look for in North Korean progress toward denuclearization to determine that the United States could responsibly consider lifting the current comprehensive sanctions on North Korea?

Admiral DAVIDSON. As our diplomats have stated following the Hanoi summit, our position remains that we expect final, fully verified denuclearization before sanctions relief.

35. Senator BLUMENTHAL. General Abrams, in your testimony, you state that North Korea “demonstrates increasing cyber capacity that must be matched and thwarted.” Do United States Forces-Korea possess matching cyber capacity to thwart attacks?

General ABRAMS. Yes. USFK and USINDOPACOM work closely with USCYBERCOM to ensure we are postured to match and thwart the cyber threats posed by the DPRK. Our activities and current posture are much improved thanks to the development and implementation of the National Cyber Strategy, the DOD Cyber Strategy, the certainty and resourcing provided by Congress over the last two years, and as a result of changes in Presidential Policy providing increased latitude for USCYBERCOM to prepare and act.

36. Senator BLUMENTHAL. General Abrams, do you require any additional investment in intelligence, surveillance, and reconnaissance assets in order to inform decision-making and military strategy on the Korean Peninsula?

General ABRAMS. Combined Forces Command (CFC) and United States Forces Korea (USFK) require increased, multi-discipline, persistent ISR capability and associated exploitation support to lengthen the warning time necessary to provide adequate decision space. The requirement for collection capabilities and capacity is shaped, in part, by North Korea’s behavior. If we see a return to demonstrations of threatening military capability and associated increase in military tensions, collection requirements will be greater. Additionally, collection requirements change as the target evolves capabilities, tactics, techniques, and procedures. Additional information is provided in a classified response.

37. Senator BLUMENTHAL. Admiral Davidson and General Abrams, last year, the United States suspended several combined military exercises with South Korea, purportedly to increase the potential success of nuclear negotiations. Did the suspension and scaling back of recent military exercises make a tangible impact on diplomacy?

Admiral DAVIDSON. In my view, the suspension of certain military exercises with South Korea created space for diplomacy. While we have not yet reached an agreement with North Korea, the President’s initiative to engage North Korea directly has reduced tension on the Korean peninsula and provided the possibility for an escape from the long-running cycle of North Korean escalation and de-escalation.

General ABRAMS. The suspension of exercises in 2018, combined with the modifications to training and exercises going forward, have been instrumental to creating the necessary space for diplomacy by effectively turning down the volume on the regional military tensions that escalated throughout 2017. That reduction in military tensions has continued through the efforts of South Korean, North Korea, and the United Nations Command to coordinate, plan, and implement the slate of confidence-building measures reducing military activity along the DMZ. The outcome of these activities is the sustained reduction in military tensions throughout 2018 and into 2019 which supports our ongoing period of détente and its continued diplomacy.

38. Senator BLUMENTHAL. Admiral Davidson and General Abrams, did these suspensions negatively impact military readiness?

Admiral DAVIDSON. At the battalion level and below, we had no change in exercises or military readiness. I believe we accepted some prudent risk to military read-

iness at the operational headquarters level last summer to create space for diplomacy, but have made adjustments beginning in 2019 to account for and mitigate any previous readiness impact at the headquarters level.

General ABRAMS. The 12 June 2018 Summit presented a historic occasion to reshape strategic settings and relations on the Korean peninsula. The United States and South Korea have spent almost seven decades refining strategic, operational and tactical readiness to defend the Republic of Korea and deter aggression. The suspension of certain exercises during the spring and summer of 2018 was a prudent step which created additional space for diplomacy. Negotiations with the DPRK are difficult and require continuous patience, but they provide an important mechanism for the development of confidence building measures and other steps that have reduced military tensions on the Korean Peninsula. Within the resulting period of détente, the DPRK has suspended nuclear and ballistic missile testing, a development which represents a significant improvement since the apex of tensions in late 2017. The center of gravity for our military readiness in Korea is the ROK-United States Alliance. We have worked to proactively modify our exercise design and conduct to maintain that diplomatic space while allowing our negotiators to operate from a position of strength. During our spring exercise, DONG MAENG 19-1 (DM 19-1), we adjusted four dials—size, scope, volume, and timing—in order to balance readiness with diplomatic requirements. CFC/USFK effectively used DM 19-1 to train 14 of 14 warfighting Mission Essential Tasks, validate our C4I and Alliance decision-making processes under the stress of simulated crisis and hostilities, and demonstrate our Alliance commitment to combined readiness.

---

QUESTIONS SUBMITTED BY SENATOR MAZIE K. HIRONO

FREE AND OPEN INDO-PACIFIC STRATEGY

39. Senator HIRONO. Admiral Davidson, you have spoken at length about your command's goal to maintain a Free and Open Indo-Pacific. What does China perceive as the likely effects of this strategy?

Admiral DAVIDSON. China probably perceives the strategy as constricting its ability to impose a China-centric system on the region. Chinese leaders increasingly seek to assert China's model of authoritarian capitalism as an alternative development path. Many in Beijing view nearly every United States action as part of a larger containment strategy and have chosen to frame the Free and Open Indo-Pacific as an integral part of that approach. It is not. The Free and Open Indo-Pacific is exactly what its name suggests, an environment that allows all nations to freely choose with whom to associate or trade; an environment where all nations have free and unfettered access to the air, sea, space, and cyber domains; an environment in which all nations can flourish free from coercion or threats.

40. Senator HIRONO. Admiral Davidson, does China view the Free and Open-Indo-Pacific strategy as a threat?

Admiral DAVIDSON. The Free and Open Indo-Pacific presents a viable, time-tested, and successful model for international relations. As noted in my response to question 39, Beijing is trying to present its model as a better alternative. China's model is many things, but certainly not "free" or "open."

41. Senator HIRONO. Admiral Davidson, should the United States ratify the United Nations Convention on the Law of the Sea (UNCLOS) as a step to promote a Free and Open Indo-Pacific?

Admiral DAVIDSON. I continue to strongly support accession to UNCLOS and believe such a step would reinforce U.S. commitment to a Free and Open Indo-Pacific. Accession would express formal U.S. commitment to the rights and freedoms reflected in UNCLOS as shared values with our allies and partners. It would also strengthen our position vis-à-vis China by improving our ability to call out China's actions that are contrary to the treaty.

42. Senator HIRONO. Admiral Davidson, beyond some of the actions we have already seen in the South China Sea, what is the likely next step in escalation China might take to counter the Free and Open Indo-Pacific strategy?

Admiral DAVIDSON. Chinese leaders are likely to do many things to challenge the tenets and principles of the Free and Open Indo-Pacific strategy through their counter-framework of Community of Shared Future for Mankind. China will almost certainly continue to pursue efforts to upend the global governance system by proliferating its anti-United States messaging through targeted investments and propa-

ganda. China may also choose to challenge unfettered access to the seas and airways by deploying additional air defense or anti-ship missiles or other capabilities to strategic locations. China already challenges free transit by erroneously claiming international space in the South China Sea is “indisputable Chinese sovereign territory,” a claim specifically not upheld by the Hague’s Permanent Court of Arbitration in 2016. China may challenge basic human rights by proliferating to other nations the intrusive monitoring technologies they’re using against their own citizens. Or China may challenge the transparency of trade agreements or protection of intellectual property rights by expanding the already large number of unfair and non-competitive regulations imposed on those firms that do business in or with China.

43. Senator HIRONO. Admiral Davidson, how likely is China to undertake any escalatory actions in the next 2 to 3 years?

Admiral DAVIDSON. Chinese leaders have been—and will certainly remain—committed to aggressively changing the status quo in many areas through economic, diplomatic, military, and informational activities, which unfortunately can include coercion and/or threats. I think we should expect China will engage in many activities, that depending on the circumstances and location could be considered “escalatory.” A few examples might be deploying to and operating combat aircraft from the three Spratly Island airfields; pressuring Taiwan’s diplomatic partners to switch formal recognition to Beijing by economic or diplomatic means; establishing additional overseas bases by exploiting host nation debt to China; or fielding potentially destabilizing military capabilities (such as space-based weapons).

#### RUSSIA’S GOALS IN THE INDO-PACIFIC

44. Senator HIRONO. Admiral Davidson, while much of the public focus regarding the Indo-Pacific focuses on China and North Korea, you noted in your written testimony that Russia remains a power in the Indo-Pacific. What are Russia’s goals in the Indo-Pacific?

Admiral DAVIDSON. Russia’s strategic goals in the Indo-Pacific are consistent with its aspirations as a global power—namely, to protect its sovereignty, strengthen its economic relationships, project a powerful military deterrent, and expand its regional influence while simultaneously offsetting United States influence. Moscow views the Indo-Pacific region as key to its prosperity and great power status, particularly as it seeks to overcome diplomatic isolation and mitigate the effect of Western economic sanctions.

45. Senator HIRONO. Admiral Davidson, what is Russia’s strategy to realize their goals in the Indo-Pacific?

Admiral DAVIDSON. Russia pursues activities across the diplomatic, informational, military, and economic spectrums to further its goals in the region. In military activity, Russia uses long-range bomber patrols, naval diplomacy, exercises with Indo-Pacific nations, and foreign military sales to advance its interests. Additionally, Russia is modernizing its Far East military capabilities across the services. More capable aircraft, surface ships, and submarines will be operational in the Pacific in the months ahead, while infrastructure improvements are also made to improve airfields and bases in the Arctic and Kuril Islands. On the diplomatic front, Russian leaders are increasingly engaging regional counterparts—whether bilaterally or through multilateral institutions such as ASEAN—In an effort to expand Moscow’s political and economic influence.

46. Senator HIRONO. General Abrams, what are Russia’s goals specific to the Korean Peninsula?

General ABRAMS. Russia’s strategic objective on the Korean Peninsula is to maintain the status quo of two separate Korean political entities. Russia shares a border with the DPRK, and has an interest in ensuring potential DPRK internal instability does not cross the border via refugees or a humanitarian crisis. Russia also has an interest in undermining the U.S. alliance network and the current rules-based international order. Historically, Russia has been an active actor in diplomatic efforts to achieve the denuclearization of North Korea going back to the Six-Party Talks era. Additionally, Russia is seen as enforcing elements of standing sanctions on North Korea, but could do more to prevent North Korea’s efforts to circumvent those sanctions.

47. Senator HIRONO. Admiral Davidson, what are some specific steps the United States can take in the Indo-Pacific to ensure that Russia’s goals, where they run

counter to the interests of the United States and the broader international community, are not realized?

Admiral DAVIDSON. We must continue to conduct consistent, persistent operations throughout the Indo-Pacific as a deterrent, demonstrating the readiness, modernity, and lethality of all of our capability and capacity. To the extent we do this with Allies and Partners, the outcomes are more substantive. Every action we take with Allies and Partners—especially our suite of bilateral and multi-lateral exercises—provides a meaningful check against Russian influence. As with China, one area where we possess a distinct advantage against Russia is with our values. The region desires a Free and Open Indo-Pacific, the region knows that we are a reliable ally and that China and Russia are the greatest threats to a free and open Indo-Pacific. All of our messaging should incorporate this theme.

#### SPECIAL MEASURES AGREEMENT

48. Senator HIRONO. General Abrams, the week of the hearing the United States and South Korea signed a new Special Measures Agreement that increased the share of the cost paid by South Korea to keep United States troops on the peninsula. The agreement is only for 1 year, instead of the 5-year deal that has traditionally been agreed to by the United States and South Korea. Does the inability to reach a 5-year deal create a point of conflict in the overall relationship between the United States and Korea?

General ABRAMS. The ROK began its direct monetary contribution to the Alliance in 1991. The 10th Special Measures Agreement (SMA) was signed on March 8th. Once ratified by the ROK National Assembly, this agreement will provide the framework for ROK support for the next year. The SMAs have varied in length over the past three decades. This is the first one-year agreement, and while a longer-duration agreement may bring more stability and predictability to our fiscal budgeting processes, the period it covers does not negatively impact the ROK-United States Alliance. The Alliance will remain strong under the 2019 SMA, and will build on this strength with the next SMA in 2020.

49. Senator HIRONO. General Abrams, does the inability to reach a 5-year deal on the Special Measures Agreement disrupt or impede the military relationship you and your forces have with the South Korean military?

General ABRAMS. The ROK-United States military Alliance is stronger than ever and is grounded in decades of shared sacrifice and a foundation of shared values. The Alliance recently conducted the first of our new DONG MAENG exercises. The combined command post exercise provided an outstanding opportunity for ROK-United States senior leaders and staff members to come together to solve problems under the simulated stresses and challenges of crisis and contingency conditions. Additionally, our combined force continue to train and exercise during numerous unit and component-level events throughout the year. Close and frequent combined interactions assure that our Alliance remains ironclad and will continue to do so under the 2019 SMA, and will build on this strength as our Department of State negotiates the next SMA in 2020.

50. Senator HIRONO. General Abrams, would a new 5-year agreement negotiated by the end of this year improve the United States-South Korean relationship, both diplomatic and military?

General ABRAMS. The Special Measures Agreements (SMAs) have varied in length over the past three decades. While a longer-duration agreement may bring more stability and predictability to our fiscal budgeting processes, the period it covers does not negatively impact the ROK-United States Alliance. Regardless of the length of the agreement, the Alliance will remain strong and the ROK and United States will continue the critical work of maintaining stability on the Korean Peninsula.



**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**THURSDAY, FEBRUARY 14, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**UNITED STATES SPECIAL OPERATIONS COMMAND AND  
UNITED STATES CYBER COMMAND**

The Committee met, pursuant to notice, at 9:30 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee Members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Perdue, Scott, Blackburn, Hawley, Reed, Shaheen, Blumenthal, Kaine, King, Heinrich, Warren, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Senator INHOFE. Our meeting will come to order.

The Committee meets today to receive testimony on the posture of the United States Special Operations Command (SOCOM) and the United States Cyber Command (CYBERCOM).

I'd like to welcome our witnesses: The Honorable Owen West, whom I met for the first time today; General Tony Thomas, who is planning to retire, somebody told me—and I think you're far too young to retire, but that's up to you, and particularly, you have two sons that are West Point graduates. You don't need to cut them loose that soon, and then General Nakasone. I appreciate very much the fact that, in the last couple of days, we've had both open and closed meetings because of the seriousness of the thing we'll be addressing this morning.

The Senate Armed Service Committee's top priority is to support the effective implementation of the National Defense Strategy (NDS). Central to the NDS is a growing focus on competition with China and Russia, our peer competitors. Of course, we also, at the same time, don't want to forget about the threat that's posed to us from the terrorist organizations.

Our Special Operations Forces (SOF) have proven remarkably effective in combating the Islamic State in Iraq and Syria (ISIS), al Qaeda, and other terrorist groups over the last 17 years. However, these groups remain resilient and continue to pose a real threat to

the United States and our allies. At the same time, the military advancements by China and Russia pose new and increasingly complex challenges to our national security.

When you talk to people out in the real world in America, there's this assumption that we have the best of everything. It's hard to explain, sometimes, that we don't. When we have our Chairman of the Joint Chiefs of Staff (JCS) talking about how we are actually outranged and outgunned by our adversaries in artillery we are advancing, and are ahead of us in some areas.

Another critical component of implementing the NDS is developing robust capabilities to counter growing threats in cyberspace. The Department of Defense (DOD) is making important progress, including the elevation of the Cyber Command to a fully combatant command and the Cyber Mission Forces (CMF) achieving full operational capability. Additionally, DOD released a new Cyber Strategy last year that provides a roadmap over how we will operate in the cyber domain. I look to our witnesses to describe what investments will be needed to meet these objectives.

Senator Reed.

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Well, thank you very much, Mr. Chairman. Let me join you in welcoming our witnesses for this update on the readiness and the posture of U.S. Special Operations and U.S. Cyber Command.

General Thomas, I'd also like to thank you for your extraordinary service and your coming retirement after 39 years in service. You've ably led SOCOM during difficult times. You've done it with great energy, great foresight, and great dedication to the men and women you lead. I thank you for that. I also want to thank your family, because they served alongside you, and they continue to serve with you. Nice to see that your sons got good educations, also. So, thank you.

General Nakasone, this is your first time to appear before the Committee since Cyber Command's been elevated to a unified command. Congratulations on this. Also congratulations on your accomplishments, in partnership with National Security Agency (NSA) and other agencies recently, in combating some of our adversaries in the cyber sphere. Thank you very much, sir.

SOCOM is unique within the Department of Defense as the only functional combatant command with service-like responsibilities for the training, equipping, organizing, and readiness of Special Operations Forces. For that reason, it's appropriate that the Assistant Secretary of Defense for Special Operations and Long-Intensity Conflict, the ASD SOLIC, Owen West joins us today in his role as the Service Secretary-like official responsible for oversight. So, welcome, Mr. Secretary. Thank you.

Since passage of the ASD SOLIC reforms contained in the 2017 National Defense Authorization Act, DOD has made important progress, including hiring additional personnel and more effectively integrating the ASD SOLIC into departmental processes related to budgeting, acquisition, readiness, and personnel management. These efforts are necessary, but not sufficient, to fulfill the intent of the SOLIC reforms. Secretary West and General Thomas, I hope

you will provide your assessment of what more needs to be done and how this Committee can continue to support your efforts.

SOCOM, as a microcosm of the broader Department and Joint Force, continues to adjust the complex security environment and the focus of the National Defense Strategy on great-power competition. This change will have implications for the Department's management of SOF forces, their readiness, capabilities, and development, and the operational authority that they have to undertake. As the demand for SOF continues to grow, we must also keep in mind that there are limits to the hardships we can ask Special Operations Forces and their families to endure. The United States, along with our allies and partners, face an urgent and continuing threat from information warfare attacks by Russia and other foreign adversaries. Russia attacked our democracy in 2016, and we must view these attacks with the same level of seriousness and resolve as a military attack.

While we appear to have had some success in countering Russian interference in the 2018 midterm elections, we should not take this as a sign that we can let our guard down. We must do more to anticipate and counter these increasingly sophisticated attacks, including by ensuring we are properly organized across the U.S. Government and inside the Department of Defense. General Thomas and General Nakasone, your commands sit at the nexus of DOD efforts to operate more effectively in the information environment, and I hope you will give a full assessment of what has been accomplished to integrate capabilities and authorities in this arena, and what gaps remain.

With respect to CYBERCOM, while much progress has been made in the last year, many serious challenges remain. DOD has developed what appears to be a viable cyber strategy and has conducted a serious cyber posture review. This posture review identified gaps in capabilities across the enterprise, and the principal cyber advisor's (PCAs) cross-functional team is defining objectives, specific tasks, resources, and timetables to correct them. When completed, these activities should greatly increase the Department's cybersecurity and the effectiveness of Cyber Command.

The Fiscal Year 2019 National Defense Authorization Act (NDAA) explicitly established that unacknowledged activities in cyberspace conducted below the level of armed conflict are a legal form of so-called traditional military activities. The NDAA also provided authority to the President to take action against sustained campaigns of specific adversaries against the United States, including Russia's malign influence campaign. This legislation, along with a recent presidential directive, provided DOD and Cyber Command with the needed authority to plan and conduct more vigorous actions in cyberspace to defend the country.

To support such operations, Cyber Command has developed an operational concept to employ so-called persistent engagement, in line with the National Defense Strategy. This is an important milestone, which I hope will provide an even more effective model for engaging our adversaries without undue risk of escalation. General Nakasone, I look forward to hearing more about this operational concept.

We have come a long way, but we have a long way to go further. I know, with General Nakasone's leadership, General Thomas's leadership, and soon-to-be-General Clark's leadership, and with Secretary West, we'll continue forward.

Thank you very much, gentlemen.

Senator INHOFE. Thank you, Senator Reed.

We'd now have opening statements. We're going to try to confine our remarks to 5 minutes.

We'll start with you, General Thomas, and work across to General Nakasone.

Okay. All right, I've just been corrected. We're going to start with Secretary West.

**STATEMENT OF THE HONORABLE OWEN O. WEST, ASSISTANT SECRETARY OF DEFENSE, SPECIAL OPERATIONS AND LOW-INTENSITY CONFLICT**

Secretary WEST. Thank you, Chairman.

Senator INHOFE. Everyone's pointing at you, anyway, so——

[Laughter.]

Secretary WEST. Senator Reed, Chairman Inhofe, distinguished Members of the Committee, thank you for the opportunity to testify alongside my partner, General Tony Thomas, on our global posture for our Nation's Special Operations enterprise. Tony's command of SOCOM has safeguarded the Nation for 3 years. I look forward to continued progress, working with Richard Clark, when he assumes command next month.

We're honored today to team with General Paul Nakasone, whose command defends the Nation at the leading edge of the modern battlefield.

The breadth and capability of our Special Operations Force is astonishing. In over 80 countries, this vanguard force tackles our most pressing challenges in the most hostile environments. In the past 2 years, 23 SOF personnel have been killed in action, and many more have sustained life-altering injuries. Representing just 3 percent of the Joint Force, SOF have absorbed over 40 percent of U.S. casualties in this time. This sacrifice serves as a powerful reminder that special operators are in the risk business. Their families carry the burden of individual tragedy so that we might prevent a national tragedy.

This is a unique time to serve the SOF enterprise, because it is at an inflection point. First, the section 922 legislation has reinvigorated the partnership between my office and SOCOM. Second, the National Defense Strategy has challenged all of DOD to increase focus on long-term strategic competition with Russia and China.

The SOF enterprise is in the midst of transformation, something special operators have always done very well. Any transformation starts with people. In November, General Thomas and I issued the first-ever joint vision for the SOF enterprise, challenging professionals to innovate relentlessly in pursuit of decisive competitive advantage. Special Operations should be viewed as an integral part of the Joint Force, designed to quickly and cost-effectively solve risky problems that do not lend themselves to mass or scale.

General Thomas has made tremendous progress in reducing the strain caused by the high operational tempo and demand. At the

height of the wars, a large proportion of the force was spending as much time overseas as in the United States. This year, over 90 percent of the force will spend at least twice as much time in the United States as they will on deployment. I'm proud to report to you that our Special Operations Force is neither overstretched nor breaking, but very healthy, poised and eager to defend the Nation against increasingly adaptive foes.

Despite this clear progress, General Thomas and I are concerned about serious ethical failings by some members of our SOF community. These incidents have our full attention. They are totally unacceptable and do not reflect the true nature of the SOF professional.

Finally, I would like to thank General Thomas for 39 years of service, much of it in combat. From 2001 to 2013, he deployed to Afghanistan every year, except for one in which he was wounded in Iraq. His relentless desire to defend the Nation is an inspiration to us all. He epitomizes quiet professionalism as a public official, but, in leading his troops and behind Pentagon doors, he is not shy. He consistently demonstrates blunt intellectual integrity that has personally inspired me. Our Nation will miss him. His wife, Barbara, less so now, and probably less in a year.

Mr. Chairman, I am grateful for the opportunity to testify today, and I look forward to your questions.

[The prepared statement of Secretary West follows:]

#### PREPARED STATEMENT BY THE HONORABLE OWEN WEST

Chairman Inhofe, Ranking Member Reed, and other distinguished Members of the Committee, thank you for the opportunity to testify on our global posture for the Department of Defense's Special Operations Enterprise. As the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict (SO/LIC), my remarks will focus on my statutory authority within the administrative chain of command for U.S. Special Operations Command (USSOCOM) overseeing the Special Operations Forces (SOF) Enterprise. Today, the SOF Enterprise is prepared to address the most pressing security challenges our Nation faces. I'm honored to have General Tony Thomas as a partner. His command has safeguarded this Nation for the past three years. I look forward to continued progress working with General Richard Clarke when he assumes command next month.

Having served in this capacity for the past year, I am humbled by the daily service and sacrifice of the over 70,000 soldiers, sailors, airmen, marines, and civil servants who comprise the SOF Enterprise. Its breadth and capability is astonishing. In over 80 countries, this vanguard force tackles our Nation's most pressing national security challenges, from Salafi Jihadism to great power competition. These guardians often serve in hostile environments. In the past two years, 23 SOF personnel have been killed in action, while many more have sustained life-altering injuries. Special operations personnel, just three percent of the Joint Force, have absorbed over 40 percent percent of the total U.S. casualties. This sacrifice serves as a powerful reminder that special operators are in the risk business. Their families carry the burden of individual tragedy so that we might prevent a national tragedy.

This is a unique time to serve the SOF Enterprise because it is an inflection point. First, the section 922 legislation has reinvigorated my office's role in overseeing and advocating for the SOF Enterprise. Second, the 2018 National Defense Strategy (NDS) has challenged all of DOD to deter rogue regimes and defeat terrorist networks while placing new focus on the long-term strategic competition with Russia and China. The SOF Enterprise is in the midst of transformation, something special operators have always done very well.

#### ALIGNMENT OF SOF CAPABILITIES TO NDS OBJECTIVES

The NDS calls on us to ensure our special operations capabilities will compete—and win—in today's complex national security environment. The NDS emphasizes the importance of counterterrorism in protecting our Homeland from threats to our core national interests, while prioritizing investments that restore a decisive com-

petitive advantage with our principal strategic competitors. In November, General Thomas and I issued the first-ever joint vision for the SOF Enterprise. We challenged our SOF professionals to innovate relentlessly in pursuit of decisive competitive advantage. Our enemies have scattered from the conventional battlefield. SOF is a fast-adapting, full-spectrum force, uniquely capable of imposing costs on our adversaries wherever their threat resides and whatever form it takes.

As the Department implements the NDS's vision for strategic competition, the SOF Enterprise must adapt to meet the demands of our modern security environment. In this environment, both state and non-state actors threaten our national security interests with increasingly sophisticated and asymmetric capabilities below the level that would provoke a U.S. conventional response. SOF's unique capabilities, understanding of the threat environment, and interagency and international partnerships are critically important in addressing these challenges.

My team, in coordination with USSOCOM, the Joint Staff, the Services, and combatant commands, is working to institutionalize our approach to irregular warfare across the Department to meet the demands of an evolving and increasingly complex security environment. Although irregular warfare remains a core SOF competency, successful irregular warfare in competition short of armed conflict and against high-threat violent extremist organizations will continue to require support across the entire Joint Force and close cooperation with our interagency partners.

Even as we and international partners eliminate ISIS's physical caliphate, the threat from international terrorists to our interests at home and abroad persists. SOF are essential to direct action against high-value targets, supporting key allies and partners, and deterring state and non-state actors from acquiring, proliferating, or using weapons of mass destruction. In this regard, Southwest Asia and the Middle East will continue to be the focus of these efforts, but, because these transnational threat networks operate globally, USSOCOM's worldwide reach will be essential to confronting them.

Enabling free peoples to fight for mutually shared interests is the original core competency of SOF. Reassuring allies and building and sustaining partnerships remain critical to accomplishing our national security objectives. Along with general purpose forces' increasing role in security cooperation, SOF provide the Joint Force with deep cultural, linguistic, stabilization, and operational expertise to build the capacity of our partners and allies and develop lasting relationships. SOF also provide critical stabilization expertise and capability, assisting the interagency in addressing instability across much of Africa and the Middle East. From Eastern Europe to South Korea and from Colombia to North Africa, SOF presence and partnerships support United States national security interests in key regions.

As the NDS notes, the surest way to prevent a war is to be prepared to win one. In this strategic context, SOF personnel, capabilities, agility, and technological advantages help enable decisive combat power as an integral part of the Joint Force. We have long recognized that the vast majority of special operations depend upon a broad array of Service-provided capabilities. At the same time, SOF's role as part of the Joint Force in a traditional wartime construct is critically important in disrupting our adversaries' operations, creating complex dilemmas and imposing asymmetric costs. Special Operations should not be viewed as distinct but an integral part of the force with a unique role derived from its basic value proposition: quickly and cost-effectively solving risky problems that do not lend to mass or scale. Within this strategic partnership with the Services, SOF capabilities serve as a fulcrum that help maximize the effectiveness of the Joint Force.

USSOCOM is an exceptional National investment. Representing approximately two percent of the overall Defense budget, USSOCOM provides extraordinary leverage to national security. In a transformative era, our basic obligation is to tie USSOCOM's fiscal strategy with its future operating concept, driving budget discipline and delivering downstream performance. The section 922 reforms have bolstered this effort. To optimize the efficiency and performance of every dollar spent, we foster a culture of performance, accountability, and innovation, and the section 922 reforms have strengthened our oversight to better inform budgetary and programmatic decision-making. As a starting point, the SOF Enterprise capability and program guidance is now jointly issued by the Commander, USSOCOM and myself. My office is now responsible for approving USSOCOM's Program Objective Memorandum five-year budget plan and is also now authorized to approve and submit program and budget review issue papers on behalf of the SOF Enterprise.

With fiscal strategy aligned with future concepts, the SOF value proposition as an integral part of the Joint Force is reinforced. Over the years, SOF has also developed a culture of innovation, driving a battlefield technical revolution in developing a surveillance-strike capability that no competitor can quickly replicate. Protecting

the nation against a terrorist attack remains our enduring task. Additionally, we must meet the challenge as a vanguard force in great power competition.

#### READINESS AND RESILIENCE OF THE FORCE

The SOF Enterprise has enhanced its readiness by balancing deployments and dwell-time for strained units, modernizing equipment and capabilities, aligning our efforts with NDS priorities, and investing in the well-being of SOF members and their families.

Since 2001, SOF has expanded from approximately 45,000 to over 70,000 personnel. As we focus on our core tasks and responsibilities in implementing the NDS, today's SOF is ready and capable to conduct major contingency operations with the Joint Force, conduct and respond to irregular warfare, and provide national leadership with options for responses to high-priority crises. We have prioritized investments in technologies to enhance lethality and effectiveness of the force, focusing our modernization on precision strike, directed energy, artificial intelligence, close-combat lethality, cyber and space operations.

To improve its readiness for contingencies across the vast spectrum of warfare, General Thomas has made tremendous progress in reducing the strain caused by the high operational tempo of certain SOF units. Not long ago, it was common for many SOF units and personnel to operate on a 1:1 deployment-to-dwell ratio. For example, a typical Green Beret could have expected to spend six months deployed followed by only six months in the U.S. before redeploying. This high tempo strained our personnel and their families and eroded our long-term readiness. Given that the demand for SOF from the geographic combatant commands will likely remain high, we must ensure that these forces are provided on a sustainable basis. I am proud to report that SOF is a healthy force, and the men and women who comprise this force are prepared to deploy to combat at a moment's notice in defense of our Nation.

Through General Thomas's leadership, we continue to make progress toward our 1:2 deployment-to-dwell ratio target for the Enterprise, and, today, 90 percent of our deployed forces are at or above this target, allowing more time to train for the full spectrum of special operations missions and increasing the time our people spend at home with their families. However, we still have more progress to make. Approximately 10 percent of our force remains below a 1:2 deployment-to-dwell ratio. Many of these personnel are high-demand/low-density specialists performing crucial functions. Thanks to the support of Congress and the Department, we have plans in place for small and targeted end-strength growth that will reduce the strain on these essential skillsets.

My primary concern regarding SOF readiness is our ability to continue to attract top talent and retain our high-quality personnel. While the challenges SOF face in this area generally mirror those of the Services overall, our challenges will likely be magnified given the necessary experience levels of our people and our generally lengthy training pipelines. We are addressing current and projected shortfalls by offering special pay and incentives for high-demand career fields, improving recruitment and marketing practices, and optimizing our training pipelines.

Through efforts such as Preservation of the Force and Family (POTFF), as well as Service-specific programs and activities, we are enhancing the resilience of SOF personnel and their families. As a community, we are only as good as our people, and that includes the well-being of our families. Programs and resources like these help families overcome significant physical, mental, and emotional difficulties that accompany deployments. POTFF resources help shorten recovery time toward healthy and productive lives, in and out of service.

#### CULTURE AND ACCOUNTABILITY

Despite this clear progress, General Thomas and I are concerned about serious ethical failings by some members of our SOF community. Such incidents erode morale of our force, confidence of our allies and partners, and the moral authority of American values. In other words, moral failings are not individual but can impact our large-scale mission. While these specific incidents are being addressed by appropriate disciplinary mechanisms, General Thomas and I are working to identify any potential systemic problems and to enhance policies that hold leaders and individuals accountable. Because SOF operate at the forefront of highly complex military operations in remote and high-threat environments, we must maintain the highest standards of personal conduct, and the recent joint guidance General Thomas and I have issued emphasizes the standards of trustworthiness and accountability we expect from our SOF community. SOF is a mature and elite force and it will be held to the highest standards—and those standards include professionalism, ethics, and

accountability. My office is currently conducting a review of SOF professionalism and ethics, as required by the Fiscal Year 2019 NDAA, which is due to Congress next month.

These incidents have our full attention. We also recognize that they do not reflect the true nature of the SOF professional. When I visit with our SOF servicemembers at home and in the field, their selfless energy and devotion to mission are clearly evident, and they are exemplars of American values when deployed overseas.

#### CONCLUSION

Mr. Chairman, let me conclude by, again, thanking the Committee for supporting SOF with the legislation and appropriations essential to combating terrorists, building critical partnerships, and enabling the Joint Force. Finally, I would like to thank General Thomas for 39 years of distinguished Military Service and for his partnership in leading our Nation's Special Operations Enterprise. General Thomas has been an inspiration to me and countless others in the SOF formation. From 2001 to 2013, he deployed to Afghanistan every year but one in which he deployed to Iraq, where he was wounded in combat. I have been particularly impressed with his dedication to ensuring the well-being of SOF servicemembers and their families. Under his command over the past three years, USSOCOM continues to field the most professional, most highly trained, best equipped, and most effective special operations warriors in the world.

Senator INHOFE. Thank you, Mr. Secretary.  
Now General Thomas.

#### **STATEMENT OF GENERAL RAYMOND A. THOMAS III, USA, COMMANDER, UNITED STATES SPECIAL OPERATIONS COMMAND**

General THOMAS. Chairman Inhofe, Senator Reed, and distinguished Members of the Committee, I'm grateful for the opportunity to speak to you today on the posture of United States Special Operations Command.

I'm privileged to be here today with Assistant Secretary Owen West as well as my friend and teammate, General Paul Nakasone, from CYBERCOM. Since its inception, we have enjoyed a tremendous relationship with the world-class team at U.S. Cyber Command and have forged the type of partnership, reinforced in combat, that ensures our absolute collaboration and cooperation in our shared mission of defending the Nation.

USSOCOM continues to field the world's most capable Special Operations Forces. We are an integral part of the Joint Force and integrated into every facet of the National Defense Strategy. Our numerous successes over the past years would not have been possible without the support and resources provided by the Congress. For that, I thank you.

For the last 18 years, our number-one priority has been the effort against violent extremist organizations (VEOs). As part of the Joint Force, we continue to be the main effort, or major supporting effort, in Afghanistan, Syria, Iraq, Yemen, Somalia, Libya, the Sahel, the Maghreb, Lake Chad Basin, and the Philippines. Everywhere ISIS and al Qaeda and affiliated organizations are, we are relentlessly pursuing them to ensure this country never, ever endures another 9/11. We remain focused on finishing this effort by, with, and through our many coalition partners.

At the same time, again, as part of the Joint Force, we are endeavoring to provide a more lethal and capable Special Operations Force to confront peer competitors. USSOCOM is already well-oriented to the challenges of great-power competition, particularly in the competition space short of armed conflict. Our SOF network, integrated with interagency and international partners, is focused



on producing unorthodox, yet complementary, capabilities and solutions in support of U.S. policies and objectives. We continue to maintain strong, enduring international partnerships while leveraging authorities in core expertise to convert indigenous mass into combat power to deter, deny, disrupt, and ultimately defeat our adversaries.

To build a more lethal force, strengthen our alliances and partnerships, and reform for greater performance and efficiency, we are reshaping and focusing our current forces and capabilities while simultaneously developing new technological and tactical approaches to accomplish the diverse missions that SOF will face in the future. The joint SOLIC–USSOCOM SOF vision that Assistant Secretary West mentioned is our guide to move us forward. The emerging security challenges will require SOCOM to be an organization of empowered SOF professionals, globally networked, partnered, and integrated, and relentlessly seeking advantage in every domain for the Joint Force and the Nation.

In addition to our service-like responsibility to man, train, and equip the world's most capable Special Operations Forces, over the past few years USSOCOM has experienced considerable development in our other legislative role as a combatant command. We are currently assigned the role as the coordinating authority for three major global mission sets: counterterrorism, countering weapons of mass destruction (WMD), and, recently, messaging/counter messaging. These roles require us to lead planning efforts, continually assess Joint Force progress towards campaign objectives, and recommend improvements or modifications to our campaign approach to the Secretary of Defense. In parallel, USSOCOM has begun pursuing an aggressive partnership with the other combatant commands with global portfolios—CYBERCOM, here today, Strategic Command (STRATCOM), Transportation Command (TRANSCOM), and U.S. Space Command (SPACECOM)—designed to leverage our respective capabilities towards providing more agile solutions to the Department of Defense.

SOF has a long tradition of solving hard problems, adapting to changing conditions, and fielding innovative technology and tactics to give us the decisive advantage in combat. We believe that this tradition will continue to serve us well in the future. We are increasing our investments in a wide spectrum of emerging technologies, to include artificial intelligence (AI) and machine learning, automated systems, advanced robotics, augmented reality, biomedical monitoring, and advanced armor and munitions development, just to name a few.

We are in the formative stages of establishing an experimental force, which will more coherently focus and integrate our future force development in the pursuit of the required peer-competitor capabilities. Leveraging our proven ability to rapidly develop and field cutting-edge technology flowing from our focus on the tactical edge of combat, this joint experimentation initiative will bring together innovative efforts from across our Special Operations Force tactical formations to ensure that commanders' combat requirements are addressed with the most advanced concepts and equipment available.

Finally, in 44 days, I'm scheduled to relinquish command of the greatest Special Operations Force in history. I know that sounds a bit haughty, but the men and women of USSOCOM back that statement up every day. They represent the best that America has to offer, an exceptionally dedicated, effective, and resilient group of warriors and problem-solvers. I'd like to publicly thank them for the opportunity to be their teammate. It has been an incredible privilege to serve with them over the course of 39 years of service.

I'd like to also personally thank Command Sergeant Major Pat McCauley, our SOCOM Senior Enlisted Advisor, appearing with me again today, for his service as a critical member of the SOCOM command team. Pat is the epitome of the best that USSOF has to offer, and, in a few short months, will conclude 30 years of faithful and devoted service to the United States Army, United States Special Operations Command, and the Nation. During his distinguished career, he's inspired many by his personal courage on the battlefield, his sage counsel to commanders and leaders at every level of command, and his moral and physical leadership. He represents everything that is great about this Command—most importantly, our people.

Thanks again for the opportunity to appear before you today. I look forward to your questions.

[The prepared statement of General Thomas follows:]

#### PREPARED STATEMENT BY GENERAL RAYMOND A. THOMAS, III

##### INTRODUCTION

Chairman Inhofe, Senator Reed, and distinguished Members of the Committee, thank you for this opportunity to inform you on the posture of United States Special Operations Command (USSOCOM) and your Special Operations Forces (SOF). USSOCOM continues to field ready and capable SOF to conduct global operations as an integral part of the Joint Force against state and non-state threats to America and its interests, and to advance U.S. policy objectives. We greatly appreciate the consistent support of the Congress in this endeavor.

Since my last address, USSOCOM has focused its efforts on addressing the defense and security threats and challenges from near-peer competitors as well as violent extremist organizations (VEOs) identified in the National Defense Strategy (NDS) along the directed lines of effort: building a more lethal force, strengthening relationships, and reforming our institution for more efficient performance. Consequently, we are re-shaping our current forces and capabilities even as we develop new technological and tactical approaches for our diverse missions. Toward this end, Assistant Secretary West and I co-authored a shared US SOF vision to guide us into the future. In short, it directs that USSOCOM must be an organization of empowered SOF professionals, who are globally networked, partnered and integrated, and relentlessly seek advantage in every domain for the Joint Force and the Nation. To achieve this vision, we are embarking on a path I will outline for you today.

##### SOF VISION—"EMPOWERED SOF PROFESSIONALS . . . "

Our vision recognizes the enduring truth that "humans are more important than hardware" by emphasizing that our people—more than platforms—are the source of our decisive advantage. To that end, we continue to recruit, assess, select and retain the Nation's finest human potential. We empower them with training, technology and authorities to solve some of the most complex and dangerous mission challenges. We steward people throughout their careers and their transition out of service, placing a special emphasis on resiliency by providing exceptional care to them and their families.

We appreciate your support of SOCOM's Preservation of the Force and Family (POTFF) programs through the authorities and funding provided. Over the past seven years we have made substantial improvements in the readiness and resilience of our force and their families.

As we address core issues of high operations tempo and personnel tempo, we are better suited to holistically address their impacts on our people. Last year, I referred to POTFF as “our stay well plan.” This year I would go further and echo the sentiment of my commanders across the SOF enterprise and say that it is our lifeblood. POTFF resources fuel our ability to continue meeting today’s operational demands and enables longer, more productive careers in SOF. I am more convinced than ever that this is the right thing to do, and that the embedded, multidisciplinary model of POTFF is the right way to do it. So strong is my conviction, that I have directed mandatory participation in the physical and psychological services of POTFF for all SOF members.

In order to execute this program in all of its aspects, we plan to add additional behavioral health and psychological performance resources. We also plan to expand our Human Performance efforts to address rehabilitative needs. Our POTFF programs must be agile and innovative, taking advantage of advancements in medicine, psychology and data science. I hope we can rely on your continued support as SSCOM moves forward with these program improvements.

USSOCOM is appreciative of Congress’ sustained support for our Warrior Care Program. Wounds, injury, and illness threaten the ability of our SOF personnel and their families to continue to serve. Our Warrior Care Program—the largest in the Department of Defense with over 15,000 participants—contributes to the resiliency of our force by providing advocacy and care coordination through the recovery and rehabilitation process, returning SOF professionals to the fight, and restoring their families’ footing as rapidly as possible.

We continue to make strides in managing the Deployment-to-Dwell (D2D) and Personnel Tempo (PERSTEMPO) of our personnel. Based on updated Department guidance, SOF formations are now focused on achieving a *minimum* of a 1:2 ratio and with the exception of a select few critical skill sets and career fields, the vast majority of SOF deploy at or above the deployment-to-dwell ratio of 1:2. This guidance is driving ongoing efforts to optimize our current force generation models to ensure SOF will continue to provide ready forces at a consistent and sustainable rate to meet the NDS and National Military Strategy (NMS) objectives. A planned increase of personnel in fiscal year 2019–2020 will help close current gaps among our enabler forces. These additional support personnel, and adherence to a 1:2 rate for Active and 1:5 for Reserve Forces, will ensure SOF can sustain our support to future geographic combatant commander requirements with the capabilities they require.

The nature of our special operations missions brings a high expectation that USSOF will operate with the highest standards of ethics and honor. We are working closely with ASD West to complete the assessment of culture and accountability within the USSOCOM enterprise mandated by Congress. On January 1st of this year, we began a 90-day internal focus on core values. Commands are reviewing programs of instruction for opportunities to address SOF culture and implement values-based decision making to reinforce moral courage. Command teams at the battalion/squadron level and above will conduct direct engagements with their personnel on the cultural climate of their units. Our goal is that all of our special operations teammates operate in a culture that is mission-focused and undistracted by misconduct, harassment, or abuse. 99.9% of the USSOCOM teammates continue to serve with honor and distinction as our ethos demands. That is 0.1% short of our goal. We will not be complacent and will push forward our efforts to inculcate and reinforce our core values.

#### SOF VISION—“GLOBALLY NETWORKED, PARTNERED AND INTEGRATED . . . ”

SOF is an integral part of the Joint Force and the whole-of-government effort that must successfully compete on a global scale. USSOCOM provides critical coordination and assessment functions for the Department’s operations and activities against VEOs and WMD threats. And SOF’s worldwide access and placement and our networks and partnerships enable the Department to understand adversary actions and intent and to respond across the spectrum of competition, especially beneath the threshold of conflict where our competitors such as Russia and China continue to hone their skills and advance their strategic objectives.

As the Coordinating Authority (CA) for the C-VEO mission, USSOCOM collaboratively works with geographic and global functional combatant commands on the Global Campaign Plan for counter-VEO operations (GCP-V). USSOCOM provides an annual assessment on VEO trends—which we have just completed—and the Joint Force’s progress towards campaign objectives. Along with this assessment, we make recommendations on campaign adjustments to the Secretary of Defense. To facilitate GCP-V execution, USSOCOM integrates Joint Force, Interagency, and

partner nations' activities into a unified effort, the Transregional Synchronization Forum (TRSF). Current campaign efforts are focused on disrupting the financial, messaging, and foreign terrorist fighter networks that enable and sustain VEOs. Severing these conduits will degrade and disrupt VEO attacks against the U.S. Homeland, our interests, and against our allies and partners.

Similarly, as the CA for countering weapons of mass destruction (CWMD), we continue to develop and refine our capabilities to execute CWMD campaigns. We completed and signed the DOD Functional Campaign Plan to Counter Weapons of Mass Destruction last November. This campaign nests under, cross-cuts, and complements the NDS, the NMS, and global and other functional campaigns across the Department. Our USSOCOM CWMD Fusion Cell guides and coordinates the planning and assessments of CWMD campaign execution, and makes recommendations to the Chairman and Secretary of Defense on actions to disrupt and deter adversary WMD programs.

USSOCOM also now has the mission to field a transregional Military Information Support Operations (MISO) capability to address the opportunities and risks of the global information space—one of the domains that challenges the Department's command and control boundaries. By April of this year, the Joint MISO WebOps Center (JMWC) will be operating in close coordination with the interagency and alongside combatant command teams to provide global messaging capabilities to a broader portion of the Joint Force and beyond CVEO themes. The JMWC will support the combatant commands with improved messaging and assessment capabilities, shared situational awareness of adversary influence activities, and the capability to coordinate internet-based MISO globally. We remain on track to achieve Initial Operating Capability in a new temporary facility by the end of fiscal year 2019.

To help the Joint Force address the complexity of networked, globalized threats and great power competition, USSOCOM has begun collaboration with other global-reach combatant commands to provide integrated options to address these challenges. USSOCOM, Cyber

Command (CYBERCOM), Strategic Command (STRATCOM), and Transportation Command (TRANSCOM)—combatant commands whose global presence and responsibilities shape our perceptions and the capabilities we provide to the Joint Force—are working toward a model for integrating our global capabilities more effectively into the Department's efforts. Our goal is to help close the seams created by our post-WWII (1946) geographic combatant command framework—seams that are currently exploited by adversaries who act globally, unencumbered by similar regional frameworks.

We continue to work with and rely extensively upon the capabilities provided by DOD. These include the Defense Intelligence Agency (DIA), the Defense Logistics Agency (DLA), and the Defense Information Systems Agency (DISA). I want to draw particular attention to the work of the Defense Threat Reduction Agency (DTRA) for their exceptional work in CWMD and counter-proliferation (CP). DTRA plays an integral role in creating shared awareness of the threat that supports our campaign planning. We are also working closely with them on the very pressing and expanding asymmetric threat of small unmanned aerial systems (UAS) by VEOs and state actors is a significant concern to the Joint Force. USSOCOM fully endorses DTRA's initiatives to understand and counter this threat and is working with them on several fronts toward this end.

Beyond our national collaborative efforts, USSOCOM also extends its network abroad to engage willing international partners, as well. USSOCOM hosts highly qualified and talented Special Operations officers and Non-Commissioned Officers from 24 nations with established SOF capability, many of whom are contributing combat forces to today's CVEO efforts. We also maintain US Special Operations Liaison Officer (SOLOs) in 21 countries. These liaison relationships provide agility to a global network that creates a common understanding of threats, develop response options, and—in some cases—to develop technology, tactics and equipment for mutual benefit to our forces.

For developing countries, security cooperation activities are a key tool for enabling them to tackle threats and challenges of common concern. USSOCOM appreciates Congressional consolidation of security cooperation authorities in 10 USC 333. USSOCOM and GCCs have leveraged this authority to provide partner nations the necessary skills and equipment to conduct security operations in their own self-defense and to become more capable partners.

SOF continues to use section 1202 to work by, with, and through partners, and in support of the geographic combatant commands. This authority fills a gap in our arsenal at a critical juncture for USSOF, and as the Joint Force re-orient on NDS threats beyond VEOs. Through these authorities, we will operationalize select regular and irregular forces possessing unique access and capabilities to confront peer

competitors—at an appropriate level below armed conflict. Recognizing the strategic implications of great power competition, we will move forward deliberately, coordinated with interagency partners, while providing full transparency to Congress.

SOF VISION—“RELENTLESSLY SEEKING ADVANTAGE IN EVERY DOMAIN TO COMPETE AND WIN . . .”

In addition to geographic domains, we must fight and win enabled by the latest technological advancements. The increasingly data-driven, networked, miniaturized, and automated world where goods, information, and people move across the globe at a furious pace significantly impacts virtually every aspect of SOF operations. We need to understand this impact and embrace and harness the opportunities offered by technology. Data science, artificial intelligence, automated systems, and cryptography are no longer restricted or isolated products available to select powers. They are commodities accessible to all. Social media and publicly available information presents us with a world of far fewer shadows for concealment and yet opportunities for understanding heretofore unseen indicators of adversarial intent or action. For this reason, to achieve our mission we cannot relent in our pursuit of capabilities that will sustain and increase our advantage along the entire spectrum of conflict.

To address these challenges and to seize these opportunities, USSOCOM is sustaining previous efforts that are proving impactful, establishing new efforts to provoke change in our workforce culture and mindset, and intent on confirming our results and findings through an experimentation force that will ensure that our pursuits remain solidly in support of our operational success on the battlefield.

In 2018, USSOCOM established the position of Chief Data Officer (CDO) to lead the integration of artificial intelligence and machine learning (AI/ML) across the enterprise and create a culture of data-driven decision making. Our CDO is guiding data governance efforts and leading engagement with the Defense Digital Service, the Joint Artificial Intelligence Center, Project Maven, and related activities. Under the direction of the CDO, USSOCOM is also building a data engineering lab and operationalizing a Development Operations (DevOps) environment that enables world-class talent to collaborate and deliver technical solutions for the SOF enterprise.

Embracing these technologies will allow our workforce to consume and process data in ways that exceed basic human cognitive capabilities and reserve our valuable manpower for the tasks that are the exceptional domain of the human. To maximize the effectiveness of available technology, we must also address data architecture and data management as priorities. We will transition to cloud-based data services and treat our data as a critical, strategic asset. We will ensure that data is defended from our adversaries while remaining usable and accessible to those who need it.

To ensure that these changes are rooted in SOF unique requirements and relevant to our special operations missions and tasks, USSOCOM will expand the use of wargames, and establish a joint SOF Experimental Force (EXFOR) within our force structure. The EXFOR will test concepts developed in our SOF Future Operating Concept alongside technology and equipment developed from our innovation efforts. The EXFOR will consist of existing units and personnel from our SOF service components and operational commands and will serve as the pacing element for the development and fielding of innovative concepts, equipment, and tactics.

USSOCOM values its acquisition authority and welcomes recent legislative acquisition reforms such as expanded authority under section 2371b and section 803 Middle Tier Acquisition Authority. These initiatives enable our SOF acquisitions personnel to leverage non-traditional DOD and commercial markets for emerging technologies and capabilities. We are also in our fourth year of leveraging the authority to enter into a Partnership Intermediary Agreement to manage our SOWWERX efforts. SOWWERX connects a growing ecosystem of over 40,000 traditional, non-traditional, large and small companies, individuals, academia, and government labs to address capabilities across SOF mission areas. SOWWERX has conducted over 2,000 events to include collaborations, hackathons, rapid prototyping, and experimentation to drive speed and efficiency into our acquisition processes. We have completed over 96 projects in support of our Component and Theater Commands. SOWWERX is currently growing its strategic partnerships across the Services' Rapid Acquisition Offices and with Other Government Agencies to mitigate redundancy and increase the speed of delivery of capabilities to DOD.

We are enthusiastically supportive of the initiatives of the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) to streamline policies and procedures within the Department and fully support her efforts to minimize constraints and promote a more agile process. We also support her call for improvements in

DOD software development, specifically through increasing the number of program managers and contracting officers who are conversant in the commercial processes of this domain. USSOCOM engagements with the Defense Digital Service has helped us in this regard and we will continue to bring in “digitally native” talent for the SOF acquisition workforce. We are heavily involved with the USD(A&S) effort to increase the use of Other Transactional Authorities (OTAs), enabling us to interact with non-traditional vendors in a far more commercial format. In the last year we have exercised 10 OTAs and will benefit from Defense Acquisition University’s increased emphasis on OTA training.

In the push by USD(A&S) towards increased prototyping under Middle Tier Acquisition (MTA) rules, USSOCOM comprises 20 percent of the Department’s total MTA effort. We expect this number to increase substantially in fiscal year 2019. MTAs allow for abbreviated requirements approval and tailored acquisition approaches. As we move forward, we are closely adhering to reporting requirements in order to ensure compliance with the statute.

#### CONCLUSION

Before I conclude my update, I would like to highlight that USSOCOM will host the 2019 DOD Warrior Games in Tampa, Florida from June 21st through June 30th. Approximately 300 wounded, ill and injured servicemembers and veterans will participate in 11 sporting events. The Warrior Games were established in 2010 to enhance the recovery and rehabilitation of our personnel with health challenges. The athletes will represent the United States Army, Marine Corps, Navy, Air Force, and Special Operations Command. Additionally, allied athletes from the

United Kingdom, Australia, Canada, Denmark and the Netherlands will compete. A large contingent of these athletes’ families will also attend. I invite all of you to attend these games, and join us in cheering alongside them and honoring their courage and perseverance.

Before I conclude, I want to take a moment to remember the long and dedicated service of the late Senator John McCain, who chaired this hearing just over a year ago. Senator McCain was a consummate servant leader to his Nation—a true statesman and hero who put the interests of his fellow citizens ahead of his own. His presence is missed but his impact on our command will never be forgotten.

In closing, I thank the Congress for the steadfast support for USSOCOM. We are already competing with adversaries and adapting to complex challenges facing our country and will continue to do so now and into future.

Senator INHOFE. Thank you, General Thomas.  
General Nakasone.

#### **STATEMENT OF GENERAL PAUL M. NAKASONE, USA, COMMANDER, UNITED STATES CYBER COMMAND; DIRECTOR, NATIONAL SECURITY AGENCY; CHIEF, CENTRAL SECURITY SERVICE**

General NAKASONE. Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, thank you for your enduring support and the opportunity to testify today about the hard-working men and women of United States Cyber Command. I’m honored to lead them.

I’m also honored to sit alongside these great leaders, Assistant Secretary of Defense West and General Tony Thomas.

For Tony, my congratulations to you and Barb for your steadfast service to our Nation. It’s been a tremendous journey for you, and I’ve enjoyed our close partnership and friendship. My personal best wishes to you, Tony, and your family.

As the Commander of U.S. Cyber Command, I’m responsible for conducting full-spectrum cyberspace operations supporting three mission areas: defend the Nation against cyberattacks, defend the Department of Defense Information Networks (DODIN), and enable our Joint Force commanders in pursuit of their mission objectives.

In the cyber domain, we are in constant contact with our adversaries, who continue to increase in sophistication, magnitude, in-

tensity, volume, and velocity, and remain a threat to our national security interests and economic well-being. The National Security Strategy (NSS) and the National Defense Strategy highlight the return of great-power competition. Beyond near-peer competitors, China and Russia, rogue regimes, like Iran and North Korea, continue to grow their capabilities. Using aggressive methods to conduct malicious cyberspace activities, adversaries have, until recently, acted with little concern for consequences.

The Department of Defense Cyber Strategy identifies the need to defend forward during day-to-day competition with our adversaries. This strategy aims to maintain our superiority in cyberspace through protection of our critical infrastructure and networks. At U.S. Cyber Command, we implement the DOD strategy by adopting an approach of persistent engagement, persistent presence, and persistent innovation. This past year witnessed the elevation of U.S. Cyber Command to combatant command status, the opening of our Integrated Cyber Center, and our shift from building the force to the readiness of that force. This progress ensures our ability to execute our mission requirements for the Department in defense of our Nation.

The defense of the 2018 midterm elections posed a significant strategic challenge to our Nation. Ensuring a safe and secure election was our number-one priority and drove me to establish a joint United States Cyber Command/National Security Agency effort we called the Russia Small Group (RSG). The Russia Small Group tested our new operational approach. With the organization and direction from the President and Secretary of Defense (SECDEF), the Russia Small Group enabled partnerships and action across the government to counter a strategic threat. Our response demonstrated the value of a tightknit relationship between United States Cyber Command and the National Security Agency, bringing together intelligence, cyber capabilities, interagency partnerships, and the willingness to act.

Through persistent engagement, we enabled critical interagency partners to act with unparalleled coordination and cooperation. Through persistent presence, U.S. Cyber Command and the National Security Agency contested adversarial actions, improving early warning and threat identification, in support of the Department of Homeland Security (DHS), the Federal Bureau of Investigation (FBI), and others.

Beyond the interagency, we partnered and engaged with allies and public and private sectors to build resiliency. For the first time, we sent our cyberwarriors abroad to secure networks outside the DOD Information Network. Our operations allowed us to identify and counter threats as they emerged to secure our own elections and prevent similar threats interfering in those of our partners and allies.

The Russia Small Group effort demonstrated that persistent engagement, persistent presence, and persistent innovation enable success. Effective cyberdefense requires a whole-of-nation effort. Information-sharing plays a vital role in enabling everyone, including government agencies, to defend their networks. Therefore, we are now sharing computer malware we find during our routine operations with the private sector and the broader cybersecurity com-

munity. We have posted numerous malware samples for crowd-sourcing analysis. We believe our actions will have a positive impact on improving cybersecurity globally.

Our actions are impacting our adversaries. Our shift in approach allows us to sustain key competitive advantages while increasing our cyber capabilities. As we review lessons learned from securing the midterm elections, we are now focused on potential threats we could certainly face in 2020.

Looking forward, we need to continue building a warrior ethos similar to our other warfighting domains. Cyberwarriors are, and will continue to be, in constant contact with our adversaries. There are no operational pauses or sanctuaries. We must ensure sufficient capability and capacity, people, technology, and infrastructure, which we are decisively focused on now.

Through persistent presence, we are building a team of partners that enable us and them to act more effectively. The complex and rapid pace of change in this environment requires us to leverage cyber expertise broadly across public and private sectors, academia, and industry. Therefore, we aspire to increase our effectiveness and capabilities through persistent innovation across these partnerships.

Cyberdefense is a team effort. Critical teammates, such as the National Guard and Reserve, are integral parts of our cyberforce. They provide strategic depth and provide the Nation a Reserve capacity of capable cyberwarriors.

Finally, improving readiness continues to be one of my key focus areas. I continue to work with the services and Department to actively measure and maintain readiness, manning, training, and equipping, and certainly an ability to perform the mission.

After a year of change and progress, we see 2019 as a year of opportunity. We have much work ahead as CYBERCOM matures. We assure you that our people merit the trust you have placed in them and that, with your support, they will accomplish the tasks that our Nation expects.

Thank you again for inviting me here today on behalf of U.S. Cyber Command, and for your continued support. I look forward to your questions.

[The prepared statement of General Nakasone follows:]

PREPARED STATEMENT BY GENERAL PAUL M. NAKASONE

Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, thank you for inviting me to represent the men and women of United States Cyber Command (USCYBERCOM). I am honored to lead them, and grateful for the opportunity to highlight their accomplishments. Our Command has seen a year of change and progress, featuring the elevation of USCYBERCOM to a unified combatant command with an expanded mission and additional authorities and responsibilities, and the completion of the build of 133 teams in our Cyber Mission Force (CMF). We have transitioned from building the force to ensuring its mission readiness, and in 2018 we enhanced that by opening our new, state-of-the-art Integrated Cyber Center. Enabled by changes in law and policy, we have produced defensive and offensive operational successes. My testimony will summarize threats and opportunities in our strategic environment, explain how we prepared ourselves to meet them and what we did, and explain our priorities for the future of a USCYBERCOM that enables our partners and acts in cyberspace to defend the nation.

USCYBERCOM's task is to plan and execute global cyberspace operations, activities and missions to defend and advance national interests in collaboration with domestic and international partners across the full spectrum of competition and con-



flict. Our responsibilities include providing mission assurance for the Department of Defense by directing the operation and defense of the Department's information systems (what we call the DODIN); deterring or defeating strategic threats to national interests and infrastructure; and helping the combatant commanders achieve their missions in and through cyberspace. This fiscal year we are executing a budget totaling roughly \$610 million. Our full-time personnel amount to 1,520 military and civilians, plus contractors. This January we had 4,406 servicemembers and civilians in our Cyber Mission Force, building to a total of 6,187 people. We also have both Guard and Reserve personnel on Active Duty serving in our forces.

USCYBERCOM comprises a headquarters organization that directs operations through its components. These include the Cyber National Mission Force (CNMF); the Joint Force Headquarters-DOD Information Network (JFHQ-DODIN); and Joint Task Force Ares; plus our Joint Force headquarters elements, each of which is paired with one of the Services' cyber components. Those Service components are Army Cyber Command, Marine Forces Cyberspace Command, Fleet Cyber Command/Tenth Fleet, Air Force Cyber/24th Air Force, and U.S. Coast Guard Cyber.

Our efforts and our continued success depend upon the support of the Congress and of this Committee. Thank you in advance for the assistance you are providing us in 2019 as we pursue opportunities in five areas: (1) Supporting strategic competition; (2) Establishing a warfighting ethos across the Command; (3) Improving the readiness of our cyber forces; (4) Enhancing partnerships across government, allies, and the private sector; and (5) Deploying improved operating infrastructure.

#### THE STRATEGIC ENVIRONMENT

Cyberspace is a contested environment where we are in constant contact with adversaries. The nation faces threats from a variety of malicious cyber actors, including non-state and criminal organizations, states, and their proxies. We see near-peer competitors conducting sustained campaigns below the level of armed conflict to erode American strength and gain strategic advantage. USCYBERCOM ensures two critical capabilities against these threats: it *enables* partners in whole-of-nation efforts to build resilience, close vulnerabilities, and defend critical infrastructure; and it *acts* against adversaries who can operate across the full spectrum of cyberspace operations and who possess the capacity and the will to sustain cyber campaigns against the United States and its allies.

*Renewed Strategic Competition.* The *National Security Strategy* (2017) emphasized the emergence of great-power competition and noted its spread into cyberspace. In implementing that guidance, the Department issued the *DOD Cyber Strategy*, which described the environment we face:

*We are engaged in a long-term strategic competition with China and Russia. These States have expanded that competition to include persistent campaigns in and through cyberspace that pose long term strategic risk to the Nation as well as to our allies and partners. China is eroding United States military overmatch and the Nation's economic vitality by persistently exfiltrating sensitive information from U.S. public and private sector institutions. Russia has used cyber-enabled information operations to influence our population and challenge our democratic processes. Other actors, such as North Korea and Iran, have similarly employed malicious cyber activities to harm United States citizens and threaten U.S. interests. Globally, the scope and pace of malicious cyber activity continue to rise. The United States' growing dependence on the cyberspace domain for nearly every essential civilian and military function makes this an urgent and unacceptable risk to the Nation [emphasis in original].*

I assess we are seeing what we term corrosive threats, in which malicious cyber actors weaponize personal information, steal intellectual property, and mount influence campaigns. Such measures have had and will have strategic effects on our Nation and allies.

*Changes in Strategic Guidance and Authorities.* USCYBERCOM has recently improved the scope, speed, and effectiveness of its operations with the help of legal and policy changes. I want to thank Congress for its support of DOD's cyberspace operations as reflected in provisions of the Fiscal Year 2019 National Defense Authorization Act (NDAA) that enhanced our agility to execute missions consistent with law. We also received updated policy guidance that, in conjunction with the NDAA provisions, significantly streamlined the interagency process for approval of cyber operations and thus facilitated recent activities.

The *DOD Cyber Strategy* asserts that the Department has a significant role in defending the nation. To be effective in doing so, the *Strategy* mandates that DOD components "defend forward, shape the day-to-day competition, and prepare for

war,” enabling the Department “to compete, deter, and win in the cyberspace domain.” We must be active because inaction on our part cedes advantage to capable adversaries willing to flout international law and impose their own norms of cyber conduct. In keeping with guidance to defend forward, the Department is aiming to take the initiative against those who act against us. The *DOD Cyber Strategy* states that the Department must be prepared to defend assertively the functioning of even non-DOD critical infrastructure systems—whether at home or abroad—that are essential to project, support, and sustain Departmental forces and operations worldwide. In practice, this means confronting our adversaries from where they launch cyber attacks and developing robust capabilities that are responsive to Defense Support to Civil Authorities (DSCA) activities.

*A New Operating Construct.* We are implementing the DOD Cyber Strategy through the strategic approach of persistent engagement, which includes partnering with other U.S. Government elements to build resilience into U.S. networks and systems, defending against malicious cyberspace activities as far forward as possible, and contesting adversary attempts to disrupt our Nation’s key government and military functions.

Our operators, analysts, developers, leaders, and support personnel, enabled by new and modified policy guidance, are operating more effectively in coordination and partnership with other agencies, partners, and allies. Last fall we supported United States European Command (USEUCOM), United States Northern Command (USNORTHCOM), the Department of Homeland Security (DHS), the Federal Bureau of Investigation (FBI), and others to defend the integrity of America’s 2018 mid-term elections. Working together under my command, USCYBERCOM and the National Security Agency (NSA) undertook an initiative known as the Russia Small Group to protect the elections from foreign interference and influence. By enabling our fellow combatant commands and other partners, USCYBERCOM assisted the collective intelligence and defense effort that demonstrated persistent engagement in practice. The tight links between USCYBERCOM and NSA created a mutually beneficial, intelligence-operations cycle that let us rapidly find and follow leads, discover new information, and create opportunities to act in conjunction with partners. Additionally, our co-location in the new Integrated Cyber Center optimized our collaboration for efforts of this nature. We created a persistent presence in cyberspace to monitor adversary actions and crafted tools and tactics to frustrate their efforts. We shared information through DHS with state election officials to help identify vulnerabilities and improve threat warning. We also enabled Department of the Treasury and FBI actions in conjunction with the private sector, for instance by posting foreign malware for the first time to VirusTotal, a private site for crowdsourcing analysis of cyber threats. Finally, working with USEUCOM, and with the consent of several European countries, we sent defensive teams forward to conduct operations in support of our mission to help secure the mid-term elections.

#### OPPORTUNITIES AND CHALLENGES FOR U.S. CYBER COMMAND

I note the progress we have made during the past year and see opportunities ahead, with corresponding challenges as well. We have achieved much under the *National Defense Strategy’s* commitment to prioritize investments in cyber defense, resilience, and the continued integration of cyber capabilities into the full spectrum of military operations. We must use our recent successes to inform future activities, ensuring that accomplishments are not isolated events but parts of a larger trend of improved operational proficiency.

*Supporting Strategic Competition.* Cyberspace is a domain in which opponents can attain strategic results without using armed force. Our adversaries in cyberspace are acting and taking risks in seeking to gain advantage without escalating to armed conflict; they are conducting campaigns to gain cumulative advantage (these include theft of intellectual property and personal information, malign influence and election interference, efforts to circumvent sanctions, and probes and positioning to threaten critical infrastructure).

We see evidence of such cyber campaigns in many places, such as the foreign efforts to find vulnerabilities in the Department of Defense’s Information Network. JFHQ–DODIN used its authorities to direct global Department of Defense network operations, security, and defense. By operationalizing the network sensors, they assessed effectiveness and risk through focused data analysis. This in turn helped improve the fidelity of our sensors and analytics, showing us the risks and the requirements for mitigation. The data JFHQ–DODIN collected in this effort proved that state-sponsored adversaries in cyberspace are conducting rapidly evolving campaigns to hamper the routine functions of the DODIN and to find seams in its defenses. DODIN protections are robust, but we must continue to innovate in our data

collection and analysis to build resilience and counter the dynamic nature of adversary threats.

In the face of strategic competition in cyberspace, USCYBERCOM brings unique advantages in planning, deconflicting, executing, and assessing cyberspace operations at-scale.

Our efforts in defense of the 2018 elections taught us the value of persistent engagement to contest adversary campaigns, the power of enabling partners, and the ability to impose costs. The *DOD Cyber Strategy* notes we cannot afford inaction—our values, economy, and society are exposed and we must assertively respond at all levels. USCYBERCOM is working with the combatant commands, DHS, FBI, across the Intelligence Community, and in conjunction with private sector and foreign partners to improve understanding and act to contest and frustrate adversary cyber activities. Through persistent engagement we identify and close vulnerabilities in DOD networks, act to contest threats, and enable partners in building resilience and in the defense of the nation. These steps complement and support national efforts to prepare for conflict, to deter adversaries, and to establish cyber norms while we simultaneously support combatant commanders in contingency operations.

*Supporting the Combatant Commands and Establishing a Warfighting Ethos.* A competitive mindset is needed to prevail in a deeply competitive domain. Such a mindset also helps us prepare to fight and win the nation's wars. To support combatant commanders and their missions we are engaged in a growing variety and number of activities, from planning to intelligence missions to operations in and through cyberspace. We bring to the combatant commands a wartime ethos reinforced by daily contact with cyber adversaries.

Our cyberspace operations support kinetic and information operations against terrorists across several regions. We are employing cyber capabilities to improve force protection, bolster intelligence, understand and shape the information environment, and disrupt the operations, command and control, and propaganda of several insurgent and terrorist groups in support of United States Central Command (USCENTCOM), United States Africa Command (USAFRICOM), and United States Special Operations Command (USSOCOM). Cyberspace operations in places like Iraq, Syria, Yemen, and Afghanistan today integrate and synchronize cyberspace and information operations with kinetic missions, with each enabling the other for offensive, force protection, and intelligence purposes. Our persistent engagement with this adversary for the past several years shows the continuing value of our command in being able to operate across all of these regions against the key enablers for these groups (e.g., media, finance, and foreign fighters). In this context, we have expanded the remit of our Joint Task Force Ares, and shifted its chain of command from Army Cyber Command to Marine Corps Forces Cyberspace Command while maintaining its principal task of operating against the Islamic State. JTF-Ares has also embarked on a special mission partnership with NSA to act together as a hub for whole-of-government cyber planning in the ongoing counter-terror fight (thus further demonstrating the value of the USCYBERCOM and NSA partnership).

The maturation of the Cyber Mission Force has increased the number and proficiency of the cyber units working to protect the networks and weapons systems that combatant commands rely on to perform their missions. Each combatant commander controls organic Cyber Protection Teams (CPTs) that work in conjunction with local and regional cyberspace security providers and administrators. The expertise and databases at USCYBERCOM tie these teams together and greatly increase their collective power. US Indo-Pacific Command (USINDOPACOM) and US Forces Korea have hosted frequent visits of our teams and experts to assist in surveying and hardening their military critical infrastructure in advance of any contingencies in East Asia and the Western Pacific. US Transportation Command (USTRANSCOM) has benefitted from similar assistance in support of its global operations and commitments. In Europe we assisted USEUCOM, NATO allies, and other partners to secure their networks from foreign interference. Finally, our efforts helped US Southern Command (USSOUTHCOM) and USNORTHCOM in election security, border security, and disaster recovery efforts.

Evolving national and departmental guidance creates opportunity for timely cyber operations in support of the combatant commands and in our role in the Chairman of the Joint Chiefs' global integration efforts. This includes both planning cyberspace operations support to trans-regional campaigns and prioritizing the allocation of high-demand, low-density cyber assets across the commands and in all phases of conflict. The Department and the Chairman have clarified the command and control of cyberspace forces, and in accord with this guidance we are building "cyberspace operations integrated planning elements" (CO-IPEs) at each combatant command.

The new, Service-like authorities and responsibilities that USCYBERCOM gained as result of elevation are similar to those authorized for USSOCOM on behalf of the nation's Special Operations Forces. USCYBERCOM is the Department's Joint Force Provider and Joint Cyberspace Trainer for cyberspace forces. In these roles, we develop strategy, doctrine, and tactics; prepare and submit program recommendations and budget proposals; exercise authority, direction, and control over the expenditure of funds; validate requirements; establish priorities for requirements for cyberspace capabilities, forces, training, and operations; and ensure the inter-operability of equipment and forces. We are working with the Department to build approaches across the force and leverage these new responsibilities to better measure, access, and improve the quality and readiness of the entire cyber force.

*Improving Readiness.* The rapidly evolving cyber domain makes achieving and maintaining force readiness a challenge. Similar to other Department forces, the readiness of our cyber forces can be understood as a two-part equation. First, we are evaluating the readiness of the teams that the Services (under their man, train, and equip missions) present to the Command. Second, we are studying the readiness of those teams to perform the missions they have been assigned by USCYBERCOM, something we refer to as "mission posture."

The Cyber Mission Force completed its build in May 2018, and we started formally reporting team readiness in the Defense Readiness Reporting System (DRRS) shortly afterward. USCYBERCOM is working with the Services to ensure that they present cyber forces that meet a common, joint standard so that the soldiers, sailors, airmen, and marines coming to the Command have proficiency with foundational cyberspace tools, techniques, and procedures. As part of that plan, the Services recently assumed the training mission for personnel in the CMF that USCYBERCOM (together with NSA) had overseen during the build. We are refining training curricula and standards, as well as simplifying and updating course requirements so we can ensure the right number complete their training with the appropriate skills.

The second part of the equation—mission posture—is not as accurately reflected by traditional metrics. Thus we are developing metrics that go beyond those traditionally used in order to capture cyber-unique requirements such as authorities, accesses, capabilities, and intelligence. Such dependencies are not always measured in conventional DOD readiness reporting, yet they play a critical role in generating successful cyber operational outcomes. Our goal is to ensure operational proficiency in our CMF teams by taking an appropriately holistic view of readiness and applying resources to shortfalls. Working with the Services and the Department, we will develop and institutionalize the changes necessary for us to accurately measure and maintain team and mission readiness across the CMF.

To help sustain an advanced cyber force, all of the Services are applying hiring and retention incentives (especially for high-demand, low-density skill sets) as well as utilizing the flexibility in managing talent that Congress recently granted us by authorizing the new Cyber Excepted Service. The retention of top talent—particularly in some critical, high-skill jobs—is a significant concern because it will be crucial to our continued success. We track attrition closely, as the competition with the private sector and other government agencies for talent will be an enduring challenge. An important element of building certain low-density skill sets, moreover, is outreach to and utilization of our Reserve Component.

Underpinning our readiness are the operational lessons we learn from continuous operations in cyberspace. Operations in support of JTF-Ares and the counter-terrorism fight, the security of the 2018 midterm elections, and ongoing support to combatant commands across both the defensive and offensive mission sets, are improving our training, informing how we structure our teams, and indicating how best to employ our capabilities and teams.

*Enhancing Partnerships.* Securing the nation in cyberspace requires whole-of-nation efforts and effective collaboration with allies. It is a priority for USCYBERCOM to expand its ability to collaborate effectively with other government agencies, the private sector, academia, and allies. We must do this because they directly and indirectly complement and enhance our warfighting capabilities; indeed, enabling our partners is a key element of persistent engagement. We are working with a range of partners who support, enable, and assist our operations.

The National Security Agency is our most important partner; the strength of this relationship will remain critical to the defense of the nation. The Agency's world-class expertise, technical capabilities, and accesses are crucial to USCYBERCOM's success. The USCYBERCOM-NSA relationship is proving mutually beneficial as the Command has matured. Indeed, I believe the speed and agility that USCYBERCOM and NSA demonstrated in joint operations to defend last fall's elections is evidence of the mission benefit of unity of effort and direction, the close proximity between

USCYBERCOM and NSA, and our joint focus on outcomes for the defense of the nation.

USCYBERCOM works daily with partners in DHS, FBI, and other federal agencies, sharing information and intelligence, as the U.S. Government furthers efforts to work even more effectively with the private sector. Since May 2018 we have worked to broaden these ties, both at the leadership and the action-officer levels. I have mentioned last fall's whole-of-government effort to defend the mid-term elections, but our collaboration with interagency partners is continuous and far broader. We interact constantly with the US Coast Guard's cyber forces and have Coast Guard senior officers integrated in USCYBERCOM. In addition, the CYBER GUARD exercise last year included USCYBERCOM, DHS and FBI elements practicing a whole-of-government response to an incident involving the nation's critical infrastructure.

We see growing partnerships with industry (particularly in critical infrastructure sectors like energy and finance) as a natural extension of such relationships. Working with the DOD—Chief Information Officer and NSA, USCYBERCOM has developed a Pathfinder program with DHS, sector-specific agencies, and select critical infrastructure partners to share threat information, conduct collaborative analysis of vulnerabilities and threats, and mitigate those risks. This whole-of-nation collaboration is crucial to our ability to deter or defeat strategic threats to US national interests and infrastructure. This is a complex mission in both technical and policy terms, in part because our work in this field occurs at the request of and in collaboration with Federal government partners, particularly DHS and FBI. Recent changes to our policy guidance—especially those crafted in agreements with these and other agencies—have brought clarity to this process. By partnering with DHS, FBI, and sector-specific agencies we are building persistent presence to improve the resilience and the defense of our Nation's critical infrastructure.

USCYBERCOM has been active with current and prospective foreign partners, especially countries contemplating or building their own cyber forces. We have integrees from our “Five Eyes” partners (including a Canadian brigadier general) on the Command staff. USCYBERCOM in fiscal year 2018 conducted bilateral cyber exercises with France, Estonia, and Japan, while two dozen countries sent observers to our annual CYBER FLAG exercise last June. We also provided advanced training to a FVEY partner via our first Foreign Military Sales case, and provided defensive operations guidance to Singapore. Lastly, we maintain robust operational relationships with a variety of international partners in the continued fight against violent extremist organizations globally.

We are building strategic depth in our cyber forces with assistance from the Reserve Component, and in so doing are assisting the whole-of-nation effort to secure our networks. Reservists serve in positions across our headquarters staff, the Cyber Mission Force, and our Service cyber components, as well as playing vital roles in our exercises and training for defending critical infrastructure. Indeed, our Reserve strategy seeks innovative ways to utilize the Reserve Component in unique missions. Finally, Reserve Component personnel not only bring important skill sets to USCYBERCOM, they also enhance our efforts to create cybersecurity coalitions of public and private partners, particularly with industry innovators.

Our engagement with the National Guard Bureau and the 54 state and territorial Adjutant Generals is continuous. We created a framework for DOD to sponsor access to classified information for National Guard personnel supporting local and state election systems while in a State Active Duty status (this was done in coordination with DHS and the National Guard Bureau). We are also exploring options with the National Guard State Partnership Program (SPP), which fosters trust with foreign militaries through bilateral engagements with roughly 70 partner nations. While our Command develops our global partnerships in the cyberspace domain, my intent is to work through the geographic combatant commands in growing theater security cooperation efforts.

*Deploying Infrastructure.* The Command depends on innovative cyber tools and capabilities in crafting strategic and tactical options for senior leaders. The DOD Chief Information Officer and the Services are making necessary investments, in both funding and in finding the right people to develop and maintain cyber tools and capabilities. These Service investments need to continue and be balanced against global mission requirements. Such investments feature the right mix of capabilities for USCYBERCOM to achieve its readiness goals and generate successful mission outcomes.

Our cyberspace forces require a comprehensive, integrated cyberspace architecture to achieve and sustain the insight, agility, and lethality necessary for maintaining competitive advantage against near-peer adversaries. Over the past year we have developed the Joint Cyber Warfighting Architecture (JCWA) to guide capability de-

velopment priorities to this end. The JCWA has five elements: common firing platforms at our four cyber operating locations (each operated and employed by our Service cyber components) using a comprehensive suite of cyber tools; a “Unified Platform” for integrating and analyzing data from both offensive and defensive operations with intelligence and partners (including the private sector); joint command and control mechanisms for situational awareness and battle management at the strategic, operational and tactical levels; sensors that support defense of the network and drive operational decisions; and a Persistent Cyber Training Environment where teams can train and even rehearse missions under realistic conditions. The JCWA is not a fixed future state, but rather an adapting set of capabilities continually evolving along with technological change, operational outcomes, and shifting threats. The Department has leveraged the architecture to make critical JCWA program investments that, when realized, will allow us to not only gain advantage in competition with cyber adversaries, but also to fight and win in conflict.

Acquisition authorities are also a critical enabler for us. I thank this Committee and Congress for extending our tailored acquisition authority through fiscal year 2025, and will work with the Department to implement and recommend refinements. That extension allows us to craft more contract actions under our current authorities rather than having to leverage existing contracts held by other partners. In fiscal year 2018 we executed 32 contract actions totaling \$43 million, and we could reach as much as \$75 million in this fiscal year. Our acquisition priorities include the geographically distributed set of redundant and reliable infrastructures noted above as well as a virtual arsenal of capabilities (comprising both open-source and high-end tools); implementation of cloud and engineering services in support of a big data platform; foundational architecture portions of the Command’s continuous monitoring capabilities; and a competitive cyber tool contract. Cyber tools can be highly perishable, unlike conventional munitions, but they are also like munitions in that, as they are expended, we must continuously invest in their development and procurement.

#### CONCLUSION

Thank you again for inviting me here today on behalf of U.S. Cyber Command. Your continued support is vital to the work we do, both to enable our partners and to act in cyberspace on behalf of our Nation. USCYBERCOM made significant progress in the past year. We have been elevated to a combatant command and are maturing in our new responsibilities. All of our Cyber Mission Force teams are built and, in conjunction with the Services, we are working to enhance and sustain their readiness. The Department is investing in essential operational infrastructure and is committing additional resources to build the Joint Cyber Warfighting Architecture that the Command needs. Enabled by new law, policy, and mission guidance, we are conducting operations every day—both to support combatant commands and forces engaged overseas, and to contest cyber adversaries in defense of the nation. Persistent engagement initiatives, like the operations conducted in partnership across government, with allies, and with the private sector in defense of the 2018 elections, will cumulatively impose cost on our adversaries and change their risk calculus for future operations.

Looking ahead, the work we have done to date may soon seem both crucial and preliminary. We are in continuous daily contact in cyberspace with capable adversaries determined to erode our Nation’s strategic advantages. Our efforts to act against them and to enable our partner combatant commands, government agencies, and allies have helped to defend our Nation and its interests. Those efforts, however, must rapidly become more agile, more capable, and more sustainable. My vision for the Command encompasses a continuous role for our forces in making our fellow combatant commands and our whole-of-nation partners even more effective in competition with adversaries and in preparing for and acting in conflict.

We have much work ahead, of course, and your continued endorsement and assistance are both necessary and gratefully appreciated. Our people are superb. They merit your trust, and, with your support, USCYBERCOM will continue to meet every challenge, in both competition and conflict.

Senator INHOFE. Thank you, General Nakasone.

First of all, I think we’ve all pretty much decided that this Commission, the National Defense Strategy Commission, is kind of the blueprint that we are using in this Committee. To start this off, let me address the two levels of threats that we’re talking about.

First, of course, the level of threat would be the peer competition that we have out there; then the terrorist element that's out there. It's very alive today.

So, starting off with, maybe, a response from both Generals on the first one, how can SOCOM and CYBERCOM most effectively support our efforts against China and Russia? Talk a little bit about any deficiencies, in terms of resources, that you would be suffering in order to carry out these goals.

General THOMAS?

General THOMAS. Chairman, you highlight, at the outset, the challenge is to maintain the focus on the counter-violent-extremist effort while shifting to the focus of the National Defense Strategy. I would tell you that it's burdensome, in terms of resources, but something that we can and will manage, going forward. I'm lucky, on two accounts. One, my predecessors had already focused on Russia and China as emerging threats, before the National Defense Strategy, and had already committed resources to that effort. So, I appreciate the investment that preceded me. I also appreciate some new authorities that have developed in this house which have enabled us to approach this problem differently, but similarly to the way that we approached the counterterrorism problem. So, resources that enable some unique, unorthodox approaches to peer competitors, especially in that space that we call "competition short of conflict"—a big arm wave, but arguably, the most important phase of deterrence.

Senator INHOFE. Yes. Thank you.

General NAKASONE.

General NAKASONE. Chairman, in terms of our ability for near-peer or peer competitors, our most important thing right now is to be able to enable our partners, whether or not those partners are Joint Force commanders in cyberspace or those partners are other members of the interagency. Our work with the Department of Homeland Security and the Federal Bureau of Investigation is an exemplar, I think, of the enabling aspect that we will do against near-peer competitors.

Senator INHOFE. Yeah.

General NAKASONE. I would also offer that the Fiscal Year 2019 National Defense Authorization Act was critical for us at U.S. Cyber Command. It gave us capabilities and authorities that were important for us as we look to further enable. That included the ability for us to rapidly deploy elements of our force to the Department of Homeland Security, the ability for us to look at networks that are not part of the Department of Defense network. The other piece of it that was critical, as Ranking Member Reed mentioned, is the idea of cyber as a traditional military activity. I think those are areas that are going to help us immensely with near-peer competitors.

In terms of our shortfalls and our challenges, the areas that we are very focused on is continuing to ensure that the force that has been built, the force that is ready, the force that will operate has the required infrastructure—the sensors, the locations, the capabilities—to address a number of different threats to our Nation.

Senator INHOFE. Appreciate that.

I'm going to read a quote from Dan Coats and ask for a response, Secretary West and General Thomas. He said, "ISIS still commands thousands of fighters in Iraq and Syria, and it maintains eight branches, more than a dozen networks, and thousands of dispersed supporters around the world, and will exploit any reduction in CT pressure to rebuild key capabilities, such as media production and external operations." Do you agree with that? Let's start with you, Mr. Secretary.

Secretary WEST. Mr. Chairman, I do.

Senator INHOFE. General Thomas?

General THOMAS. Mr. Chairman, I do. But, I would add, in context, we have crushed the physical caliphate, so the terrain that ISIS formerly maintained a sanctuary from where they drew their resources—specifically, oil resources—has been badly diminished, but they continue to be a threat. I agree with the scope of the assessment, as provided by the Director of National Intelligence (DNI).

Senator INHOFE. We get a variety of reports, in terms of the effectiveness of ISIS, al Qaeda, and the various other terrorist operations. We want to make sure that everyone understands, yes, that peer competitors are important, but so is the other.

Senator Reed.

Senator REED. Well, thank you very much, Mr. Chairman.

First, let me join General Thomas in thanking and commending Command Sergeant Major McCauley for your service. Thank you. We all recognize the noncommissioned officers in every service are the backbone and I think, the winning edge that we have. So, thank you.

Secretary West and General Thomas, if you could elaborate on the challenges that still face you in implementing section 922, that would be very helpful to us and, if anything that we can do to help make section 922 the whole issue of creating a service-like Secretary under the ADS SOLIC.

So, Secretary West, please.

Secretary WEST. Thank you, Senator Reed.

Well, section 922 has certainly reinvigorated our relationship, but it's also very timely, because our basic task is to help institutionalize USSOCOM within the Joint Force and in the Pentagon while keeping its unique attributes. But, it also has come along simultaneously with the National Defense Strategy. This year, General Thomas and I have cosigned four separate letters, one of which was to align SOCOM's fiscal strategy to achieve the NDS. This body has been very supportive. I think we are very adequately supported. I think the task is really left up to us to slowly build this business and achieve our objectives.

Senator REED. Thank you.

General Thomas, your comments.

General THOMAS. Senator Reed, I noted at the outset that Owen referred to me as his teammate, which I appreciate, because, technically, he's my boss. In legislation, as you know, affected by this last year, with one of my hats on for the man, train, and equip, service-like responsibilities, he is literally in my chain of command, and we have embraced that, going away. I think that actually integrates us with the Department more optimally. Conceptually, we've



certainly been able to drive the relationship, I think, to a much more enlightened level. I hope that it continues to evolve. I think ASD SOLIC provides a critical function for us, for integration with the Department. Again, it's been a pleasure working with Owen as we've developed out what I think your intent was.

Senator REED. Thank you.

General Nakasone, again, thank you for your service, particularly your great efforts with respect to the last election and looking forward to the next one. One of the areas is social media. We've talked about it, and you've talked about it with the Intelligence Committee. There were two independent reports commissioned by the Senate Intelligence Committee that looked at social media, not just particular platforms, but the cross-movement of information on these platforms. Do you think it would be helpful having studies like this for your use? Should we contemplate trying to provide you the authority to do that?

General NAKASONE. Certainly, Senator. What we found with those reports is that they provided a window on the adversary that we hadn't seen. As you know, our focus on foreign intelligence is outside the United States, so that we were able to capture that. But, having the reports that were done, in terms of what was done within the United States, was very, very helpful, in terms of being able to understand exactly what our adversary was trying to do to build dissent within our Nation.

Senator REED. So, if we could somehow institutionalize that—maybe the proper format might be through the Intelligence Committee, but those reports are useful to you and complement your direct activities.

General NAKASONE. Those reports certainly provided a window on our adversary that was very telling.

Senator REED. One of the issues that came in the context of social media is, will they voluntarily take steps that are appropriate and necessary? Now, my understanding is that they do take down sites that have been identified. But, I also don't think they identify to the consumer that these sites were either fraudulent or malign. Is it something that they should be doing, in your view?

General NAKASONE. Senator, what we were able to do was declassify information about our adversaries, and pass that through the National Security Agency to the Federal Bureau of Investigation. The FBI specifically worked with those social media companies. So, I would defer to the Bureau, in terms of its ability to do what you had stated there.

Senator REED. Fine.

Again, gentlemen, thank you for your service.

Thank you very much.

Senator INHOFE. Thank you, Senator Reed.

Senator Fischer.

Senator FISCHER. Thank you, Mr. Chairman.

General Thomas, thank you for your service to this country, and congratulations on your retirement.

General Nakasone, thank you for your service to the country, as well.

Over the years, many have talked about deterring adversaries in cyberspace, and the broader question of cyber deterrence is often

compared to nuclear deterrence. I've said this before. I don't think that's a good comparison at all. You made a similar point in a recent article, where you argued that deterrence in cyberspace results from the employment of cyber capabilities, not the threat of employing them, something you describe as persistent engagement. You mentioned, earlier, that this Committee and the White House have provided CYBERCOM with additional authority in the past year. Can you tell us what impact those changes have had?

General NAKASONE. Senator, a year ago, I appeared before this Committee for my confirmation hearings. In that year, let me just trace, I think, the major elements that have helped our Command be able to be more effective.

First of all, our National Strategy on Cyberspace, the Department's Strategy on Cyber Posture Review. Then, the key piece that I would offer is the Fiscal Year 2019 National Defense Authorization Act. That recognized cyber as a traditional military activity, that provided us the baseline of being able to operate outside of our Department networks and the idea that we would enable other elements of our interagency. Tremendously helpful, and then I would say the last piece is the work of the President to bring a new policy to bear, in terms of how we operated offensively in cyberspace.

Senator FISCHER. Have you been able to put your theory of persistent engagement into action?

General NAKASONE. Senator, we have. Our number-one priority was the defense of the midterm elections. We utilized all of those capabilities, those strategies, and our new operational concept, persistent engagement, to ensure a secure and safe election.

Senator FISCHER. I appreciated your classified briefing on that the other day. I think it was very helpful for Members to hear that.

Is it your view that imposing costs on adversaries through persistent engagement—is that going to have a deterrence effect? Or do you think there is any connection between a cyber deterrent and also a nuclear deterrent? I saw you shake your head when I mentioned that in my opening to your question.

General NAKASONE. Senator, I would offer that my view on nuclear deterrence is much different than on the idea of cyber engagement and being able to prevent our adversaries from accomplishing their goals. As I mentioned, in nuclear deterrence, the power that a nation-state has is through the threat of the use of the weapons. What we're seeing in cyberspace is, our adversaries are operating below a level of armed conflict every single day to steal our intellectual property, to leverage our personally identifiable information, to challenge our institutions. This is where I believe being able to operate either to enable other elements of the interagency or operate outside of our national borders against our adversaries is important.

Senator FISCHER. I would say, from your comments, and you can correct me on this, but that you don't believe, then, that cyber is a substitution for the deterrence that we achieve through our nuclear enterprise.

General NAKASONE. I believe that cyber is, overall, one element that our Nation is going to use to achieve deterrent effects against our adversaries, but there are other elements, other powers of our

Nation that we will also bear on adversaries that attempt to operate below this level of armed conflict.

Senator FISCHER. Last year, I discussed the adequacy of the size of the Cyber Mission Force with your predecessor, and he testified that, "We're probably going to need some level of additional capacity over time. That's something I'll be talking to my successor about. I think that it's going to be a key thing for him during his time in command." So, how adequate do you believe the size of the force is compared to the threat that we are seeing today? How do you measure force adequacy?

General NAKASONE. Senator, as we measure our readiness against what we consider a number of different adversaries, primarily both near-peer and rogue states, we believe that the teams that we've created right now is the building block for that. We are also, as you know, building a series of defensive teams in the Army Reserve and the National Guard that are going to be a strategic depth for us.

My sense, as we continue to operate more, as our adversaries continue to improve, is that there will be requirements that will probably be outside the 133 teams that we have right now.

Senator FISCHER. Thank you.

Thank you, Mr. Chairman.

Senator INHOFE. Thank you, Senator Fischer.

Senator King.

Senator KING. Thank you very much, Mr. Chairman.

General THOMAS, when we had the new overall National Defense and Security Strategies that put more focus on near-peer competitors or peer competitors, there was a implicit hydraulic effect that efforts were going to go up on the conventional peer competitor, and down on counter terrorism (CT). Do you see any reduction in the CT threat around the world? The hydraulic effect, it seems to me, is not a good idea, because the CT threat is still there, is it not?

General THOMAS. Senator, I think the CT threat is in the throes of transformation. As I mentioned, this time last year, we had just taken Raqqa, the capital of the caliphate, but we still had substantial maneuver operations and challenges to push through to the destruction and the defeat of the physical caliphate. We're much closer now. Somebody played it out to me the other day that if you wanted to put a grasp on it in physical terms, it's twice the size of the base where I'm stationed, MacDill Air Force Base, which is tiny. So, they are down to the last dozens of square kilometers, in terms of physical—

Senator KING. But, the CT threat between 2001 and 2011 wasn't measured in territory, it was in terrorist threat. So, that's still there, isn't it?

General THOMAS. You're correct. I would offer that, in our efforts to defeat ISIS, we have also greatly diminished their ability to export the threat to the United States and to our Western allies. In, though, the throes of this transformation right now, they still are very dangerous, and I could highlight the specific groups that we consider to be external threats to the United States that are truly our focus. We're staying on them.

Senator KING. There is a growing CT threat in Afghanistan, is there not?

General THOMAS. Sir, I wouldn't label it as growing. In fact, we've made huge progress against the Islamic State in Iraq and Syria-Khorason Province (ISIS-K), which is the primary external threat in Afghanistan. More regional instability in Afghanistan is of late, but not in the form of external threats.

Senator KING. Thank you.

General Nakasone, you've described the progress that you've made in this year. I'm on my way, from here, to a hearing on the security of the electric grid in the Energy and Natural Resources Committee. It seems to me this is a classic case of cross-jurisdiction. Please describe your relationship of CYBERCOM and NSA to FBI, DHS, and utilities. How do we be sure that what you know and are able to do is protecting us, because you don't have jurisdiction within the United States?

General NAKASONE. Senator, for the energy sector, the lead for the securing of that critical infrastructure is the Department of Homeland Security. They work very, very closely with the sector-specific lead, which is the Department of Energy. We tie in on the U.S. Cyber Command side, providing enabling support to the Department of Energy and the Department of Homeland Security, if requested. Right now, what we are doing is sharing information, sharing information very clearly about what we know about foreign adversaries that may be attempting to get—

Senator KING. Do you share that information with the utilities or—

General NAKASONE. We share that with the Department of Homeland Security and, specifically, Department of Energy.

Senator KING. Let me ask about structure, sharing of information. Is there a regular structure? Is there an organizational chart of these relationships, where you meet regularly, or is it sort of ad hoc?

General NAKASONE. We have put into place within the Department of Defense a pathfinder program to look at this element. We've established a regular meeting with the sector security agent, which is the Department of Energy, working with them and the Department of Homeland Security to share that information regularly.

Senator KING. Finally, you've talked with Senator Fischer somewhat about deterrence, and you're talking about a persistent engagement, which is, in effect, telling the adversary we're there. The question is, how do we change their calculus? Is your theory of persistent engagement—I think you used the term "engagement, presence, and pressure, or innovation" intended, and will it change an adversary's calculus when they come to decide whether to launch a cyberattack on our electric grid or a financial system or elections?

General NAKASONE. Senator, we think it will, through two different means. One is through building resilience, in terms of what we're able to provide to our partners and their knowledge of our adversaries, but, two, also imposing a cost on our adversary.

Senator KING. That's what I want to hear about.

General NAKASONE. Yes. So, the ability either to be able to identify where they're operating from, the tools that they're using, to

be able to provide that cost that the adversary has to think twice, in terms of, “can they conduct and exploit or attack against our critical infrastructure?”

Senator KING. But, the calculus is, can they do it? But, shouldn’t there be a calculus, if they do it, they will be responded to in a forceful way?

General NAKASONE. Certainly, Senator. I think that comes not only with cyber, but also all the elements of our Nation that can be brought to bear on that adversary.

Senator KING. I think that’s important, and it doesn’t have to be cyber-for-cyber.

General NAKASONE. Right.

Senator KING. It can be other elements of national power.

Thank you very much, General.

Thank you, Mr. Chairman.

Senator INHOFE. Senator Hawley.

Senator HAWLEY. Thank you, Mr. Chairman.

Assistant Secretary West, many of us on the Committee are working through the President’s decision to withdraw forces from Syria. It appears there’s a fair amount of work to be done there. I’d just like to know, from your perspective and from a SOF perspective, how would you characterize victory in Syria, winning in Syria? What does that look like, and what do you need to get there?

Secretary WEST. Sir, I’d be cautious to use the word “victory,” but I think it’s very important not to diminish what has happened there. As General Thomas said, the physical caliphate did, at one time, attract over 40,000 foreign fighters into that territory, from 100 different countries. They can no longer do that. But, this will be a very long war. ISIS is quite expansive, in terms of its global territory, but it now becomes an insurgency.

Senator HAWLEY. General Thomas, let me just ask you the same question. What does winning look like in Syria? Have we won? I mean, are we satisfied with where we are, in terms of SOF’s mission there and what you feel that you’ve been tasked to accomplish?

General THOMAS. Senator, again, I’d be hesitant to use the term “winning,” as opposed to the objective. I think our reasonable objective is to reduce the threat in that area, and to be able to maintain persistent capability so that an external threat cannot emanate from that area in the future.

Having said that, Syria is perhaps the most complex battlespace that I’ve experienced in 40 years. My recent trip out there had our forces operating in and around Syrian regime forces, Russian forces, Turks and their surrogates, Iranian Revolutionary Guard forces, Lebanese Hezbollah, and ISIS. Again, an incredibly complex environment that I think, again, the objective is to reduce the threat and be able to maintain some sort of sustainable security there.

Senator HAWLEY. On that point about reaching a point where the external threat can’t emanate from that region, are you satisfied, General, that we’re at that point, where an external threat from VEOs cannot emanate from Syria? I mean, do you think we’ve accomplished that objective?

General THOMAS. I do not think we're there yet. We're on the verge of diminishing the threat, and then in the process of determining what residual capability needs to remain in place in the region to ensure that we're securing that objective.

Senator HAWLEY. Let me ask you, General, about recruiting and retention. You talk about this in your prepared testimony. You talk a lot about the significant strain on SOF over the doubling of the size of the force and the significant deployment demands. Tell me about where you think we are, in terms of recruitment, retention, what additional tools or help that you need to make sure that your force is ready, is rested, is healthy, and is getting everything they need to be able to do the very significant and demanding and dangerous work we ask them to do.

General THOMAS. Senator, over the years, we have aspired to grow the Special Operations Force that the Nation needs, but have not dropped standards at all, so it's a little bit of a Catch 22 here. Part of our mantra is, you can't create this in a hurry, and people are our most important asset. We have had challenges, of late. I attribute them to a number of causes, as much the downsizing of the Army, specifically, for recruiting Special Forces, but there are some very good initiatives in place to rectify that and to try and address our recruiting shortcoming. So, I think we're trending in the right direction, but it has been challenging over the last year to 2 years, in terms of getting the numbers in that we would like to have, but cognizant of the fact we're not going to drop standards.

Senator HAWLEY. Is it your sense, General—and then I'll put the same question to you, Secretary West—but, starting with you, General, is it your sense that, under the NDS and the new reprioritization of great-power conflict, that demands on SOF will be the same, or will increase? I mean, what's your sense of it as you think about your posturing and your needs under the NDS? What do you see about the demands for the forces that you command?

General THOMAS. I think, department-wide, we all can take away that the NDS highlights there's not going to be a respite, in terms of national security challenges. You know, we've had an 18-year ongoing struggle, the longest struggle in the history of the United States. That has not come to a conclusion yet. We have some work left to do there. We've had the reemergence of peer competitors as a priority, an existential threat and clearly the focus for the Department. So, we share that across the Department. I get pretty good guidance from the Department, in terms of where they want me, in terms of priorities and effects as a part of the Joint Force, and we manage that. As global combatant commanders that provide forces to the six geographic combatant commands, Paul's and my daily challenge, but it's one we embrace.

Senator HAWLEY. Very good.

Thank you, Mr. Chairman.

Senator INHOFE. Thank you, Senator Hawley.

Senator Duckworth.

Senator DUCKWORTH. Thank you, Mr. Chairman.

Gentlemen, thank you so much for being here today.

You oversee a directorate and combatant commands that operate not in just one geographic area of responsibility (AOR), but also in

the most austere environments around the world. The men and women you lead are often the first in battle, and the heroism and dedication are not fully understood by elected leaders and the American public. So, I'm very appreciative of the opportunity to hear from each of you about the state of your Commands and the challenges and opportunities you face.

So, I'd like to take this opportunity to thank General Thomas for his 38 years of service as you come to the end of your time in uniform. I really wish you the best of luck on your next phase of your career.

Since the Committee began hearing testimony from military leadership this year, much of the conversation has been about ensuring that our forces are lethal and agile so that they provide a credible deterrent, reducing the probability of armed conflict with our peer adversaries. Yet, Special Operations and Cyber Forces are uniquely tailored and trained to achieve effects against our adversaries in a variety of situations that are just short of war, itself. Could each of you briefly discuss, conceptually, how Special Operations and Cyber Forces can exact a toll for malign activities, short of supporting armed conflict? In your opinion, what kind of restructuring with the Special Operations and cyber communities will they need to do in order to dominate these gray-space conflicts?

Secretary WEST. Thank you, Senator. Certainly, you're correct, in that the nature of war doesn't change, but its character has changed radically in the last 15 years. I'll let General Nakasone take on the cyber portion.

In terms of the Special Operations tactics, where SOF traditionally thrives, we're also seeing the enemy employ these. I'll let General Thomas talk specifics on operations. But, when we talk about competition short of armed conflict, dealing with partner nations, problems that need to be quickly and agilely solved in a cheap manner, you're really talking about SOF. So, there's a real role for that, that General Thomas will be able to describe.

General THOMAS. Thanks, Senator, and thanks for your service, as well.

Senator, we're actually very excited about the opportunity that the NDS and the specific subject of competition short of conflict offers for us and in conjunction with Paul and others, in terms of winning that critical phase, and winning, in that case, is not a defeat moniker that applies. It's to disrupt, deny, and really, ensure that our U.S. policies and objectives are pursued and successful. We think it's a combination of information operations, influence operations, partner capacity, cyber operations, in conjunction with Paul, the whole array of, nonkinetic activities that are really an art form that we're excited to employ in the future. We hope to play a substantial role there.

Senator DUCKWORTH. Thank you.

General Nakasone, on Tuesday, Admiral Davidson highlighted to this Committee the need to enhance the cyber defenses of our logistical networks, which touched the commercial industry that we help contract for support, both in the United States and overseas. Can you provide examples of what might be affected and how we might be able to harden the network when it comes to organizations such as U.S. Transportation Command (TRANSCOM)? We

have this long logistical tail that must support our forces, no matter where they're operate, and I feel like they are sometimes the most vulnerable, and we overlook—those organizations. How does TRANSCOM fit into your priority for cybersecurity?

General NAKASONE. Senator, General Lyons and I have not only had discussions about this at Transportation Command, but I've also been out to visit him. We see the ability for us to project our strategic elements in the world as being something that's uniquely suited for our Nation and a tremendous capacity. What we are doing at U.S. Cyber Command is ensuring that we understand the networks that he has to operate on, the platforms that he is utilizing, and, most importantly, the data, because it's that data that we want to make sure that we can secure.

The challenge you point out is making sure that we have enabled our partners. These partners are oftentimes private-sector partners that we work with, the Department of Homeland Security, and other sectors, to ensure that they have the information upon which they understand the threats to them and they can build more resilient networks and protect their own data.

Senator DUCKWORTH. Thank you, General.

I yield back, Mr. Chairman.

Senator INHOFE. Thank you, Senator Duckworth.

Senator Cotton.

Senator COTTON. Thank you, gentlemen, for your appearance here today.

General Thomas, let's start with Syria. We've talked a little bit about the state of the fight there and the great advances our troops have made, and a little bit about what will happen when our troops depart Syria. One thing that's been on my mind is all the bad guys that are currently being detained in Syria. Some of your colleagues have testified before the Committee that that number would go into the hundreds. We don't have to be any more specific here in this setting. They've also testified that, while some of those detainees are front-line, untrained cannon fodder, some of them are also external operation plotters and master bombmakers and other really bad guys. Is that your understanding, as well?

General THOMAS. Senator, without getting into the specifics on the numbers, it's actually closer to a thousand than it is hundreds already in detention, with potentially more to come. A huge area of concern for us is that they're being maintained by the non-nation-state that's otherwise known as the Syrian Democratic Forces (SDF). So, how we resolve these mostly foreign-fighter detentions from, I lost count, but it's in the dozens of countries that have contributed to it—but, how we reduce this, that threat, and have those people properly detained and handled over time is of paramount importance right now for the problem.

Senator COTTON. Yeah, how are we going to do that?

General THOMAS. A pretty aggressive action right now, Senator, ongoing with State Department and with other partner nations to specifically reduce that threat. I'll give kudos to some of the countries, a surprising number of countries who have recently stepped up, some of the smaller countries that had capacity challenges, but that have, nonetheless assumed the burden—or started to assume



the burden. We, with State Department, primarily, are trying to assist them in reducing this problem.

Senator COTTON. I know it's not in your area of operations, but we have empty beds at Guantanamo Bay, don't we?

General THOMAS. Yes, Senator, we still do.

Senator COTTON. Maybe we should consider that for some of those really bad guys in Syria.

While we're talking about Syria, let's contrast Syria and Afghanistan, or specifically Afghanistan against some of the other places where we have a serious terrorism threat. The President said, a couple of weeks ago, that we're going to have troops in Iraq for a while, in part because we need to watch the counterterrorism (CT) threat there and the threat of Iran. That's right next to Syria, in places like Yemen and Somalia. We obviously have freedom of action in the seas for a lot of your troopers. Contrast the CT mission that we have in Afghanistan, which I think, is 800 or 900 miles from the nearest sea, and the challenge that we would face there if we significantly drew down our troop presence in the conventional forces, for your forces and Special Operations.

General THOMAS. Thanks, Senator. Truthfully, we look at it in a global context. So, in Afghanistan, as Senator King pursued earlier, the external threat adversaries have been greatly diminished, and we're focused on them specifically. There's a larger counterinsurgency effort that you know is into its 18th year, but with a specific focus to support Ambassador Khalilzad's efforts to drive that into reconciliation. So, a distinctly different problem, but correlated, in terms of the global threat and their connectivity.

Senator COTTON. It would be hard to get after those terrorist organizations, though, in Afghanistan, for your troops, if we didn't have some kind of physical presence in Afghanistan, isn't that right?

General THOMAS. Senator, access and placement are key, and, again, something you can't establish in a hurry, necessarily, if you leave it. I probably failed to answer Senator King's question earlier. The way we look at the current context is very similar to 2011. The recent annual assessment we did reflects upon 2011, when al Qaeda in Iraq was badly down, but not out, and we pulled out of Iraq at that point. We know that, in less than 2-years' time, they were ISIS, running the deck through Nineveh, running the deck through Anbar. So, how we finish that threat, or at least contain it, going forward, is a critical concern.

Senator COTTON. What's true of our troops is true of enemy forces, as well, right? It helps them to have a safe, secure physical base from which they can carefully plot attacks outside of that base?

General THOMAS. Yes, Senator, they thrive on sanctuary, and they're actively seeking sanctuary right now if they lose their foothold in Syria and other places.

Senator COTTON. Thank you, General Thomas.

General Nakasone, a quick question about the 5G network. We've discussed this many times before. What is the status of your conversations with counterparts around the world to the threat that Chinese companies, like Huawei and ZTE, pose to our telecommunications networks?

General NAKASONE. Senator, for fifth-generation wireless, on U.S. Cyber Command, we have certainly talked with our partners and our allies with that. In terms of the Director of National Security Agency, of which I am, we have also worked that to the Department of State as they've made engagements with our allies throughout the world.

Senator COTTON. Thank you.

My time is expired.

General Thomas, I don't think you'll be appearing here before us again. You are smiling at that, I can tell. I want to thank you and thank your wife, Barbara, for many years of carrying the rucksack of responsibility for our Nation. You have more than earned the opportunity and the privilege to pass it on to the next man.

Senator INHOFE. Thank you, Senator Cotton.

Senator Kaine.

Senator Kaine. Thank you, Mr. Chairman.

Thanks, to all of you.

General Thomas, I offer my congratulations, as well.

I want to ask you a question—and the others may want to chime in, too—about an important aspect of our military operations, which is building partner capacity. As I've traveled in Armed Service Congressional Delegations (CODELs), I've often been struck very positively by the response of our allies to the partner capacity we do with them all over the globe. There was a CRS study—Congressional Research Service study—in 2016 that kind of analyzed about 20 instances of building partner capacity. Its conclusion was that the results are sort of mixed, in terms of effect. I've always viewed the partner-capacity issues, whether we're doing work in the field in other nations, or bringing foreign military leaders here to go to the Army War College, or other institutions, as it's great to build strong relationships; you build them with young officers, and later they might be a Minister of Defense or even a Prime Minister or President. But, as you are finishing your time, your lengthy career, what are the sort of metrics we should be looking at in the build-partner-capacity investments we make through DOD to see whether they're successful or not? Just share, kind of, lessons learned on that, please.

General THOMAS. Thanks, Senator. Great question.

I guess my first point of reflection is how drastically different the approach to partner capacity and, really, partners is from when I first started. It had very little to any contact points. Established relationships were checkered. Often, when countries were deemed to have behaved badly, the first point of separation was to separate International Military Education and Training (IMET) schooling and things like that. It is of great difficulty to keep partners close and to work their capacity if you don't have the point of contact.

Over the years, the establishment and the expansion of our contacts and true partners has been extraordinary, and I tell our younger officers, "You're in a period of time of international relations and partners that I didn't grow up in. Please don't lose sight of the potential."

To your point on success, though, we should assess, constantly, what's the return on investment for these, various efforts. Again, I think the report card's better than, probably, the American public

knows, and it's both with established nations, and the Russia threat's a good case in point. We've had persistent presence in every country in the European landmass with Russia for the last 5 to 6 years, and are thriving there. But, even with untraditional partners—I reflect back on the Syrian Democratic Forces (SDF), which started as seed corn of a couple hundred people and is now 60,000 strong, has done most of the fighting and dying in Syria in support of that effort, has lost thousands of people, but is just an extraordinary force that was cobbled together over time, through a partnering effort. So, I am more inclined to see the potency and the results than some of the shortcomings on it.

Senator Kaine. Secretary West.

Secretary West. Senator, the National Defense Strategy requires us to answer this question.

Senator Kaine. Yeah. Secretary Mattis always says, “by, with, and through”—anytime he was with us, “by, with, and through other nations.” I heard him say that many times, and I know that's an important part of the Strategy.

Secretary West. Since there must be a resource allocation, we must begin to look at, number one, the nature of the threat. Local forces who do not demonstrate intent or capability do not deserve the same resource allocation as do those enemies with the capability and the public declaration that they'll strike us. Number two, what are—as General Thomas said, what are the odds of success of training this force? How long will it take? How well connected are they to the people and to the government?

Senator Kaine. General Nakasone, how about in the cyber realm? Talk a little bit about the partner-capacity issue and activities that we're engaged in with them.

General Nakasone. I would add to the importance of building these partners, as our National Defense Strategy has indicated. My perspective, in terms of what I've seen within the cyberspace domain, is, it provides us three critical elements. First of all, intelligence that we may or may not have by ourselves. Secondly, capabilities that our Nation may or may not have. Third thing, unique placement, placement around the world that is really critical for us, that gives us greater reach as a Nation.

Senator Kaine. I will follow up with this in other hearings, as well, because I think it's really important. It is a significant investment. It's a part of the DOD budget. It's not massive, but I think it has a massive upside if we do it right. We just want to make sure we're analyzing the metrics correctly.

I'm going to ask a question, just for the record, General Nakasone, for you, but let me just preface it. I'm on the Health, Education, Labor, Pension Committee. We are reauthorizing the Higher Education Act this year. Part of that is analyzing workforce and skills gaps and doing things like public-service loan forgiveness and other programs to fill gaps. One of the areas that we're looking at significantly is cyber professionals, whether it's in the DOD side of the house, the DHS side of the house, or in the private sector. So, the question I will ask is if you would have any suggestions for us, as we work on Higher Ed reauthorization, programs that you think are successful to enable us to train and recruit and retain the

cyber professionals that we need. I'll ask that question for the record.

General NAKASONE. Thank you, Senator.

Senator Kaine. Thanks, Mr. Chairman.

Senator INHOFE. Thank you.

Senator Rounds.

Senator ROUNDS. Thank you, Mr. Chairman.

Gentlemen, first of all, thank you for your service.

General Thomas, we most certainly appreciate all of the hard work that you've put in, and your service to our country.

I'm curious, with regard to the Middle East. We've talked a lot about Syria and the challenges that we have there. What about with regard to Iraq at this point? I know that we've talked about the fact that we're going to have forces remaining in Iraq in the near future. The President has indicated that there's the capability to be able to move back into the Syrian areas. But, within Iraq itself, what is the current state of play with regard to ISIS, specifically within northern Iraq?

General THOMAS. Senator, I would offer that our Iraqi partners have embraced their sovereign responsibility, in terms of defending their terrain. We're maintaining, persistent pressure on ISIS, both where they were and where they are intending to try and have any sort of resurgence. So, it continues to be a work in progress, but it's borne primarily through the Iraqi forces, who we have rekindled our relationship with.

Senator ROUNDS. Do you see evidence of their activity in northern Iraq with regard to any incidences that they appear to be responsible for?

General THOMAS. In terms of the Iraqi forces, sir?

Senator ROUNDS. In terms of ISIS' impacts within northern Iraq. Are you seeing evidence of where they're trying to impact local communities and so forth?

General THOMAS. They are attempting to make a resurgence in various locations. But, again, I believe our forces, with the Iraqis, are very aware of where they are, and they're addressing them accordingly.

Senator ROUNDS. Thank you. Thank you.

General Nakasone, I appreciate the way in which you laid out, today, a little bit about the activity that the men and women of CYBERCOM, along with their associated forces within the NSA and so forth, worked very hard with regard to the 2018 election. Would it be fair to say that it is not a coincidence that this election went off without a hitch, and the fact that you were actively involved in the protection of this very important infrastructure that we value?

General NAKASONE. Senator, the security of the midterm election was the number-one priority at U.S. Cyber Command and the National Security Agency.

Senator ROUNDS. Can you share a little bit about what the tools are to protect an election, and the need to protect the tools and the systems and the processes that are used in order to protect an election, as an example, and the different types of threats that you see and that you have to defend against? Could you share a little bit about that?

General NAKASONE. Senator, as part of a whole-of-government effort, we were looking at three different areas. First, we were looking to ensure that we prevented interference in the election. Secondly was to disrupt any attempts by adversaries to influence that election. Thirdly, to impose cost on any adversary that decided that they would attempt to interfere with our democratic processes.

Senator ROUNDS. Would it be fair to say that there's been clear evidence in the past—we've seen—with regard to Russia, who has done propaganda, attempted to manipulate the American public, tried to pit one side against the other, and so forth. In this particular case, would it be fair to say that Russia has, in the past, demonstrated a compatibility in the cyber realm to use Internet activity, social media, and so forth, as a way to do exactly the same thing with more sophistication than perhaps in the past?

General NAKASONE. Senator, the Russians are a very sophisticated adversary in using influence operations that you described.

Senator ROUNDS. Would it be fair also to say that there have been concerns in the past and that the CYBERCOM has worked very hard to make sure that the elections that have been held in the United States have not been impacted directly, in terms of vote counts or anything like that?

General NAKASONE. Certainly, Senator. Again, working as part of a broad government team, that was our focus. I give great credit to Department of Homeland Security, the Federal Bureau of Investigation, and other elements of our Government to work towards this. This was a team effort.

Senator ROUNDS. Very good. Thank you.

In terms of being able to impact social media, we talk about being able to impact and make sure that folks outside of the United States coming in are not able to influence public opinion by providing misinformation. But, there's another piece of this, as well, and that's to actually be able to defend and protect the physical infrastructure within the United States. Would you just simply explain to the public that there is more to it than just simply stopping bad tweets from going out? It is a matter of actually protecting critical infrastructure that it has a real impact on day-to-day lives of American citizens.

General NAKASONE. Senator, one of the things that is within our mission is certainly to protect that critical infrastructure in the defense of the United States. You accurately portray, obviously, both the opportunity and the challenge that we have at our Command in doing that. I would also offer that one of the things that is so important here is the partnerships that you've formed. If there's anything that I've learned over the past several months, these partnerships give us real strength in being able to do that.

Senator ROUNDS. Thank you.

Thank you, Mr. Chairman.

Senator INHOFE. Thank you, Senator Rounds.

Senator BLUMENTHAL.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

Thank you all for being here today, and for your service to our Nation.

General Nakasone, I was grateful to have the briefing that we did—classified briefing, very recently, which I think was very illu-

minating as to the continued threats to our Nation as a result of cyber, particularly meddling and interference with our elections. The threat from Russia continues unabated. Can you say that in public here today?

General NAKASONE. Senator, Russia certainly provides a very sophisticated threat to our Nation, and one that has done over several years.

Senator BLUMENTHAL. That threat ought to continue to concern the American people, shouldn't it?

General NAKASONE. Yes, Senator, it should.

Senator BLUMENTHAL. I said in that briefing, and I've said it in numerous such classified briefings, that, really, I wished that the American people could have heard more of what you told us. In a sense, the enemies know what they're doing; we know what they're doing, to some extent; they know we know what they're doing; the only ones who are in the dark, really, are the American people. As we enter this next election cycle, would you agree that we ought to do everything we can to make the American people aware of that threat?

General NAKASONE. Senator, we will, at Cyber Command, commit to working that. I think your point is a very important one. Being able to educate the public is critical for us. The success that we had in 2018, more of our Nation should know about.

Senator BLUMENTHAL. It was success. I think very few of the American public know about the successes. They assume that the meddling and interference in our election system, when it occurs, simply is undeterred or unstopped. I think—again, without going into any of the details, there are some successes that the American people should know happen, but, at the same time, should know that the threats do continue, not only from the Russians, but—let me ask you whether you've seen any indication that China has sought to conduct activities similar to what we have seen from Russia in 2016, 2018?

General NAKASONE. Senator, given the forum that we're in today, I would offer to broadly state—what we're seeing is that our adversaries understand how to operate, again, below this level of armed conflict, and are taking broad lessons learned, upon which they will attempt to impact our Nation.

Senator BLUMENTHAL. Would you agree that the American people should know about the threats from, not only Russia, but other countries, as well, because the tools and means and techniques are highly asymmetric? That is, they don't need to invest tens of billions of dollars to disrupt our election system. Some of it is available with very little such investment.

General NAKASONE. I agree, Senator.

Senator BLUMENTHAL. General Thomas and Mr. Secretary, I know we have been over this issue, to some extent, but I just want to be clear. From your standpoint, moving Special Operators from Syria to Iraq—in other words, withdrawing from Syria and moving those forces to Iraq—could you say, again, what the impact is on our operational capability?

General THOMAS. Senator, obviously, it's easier to do our job with access and placement and proximity. We've thrived on that, being with the Syrian Democratic Forces and enabling them to do the

heavy lifting that I described earlier. It'll certainly be harder to not have that proximity, make it more challenging. But, we're working alternate solutions to maintain some contact and some level of support for them.

Senator BLUMENTHAL. Would you agree, Mr. Secretary, that it will make it harder, but you're trying to overcome those challenges?

Secretary WEST. Militarily, it is more difficult, sir, but we can remotely assist and advise. If Special Operations does anything, this agile force has already adapted.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

General THOMAS. Senator, I probably would point out, too, that's how we started the first of it. We were not in Syria for the first year. I was in the command that was responsible for that, and we did everything from externally to establish that force and provide—

Senator BLUMENTHAL. But, there was a reason why you went into Syria, which is that it enhanced your operational capability, correct?

General THOMAS. It got us the return on investment. I mean, they maneuvered and destroyed the caliphate, or are on the verge of destroying the caliphate, so that was that subsequent phase to play.

Senator BLUMENTHAL. Thank you.

Senator INHOFE. Thank you, Senator Blumenthal.

Senator Perdue.

Senator PERDUE. Thank you, Mr. Chairman.

Thank you, gentlemen, for appearing today.

It's public information that China is trying to build a navy of about 425 ships, within the next decade or so, and they're accelerating that. It's been reported, in just December, that Chinese hackers have been breaching Navy contractors to steal pretty much everything from maintenance data to missile plans. A particularly egregious report came out later that one breach was about a supersonic antiship missile that we were building for our nuclear submarine force. If they're successful, by 2030, they'll have a navy that's about 100 ships bigger than our Navy has today. The problem is, right now, that they're accelerating that development through hacking, not the Navy network of information, but our contractor network of information.

So, General Nakasone, how do you operate with our contractors? Should this data be kept on DOD networks? How do you interface with the FBI, when we get into these commercial entities out there that seem to be less protected than our military networks?

General NAKASONE. Senator, the example that you cited there is one that has driven the Department, and we're certainly working with that Department as one of the lead agents to ensure that contracts are written right and ensure that our cleared defense contractors understand the standards that have to be met, that we test those standards, working with the services, ensuring that there are proper safeguards in place that will guarantee that the information that they have that's critical for our Nation is safeguarded better.

Senator PERDUE. Are you optimistic you have everything you need, from an organization standpoint of funding and so forth, to help accomplish that?

General NAKASONE. Senator, I'm optimistic that if I don't have what I need, I'm going to come back rapidly to ask for it.

Senator PERDUE. Yes, sir. You've done a good job of that.

Let me move on to the organization. Right now—in August of 2017, it was announced that the Cyber Command would be elevated to a unified command, if I'm correct. Today, we're still operating in a dual-hat structure, and it's been reported that one of the reasons we still have a dual-hat responsibility is that there is a concern about the lack of intelligence in a separate unified command, versus NSA, that you're still getting a lot of your intelligence through the NSA. How do you equate this, relative to the long-term plan of having a unified command? Does that mean we'll have a duplicate capability, in terms of intelligence, both in the Cyber Command and also in NSA, or will there always be a close relationship between the two?

General NAKASONE. Senator, the decision on the dual hat remains with the Secretary. I've commented I need it. During my first 90 days, I provided my thoughts on it. Whatever the ultimate decision is, there will always be a very, very close partnership between NSA and Cyber Command, and so, that's where I see it right now, Senator.

Senator PERDUE. Thank you.

General Thomas, first of all, thank you for the leadership, you're at the tip of the spear.

When we have continuing resolutions, how does it affect your operation in the field? You've been at war for 17 years, your troops, and I've been around some of your troops around the world, and I would have to say, the best and the very best of what we have in America is in your uniform. But, when we do a continuing resolution here in Congress, I get the feeling that it really impacts you guys pretty directly. Is that true?

General THOMAS. Senator, that's an accurate statement. It's disruptive, in terms of programming and just normal operations.

Senator PERDUE. Can you describe just a couple of anecdotal examples of how that really impacts training, refitting, rotations, all of the above?

General THOMAS. Yes, sir. I'd be inclined, because it's usually played to me, the biggest impact is in the prescription for new starts. The aspect of a continuing resolution inhibits our agility to actually adjust to the problems. It's a fluid and dynamic environment that we live in. More broadly, it's the aspect that we're stuck in a preceding paradigm and not able to move on to the newer, better ways of solving problems.

Senator PERDUE. Thank you, sir.

Mr. Chairman, I'll yield my time.

But, General Thomas, I do want to echo my colleagues' comments about your storied career, but particularly your time in the 75th Ranger Regiment in Georgia. God bless you.

Senator INHOFE. Thank you, Senator Perdue.

Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.



Thank you, gentlemen, all of you, for your service.

General Thomas, we wish you well in whatever you do next.

I want to pick up on Senator Perdue's questions about how vulnerable we are to third-party products and software. So, I think this is for you, General Nakasone. In 2018, the NDAA included a provision that would prohibit the use of products and services developed or provided by Kaspersky Lab in third-party products. It required a report on DOD's capacity to spot and address risks. So, can you tell me what the status is of banning all of those Kaspersky products from third-party contracts, and also what's the status of the report on what risks might still be there?

General NAKASONE. Senator, I know that we have conducted the ban, but let me take that for the record to make sure I have an accurate response to both parts of that question.

Senator SHAHEEN. Okay. Thank you very much.

General Thomas, I want to pick up on the questions about Syria, and particularly on the detainees. As you are probably aware, two of those detainees are suspected in the murders of four Americans: James Foley, Steven Sotloff, Peter Kassig, and Kayla Mueller. I don't know if you have anything that you can tell us today about what their status is and what the potential is to make sure that they can be brought back to the United States to be tried for their crimes, but certainly that's what the families of those murdered Americans would like to see happen.

General THOMAS. Senator, I don't have an update on the status, but I would express my appreciation for your personal interest on the matter. Your visit out there, and your very public commentary after that, actually helped focus the world on the problem, and then specifically on the U.S. problem. But, I don't know the current status. I just know it's in the legal wrangling of considering how we handle the special cases like that.

Senator SHAHEEN. Well, thank you. I hope you and Secretary West will both take back the interest that the families have in making sure that they see justice in the United States.

But, General Thomas, I also want to go back to the question about, How confident are you that, given the estimates on the number of ISIS fighters who have gone underground, who may be operating out of Iraq or other places in the Middle East, that we will be able to contain that threat if we no longer have operations in Syria, given the complexity there?

General THOMAS. Senator, as I mentioned, this has been one of the most complex challenges that our force has dealt with in quite a while. I am concerned that we are not overly restricted in the end state, and I don't honestly know what that is. There are several planning efforts ongoing, with a focus to maintaining what we've gained so far, to focus to ensure that there is no external attack capability coming from a morass of bad actors—admittedly bad actors, many of whom are just regional, local types. So, we're in the throes of trying to do the right planning and preparation to provide the Nation options to make sure that that's not a shortcoming and we have a revisit to the 2011 recurrence.

Senator SHAHEEN. How much of a threat continues from Turkey to the Syrian Democratic Forces and their continued work on the ground?

General THOMAS. Senator, there has been friction which is an understatement, right from the very beginning, in terms of our choice of a partner force. Truthfully, it was a necessary choice. It was the only force really available, and their relationship with the Turkish Government—again, I would commend General Scaparotti and General Votel, the senior leaders who have been trying to work through that friction and stay focused on the counter-ISIS effort, which is why we're out there. It has been a challenge, but, I think we are certainly addressing Turkish sovereign interests and concerns as we stay focused on ISIS.

Senator SHAHEEN. Well, I appreciate that. I hope we're also continuing to support SDF, who have been such good partners with us in the arena.

Secretary West, I understand that you're the point person at DOD for implementing the Women, Peace, and Security Act. Is that correct?

Secretary WEST. I'm certainly on point, Senator.

Senator SHAHEEN. Okay, good. I wonder if you could give us an update. I understand that we are expecting the plan, that it's going through final approvals. Can you tell me when we might see the final plan for how that's going to get implemented, and any thoughts you have about the effectiveness of being able to implement that as we're looking at all of our operations around the world?

Secretary WEST. Senator, we're certainly supporting the inter-agency plan. As they say in the Green Berets, we're trying to lead from the back of the front. But, this does establish the United States as the world leader in ensuring that women are part of the conflict resolution and prevention process. I want to thank you personally for the appropriation we have this year, because the gender advisors, which were already installed in come COCOMs, now will be permanent.

Senator SHAHEEN. Well, thank you. I hope, as we're looking at continued negotiations in Afghanistan, that we will certainly make sure that women are at the table in any negotiations.

Thank you, Mr. Chairman.

Senator INHOFE. Thank you, Senator Shaheen.

Senator ERNST.

Senator ERNST. Thank you, Mr. Chair.

Thank you, gentlemen, for being here today, and, on behalf of the American public, I would like to say thank you. Because much of the work that is done within your commands, the American public will never know about, nor will they be able to appreciate. So, thank you very much for that.

General Thomas, I'd like to start with you. What I would like to do is, basically, give you an open floor or a moment to reflect upon your time in command. There have been many innovations during your time in command that you have brought forward for Special Operations Command, and I'd like to give you the opportunity to talk about some of those innovations, why they have been so important to our Special Operators, and if there's anything that is not yet finished, what you would like to see continue on in your absence.

Sir, please.

General THOMAS. Thanks, Senator. Dangerous to give me an open mic, here.

[Laughter.]

General THOMAS. I'll try and stay focused.

I joke with contemporaries, whether it's in the Armed Forces or in the private sector, that the one problem we do not have in Special Operations Command is to spur innovation. It's almost runaway innovation and problem-solving every day. As you know, it's bottom-up-driven. So, the challenge for us, as a higher headquarters, is to assess and bundle the great ideas and the solutions that are being forwarded, and put them into programs of record that drive budget considerations and things like that. Nice problem to have, I would offer. I can't recount, the extraordinary number of initiatives and solutions that the forces provided over the last couple of years, and I'm incredibly proud of it.

I'm more excited about where it's going in the future. The Command is truly poised to be even more relevant for the Department of Defense and for the Nation, in terms of securing this country, and borne on the back of just the best talent that the country has to offer, but with the resourcing that you all provide and the ability to do creative solutions.

The one area that you and I have discussed time and again, that was probably the best innovation, that I would ascribe to my predecessors, and addresses directly how we sustain this force, despite the relentless pace of things, is the initiative awkwardly named Preservation of the Force and Family—

Senator ERNST. POTFF.

General THOMAS.—POTFF, but juxtaposed to our ability to care for our people with the Care Coalition. Right now, we have, I think, 15,000 wounded, ill, and injured SOF members, both currently serving and prior, that are part of our core focus to take care of the Command. But, the POTFF effort has been just remarkable, in terms of building in resilience to the Command. Again, I give all the credit to my predecessors, who saw that as a needed requirement, and this body, for giving us the resources to get after it.

Senator ERNST. Well, General Thomas, I thank you so much for your emphasis on POTFF. I've had the great opportunity to travel and visit with a number of your operators at Fort Bragg and Fort Benning, Hunter Army Airfield, Coronado. We've covered the bases there, and not only in supporting the operators, but their families, as well, because they truly are such an important part of the equation on why you are so successful. So, thank you for addressing that.

We do have a closed hearing this afternoon, so I will save some of my questions for that time period, but I do want to take this opportunity to thank both of you, both Generals. Thank you very much for the command structure that you have provided, the leadership and guidance.

Secretary West, thanks for taking on this very challenging position out there with DOD. We know that it's an ever-growing and -influencing part of the DOD. So, thank you very much for that.

Just in the very short time that I have remaining, General Thomas, I want to thank you for your time and service. To you and Barbara, my best wishes as you move on to retirement. It is well

earned and well deserved. You will be missed. You will truly be missed. But, thank you for your leadership.

Thank you very much. I'll yield back.

Senator INHOFE. Thank you, Senator Ernst, and we all agree with her comments.

Senator Warren.

Senator WARREN. Thank you, Mr. Chairman.

I also want to add my thank you, General Thomas, for all of your work and for your leadership.

Last year's NDAA required the Secretary of Defense to review whether members of the Armed Forces or coalition partners of the United States abused or witnessed abuse of detainees during operations in Yemen. The unclassified summary of DOD's report to Congress concluded, "DOD has determined that DOD personnel have neither observed nor been complicit in any cruel, inhuman, or degrading treatment of detainees in Yemen." So, when I asked General Votel about this last week, he said DOD's conclusion was based on the discussions and reports from the people that they have on the ground. General Thomas, is that your understanding, as well?

General THOMAS. Senator, I monitored your conversation with General Votel, and I am in agreement with that assessment.

Senator WARREN. Okay. So, the Associated Press, Human Rights Watch, Amnesty International, and the United Nations, all four, have all conducted their own investigations and come to a very different conclusion. They determined that our Emirati partners oversaw a network of detention centers that regularly engaged in torture and abuse. General Thomas, do you find these independent investigations credible?

General THOMAS. Again, Senator, I monitored General Votel's answer to the same question, and you'll probably hear some consistency. Every one of those allegations is taken with the utmost interest, in terms of poring into them and determining if they're factual, and we have. In fact, I'm not aware of any outliers. But, if we observe violations of the Law of Armed Conflict, it is a break-contact standard along our force, to address it specifically and/or to break contact with those partner forces. Again, I would reinforce how General Votel answered it. It's a high standard.

Senator WARREN. So, I appreciate that, and General Votel said exactly that there—he was very careful about what he said. I asked him if he'd reached any conclusions about whether or not our Emirati partners are engaging in detainee abuse when DOD personnel are not present, and he said he was not aware of that. The question I was asking, though, General Thomas, do you find those four investigations credible?

General THOMAS. Senator, I find them of sufficient interest that it's actually been a topic of discussion back with our Emirati partners. It is hard for us to confirm or deny if it happened, but not something we just take as something I approve or disprove. It's the subject of our discussion with the Emiratis that, if we can prove this, or if there is evidence, this could be a deal-breaker.

Senator WARREN. Okay.

General THOMAS. Again, we take it very seriously.

Senator WARREN. Good. I appreciate that, General Thomas. I know you work hard to encourage our partner forces to obey the Laws of Armed Conflict. But, when it comes to whether or not our partner forces have engaged in abuse of detainees, there seems to be a really serious disconnect between what DOD understands to be true and credible independent reports from journalists and human rights organizations. So, I remain deeply concerned about whether our partners in Yemen are treating detainees in ways that are consistent with the Law of Armed Conflict. As you know, turning a blind eye is not acceptable. So, I'm going to keep asking questions about this. I appreciate your answer on this.

If I can just ask one other area quickly in the time left to me, General Thomas, I'm concerned about the militarization of our foreign policy. Nowhere is that more evident than in the use or overuse of our Special Operations Forces. I think Senator Reed alluded to this earlier. In 2017, Special Operations Command deployed forces to 149 countries under your Command, and they launch airstrikes, carry out raids, train foreign militaries, all in the hope of removing terrorists from the battlefield. Many of these countries have governance challenges that allow violent extremist groups to grow. Instead of treating the causes of violent extremism, we're treating the symptom.

So, let me just ask. General Thomas, do you think that we can kill or capture our way out of this problem?

General THOMAS. No, Senator, I definitely do not think that's the solution to most of these problems.

Senator WARREN. Do you think that the current pace of operations for your Command is sustainable?

General THOMAS. I do, Senator. We had challenges on specific parts of our formation and to specifically get to the Department-directed standard of a one-to-two dwell rate, so for one cycle of deployment downrange, two parallel cycles back home—but, we have gotten that back into a very healthy shape, with a few outliers, and we're intent on getting them healthy, as well, here.

Senator WARREN. I appreciate it. Thank you, General Thomas. I just want to say, we need to be thinking harder about using our nonmilitary tools, here, as well. Thank you.

Senator WARREN. Thank you, Mr. Chairman.

Senator INHOFE. Thank you Senator Warren.

Senator Blackburn.

Senator BLACKBURN. Thank you, Mr. Chairman.

To each of you, thank you for your service to our country. We appreciate it.

General Thomas, we do wish you well, and we wish your family well, and thank you for the service.

I will say, Senator Ernst mentioned some of the posts she's visited. She also has visited Fort Campbell, and they were, and still are, a big part of our Tennessee community. I represented that post during my time in the House, and have enjoyed working with those military families and looking at the challenges that are going to be necessary for 21st-century warfare.

General Nakasone cyber is an enormous part of that. I think it's been really curious to me this week, as we have looked at the different geographic combatant commanders and those areas of

responsibilities (AORs), maybe a hesitancy to engage in the discussion of how our adversaries are using the cyber area to their advantage, namely China, of course. We've talked some about the great competitive threat that is there.

So, my question to you, General Nakasone, would be, do you feel like that your Command, Cyber Command, is being properly integrated into all of the other commands in those missions?

General NAKASONE. Senator, I do feel that Cyber Command is being integrated properly into the other combatant commands. We have undertaken a very aggressive approach to engage with the combatant commands. General Thomas and I have had a long association, and one of the things that I think that we've been able to leverage is the close partnership of ensuring that what we do in cyberspace is supporting his end states and what he was trying to do, whether in previous commands or at U.S. Special Operations Command. We are very, very appreciate of the work that has been done and approved by this Committee to build cyberspace operational integrated planning elements at each of our combatant commands. This will allow us to develop the talent and the planning expertise to ensure that we get to outcomes.

Senator BLACKBURN. Okay.

Let's talk about artificial intelligence (AI) for just a moment, because I think that that strategy—and, of course, it's been released—highlights a reality that we've known for some time. I want to quote from that, and then have you respond. I'm quoting, "Other nations, particularly China and Russia, are making significant investments in AI for military purposes, including applications that raise questions regarding international norms and human rights. Failure to adopt AI will result in legacy systems irrelevant to the defense of our people eroding cohesion among allies and partners, reduced access to markets that will contribute to a decline in our prosperity and standard of living, and growing challenges to societies that have been built upon individual freedom." Now, that, in my opinion, is a pretty sobering assessment. So, do each of you agree with that strategy's assessment? Exactly how do you see the AI strategy informing your Command as we move forward?

General NAKASONE. I agree with the statement that you read, Senator. I do see artificial intelligence, deep learning, machine learning, as something that's a critical enabler of what we're going to need to do at U.S. Cyber Command. We have already seen the power, at the National Security Agency, of what artificial intelligence can do for our foreign intelligence mission, our cybersecurity missions. This is where the world is headed, in terms of innovation and capability. We, as the military fighting force, have to ensure that we have that enabler. One of the things that I do take great credit and pride in is that U.S. Special Operations Command really has led a lot of the work in artificial intelligence, in integrating some of the early thinking into how they become a more powerful force.

Senator BLACKBURN. General Thomas?

General THOMAS. Senator, great question. We could spend several hours talking about it. Unfortunately, we don't have that kind

of time. But, agree with the assessment, in terms of threat. More importantly, am incredibly enthusiastic about the opportunity.

Anecdotally, 3 years ago, Eric Schmidt visited our Command as part of the Defense Innovation Group. Quick assessment that he felt compelled to give me, he said, “You’ve got tremendous people, you prototype pretty effectively, and you’re absolutely terrible”—he had some more colorful words than that—for machine learning, applied artificial intelligence.” Truthfully, it gave me a spark 3 years ago, and turned me into a zealot on the subject. But, more importantly, it has really kind of reoriented our Command to embrace this phenomenon and apply it. It is relevant to everything we do, until it’s proven otherwise. We’re taking, not-so-small bites, but some pretty substantial bites into embracing applied artificial intelligence, and I’m excited about where we’re going in the future.

Senator BLACKBURN. Thank you for that. Thank you for your service.

I yield back.

Senator INHOFE. Thank you, Senator Blackburn.

Senator TILLIS.

Senator TILLIS. Thank you, Mr. Chairman.

Gentlemen, I apologize for not being here for a lot of the hearing. We have three committee hearings going on simultaneously.

General Thomas, I want to thank you for your service and all the quality time you’ve spent in North Carolina. I hope, in retirement, you continue to spend a lot of quality time there.

I’m going to take, probably, the questions a different direction in my capacity as Personnel Subcommittee chair, because I know a lot of the other members have covered the landscape on the extraordinary work you’re doing. General, thank you for the briefing earlier this week. I got a real sense of progress being made. I think some of that stems from some of the authorities that you’ve been granted. You’re doing great work there, so thank you for your leadership.

But, I want to talk more about the personnel aspects. Number one, when you look at, General Thomas, the very challenging job of an operator—and how a disturbing percentage of them are going to get injured in one way or another—what more do I need to be thinking about, in terms of family support, for the members, and actually even in dealing with the wounds of war—what more should we be looking at, as a function of the Personnel Subcommittee, to send the very clear signal we understand the dangerous job and the impact it’s having on families?

General THOMAS. Senator, thanks for that question, and thanks for the concern expressed.

I would actually challenge the term “operator,” because therein lies the opportunity for us to do better by our people in the future. While you highlighted particular career fields that are inherently dangerous, in terms of jumping and fast-roping, and things like that, we’re as good as our weakest link. We’re as good as our support personnel. We use the term “enablers,” which is broadbased, but it’s the entire fabric of the force, and, arguably, we didn’t focus sufficiently on the entirety of the force early on, when we talked about POTFF and how we sustain it. I think we’re much more focused on that, and we have come to you to ask for additional re-

sources so that we can be more thorough in the application there. But, again, thanks for the support we've had so far. Truthfully, the best comment we can get on it is, the sister services are emulating what you've allowed us to do as the way they could/should take care of their people, as well.

Senator TILLIS. Thank you.

Something else that we'll be talking about—I was just briefly speaking with Senator King about progress that we can make on procurement. We've taken some steps, in recent NOAAs, for acquisition and procurement reform. I think we can still take a few pages from y'all's book, in terms of rapid prototyping and deployment. So, look forward to that in subsequent hearings. Mr. Chair, hopefully we can have that as a subject, some point in this Congress.

General Nakasone, you've got a challenge—you mentioned, in your opening statements that you're trying to find the resources. You're competing with the private sector. Again, in the last NDAA, we made some progress, in terms of being able to get resources from the private sector into positions. But, what more do we need to do? I've got to believe you just don't have enough of what you need, in terms of expertise. What more would you suggest that we look at, as a matter of policies, going into this NDAA cycle?

General NAKASONE. Senator, I think that we have to come back to the Committee and identify those critical subsets. There are people within our force right now that I call "10-or-20X" type of people. That means they're 10 or 20 times better than the people that they work with, better coders, better malware analysts, better developers, and so, how do we ensure that we keep those within our force? The services do a wonderful job in recruiting. We get great recruits. We do a very, very good job in training them. Our challenge will be in retaining the very best—not everyone, but the very best. This is where I think identifying those categories, coming back to you to make sure that we have the proper career paths and the proper enumeration will be very helpful.

Senator TILLIS. Well, Senator Rounds and I have talked a lot about it in his capacity on Cyber, and we need that information sooner. In the private sector, I led a practice that had ethical testing in cybersecurity resources. They were even scarce in the environment where you could pretty much pay whatever the market rate is, so I can't imagine what you're going to go through for retention. We just need to think creatively and recognize that these are hot skills, and you've got to have the SOF equivalent of cyberwarriors out there. We need to do everything we can to provide you the authority to do that. But, as you just said, you've got to differentiate between that person who has a 20-time multiple on skills, and just say, we're going to treat you all fairly. We're not going to treat you equally, because you've got to have those extraordinary warriors in this domain.

I'm going to follow up with a couple of questions for the record, but they happen to do with plumbing in business matters, so I'm going to yield back my remaining 10 seconds.

Thank you all for being here.

Senator INHOFE. Thank you, Senator Tillis.

Senator Sullivan.



Senator SULLIVAN. Thank you, Mr. Chairman.

Gentlemen, thank you for your service.

General Thomas, I really wanted to thank you for all you've done for our Nation. I think I've had a bit of a unique opportunity to not only get to know you from this position, but also when I put my Reserve uniform on. As my commander, he's, like, 17 levels above where I am in the organization chart. So, you've done a great job, and really appreciate it.

Secretary West, appreciate the job you're doing. You know, unfortunately, there's a very small number of Harvard marines, and you're making us proud. Very few.

General Nakasone, I want to ask you, on this issue of offensive operations—I know you probably can't talk too much, but you might recall a hearing we had in this Committee a couple of years ago, where Director Clapper and some other leaders on the cyber and intelligence front openly admitted that, after the Chinese hacked the Office of Personnel Management (OPM) and stole over 20 million SF-86 forms for all our top-secret operators, including Members of this Committee, didn't retaliate against them, which I thought was kind of a stunning admission. To me, it was part of the problem. Whether it was North Korea or Iran—I think, a couple of years ago, China, certainly Russia, we were viewed as kind of the world's cyber punching bag. Any of these countries could come and do what they wanted, and we did not retaliate.

Can you tell me, without revealing anything classified, do you feel you have the authorities to hit back, or maybe even hit back harder, to make the costs of those kind of operations against our country, against our democracy, much more prohibitive? Particularly for a country like North Korea, where I'm assuming we could just drop their entire electrical grid and Internet system overnight if we wanted to.

General NAKASONE. Senator, if I might, 1 year ago I appeared before the Committee for my confirmation, and you asked a similar question of me. I think it's important that we look at what's happened within this past year: a National Cyber Strategy, signed; a DOD Cyber Strategy, signed; the Fiscal Year 2019 National Defense Authorization Act that provided us greater capabilities and greater authorities within the law was signed; a new presidential policy that came out on offensive cyber; and finally, our ability to have a new construct upon which we operate, which is persistent presence. All of those provide a much different environment for our adversaries today than it did 1 year ago.

Senator SULLIVAN. So, can you publicly state, in this hearing—again, without getting in classified information—that you have the authorities and you are not unwilling to undertake offensive operations that can help deter, whether it's Chinese stealing 20 million SF-86 forms or the North Koreans hacking our companies?

General NAKASONE. Senator, I have the authorities to accomplish my mission.

Senator SULLIVAN. Or the Russians attacking our election systems?

General NAKASONE. I have the authorities that I need to accomplish my mission, Senator.

Senator SULLIVAN. Good.

I want to ask Secretary West and General Thomas—you have taken the lead over the last 2 years on the counter-WMD mission. SOCOM has that lead. To me, there's probably no more important mission for the survival of the entire Nation, the entire Republic. We might have threats that rise—ISIS or al Qaeda, they might rise and fall, but, as long as we have a republic to defend, the counter-WMD mission is going to be, in my view, the most important mission. How is that going? Do you need more resources on that? Are there any things that we can do to help you with the authorities, whether it's working with allies, whether it's more resources to undertake that mission, in terms of the leadership that you now have with regard to that mission?

General THOMAS. Senator, one, we appreciated the opportunity to perform this mission. It's a daunting, critically important mission, as you mentioned. We actually had John Hyten, from U.S. Strategic Command (STRATCOM), visiting, as well as Paul Nakasone, this past week. I would offer, his mission is probably the true, primary mission, and this one's connected just underneath.

The level of cooperation and collaboration that we enjoy with the community of action is extraordinary. We just hosted our annual seminar, 2 weeks ago. We're about to produce our Annual Assessment to the Secretary of Defense. This mission set and space continues to move in the right direction. I don't know on resources yet. I daresay we will probably uncover some gaps, in terms of collection capabilities that we, the Nation, need, going forward, whether it's Department of Defense or other entities. But, the mission is going very well for us, and I'm appreciative of some of the expertise that has been brought to bear on it.

Senator SULLIVAN. Mr. Chairman, if I may, just one final quick question.

The return of great-power competition is spelled out in the NDS, the National Defense Strategy. How is SOCOM aligning with regard to that mission? Have we overutilized the SOF community on low-intensity threats? Are we focused on the new NDS mission, on the SOF side?

Secretary WEST. Senator, quickly, from my perspective, SOF is perfectly well suited to take on this challenge, because it's cheap, it provides the Nation real leverage. But, the basic task is resource allocation. As you indicated, we are at capacity, and demand signal is not shrinking. Then this, in turn, requires a new assessment of the threat in counter-terror to repurpose forces.

Senator SULLIVAN. Thank you.

Thank you, Mr. Chairman.

Senator INHOFE. Thank you, Senator Sullivan.

Senator WICKER.

Senator WICKER. Thank you very much, Mr. Chairman.

General Nakasone, in February, the Department of Justice and the Department of Homeland Security sent a joint report to Congress on 2018 election interference. You testified before a classified session of this Committee yesterday. But, the public-specific conclusions of the report of these two departments was as follows, "There is no evidence to date that any identified activities of a foreign government or foreign agent had any material impact on the integrity or security of election infrastructure or political campaign infra-

structure used in the 2018 midterm elections.” I appreciate your testimony yesterday, and I realize there are things that you cannot get into today. But, what can you tell us, in this public setting, about whether or not, based on what you know, the Department of Justice and the Department of Homeland Security were correct in saying there was no such interference?

General NAKASONE. Senator, I agree with what you had read with regards to that report. What I can say, in terms of our role with that, was, within U.S. Cyber Command, and specifically the National Security Agency, we took a look at all the intelligence information we had on our adversaries. We declassified as much of that information as we could. We shared that with the Department of Homeland Security, who, in turn, shared that with the state and local levels so that they had a very, very good picture of what we knew about adversaries that might be trying to interfere with our elections.

Senator WICKER. So, to the extent that there were concerns that a foreign government or agent had an impact on the election, you concur with the public conclusion of the Department of Homeland Security and the Department of Justice that there was not such interference.

General NAKASONE. I concur, Senator.

Senator WICKER. Thank you very much.

I appreciate it, Mr. Chairman.

Senator INHOFE. Thank you, Senator Wicker and all the other Senators, and certainly for the three witnesses. That was a very eye-opening and a great presentation. Appreciate your patience and your thoroughness. Thank you so much.

We’re adjourned.

[Whereupon, at 11:27 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR DAN SULLIVAN

##### SPECIAL OPERATIONS FORCES IN GREAT POWER COMPETITION

1. Senator SULLIVAN. Secretary West and General Thomas, in your testimony you discussed the Special Operations Forces’ (SOF) critical role in executing the National Defense Strategy both in terms of gray zone operations below the threshold of conflict and in terms of deterrence. We didn’t hear any discussion of a physical rebalancing of forces away from the counterterrorism mission and toward great-power competition, however. In fact, Secretary West, you stated that “We are at capacity and demand is not shrinking. So then this in turn requires a new assessment of the threat in counter-terror, to repurpose forces.” How close are you to completing that new assessment, when do you expect it will be complete, and when and how are you planning to repurpose your forces toward the NDS’ emphasis on great-power competition?

Secretary WEST. The Department has been adjusting its focus towards great-power competition since the NDS was published. SO/LIC, USSOCOM, and the Joint Staff are actively developing policy concepts for SOF’s role in this new strategic paradigm, which includes ensuring that DOD has the tools to meet state-based challenges below the level of traditional armed conflict. This shift has already begun, including the adjustment of force posture for great-power competition, and will be continuously adjusted to meet changing demands and requirements. To ensure we continue to meet enduring CT requirements, we will adopt a resource-sustainable approach to counter priority violent extremist organizations. A primary focus for managing global CT challenges will be to share the burden of responsibility with capable partners who can manage lesser threats locally. Our willing and capable partners understand the need for collective security, and we will seek to support their efforts through various security cooperation efforts. This, in conjunction with

prioritizing VEO threats, will enable our forces to sustain our posture appropriately. These, and other terrorist-related assessments, will inform my recommendations to the Secretary of Defense on priorities for the employment of special operations forces against all of our Nation's threats, from great powers to terrorists.

General THOMAS. The global and regional challenges that America faces today are complex, dynamic, and of a long-duration. Unlike conventional forces, SOF have a small footprint, and simply counting "boots-on-the-ground" does not always capture the disproportionate strategic effects our operators have on the adversary every day. We are continuously refining our methods of assessing our progress to achieving our desired conditions that will allow us to deliver the best return on investment for the American taxpayer. It is also important to note that while assessments are continuous, it takes time to actually see tangible results. Specifically, at the end of the 3rd quarter of this fiscal year we will have the results needed to assist in informing the Chairman's Annual Joint Assessment and USSOCOM's recommendation to the Office of the Secretary of Defense (OSD) on force allocation. We anticipate, at that time, to begin to identify forces that can be repurposed to meet the challenges posed by great power competition.

---

#### QUESTIONS SUBMITTED BY SENATOR DAVID PERDUE

##### REQUIREMENTS PROCESS

2. Senator PERDUE. Secretary West and General Thomas, does a requirements process exist whereby unique U.S. Special Operations Command (SOCOM) capabilities help influence or determine requirements for DOD-wide conventional forces? If so, what is this process?

Secretary WEST. The Services and USSOCOM requirements process are governed by the Joint Capabilities Integration and Development System (JCIDS). Through the governance boards that support the Joint Requirements Oversight Council validation and approval of requirements, USSOCOM articulates their unique capabilities that have Joint Force applications. Some of these capabilities are adopted by the Services, and the corresponding management of programs of record transitioned from USSOCOM to one or more Services. ASD(SO/LIC) and USSOCOM constantly analyze special operations-unique capabilities to identify programs that can appropriately be transferred to the Services for conventional forces use.

General THOMAS. Yes it does. USSOCOM's Special Operations Forces Capabilities Integration and Development System (SOF-CIDS) process is nested in and compliant with the Joint Staff's Joint Capabilities Integration and Development System (JCIDS). SOF-CIDS is the process used by USSOCOM to implement JCIDS, by validating special operations-peculiar capabilities at or below the Joint Staffing Designator of Joint Capabilities Board Interest. USSOCOM leverages the Services for Service-common equipment whenever possible. USSOCOM posts its validated requirement documents in the Joint Staff's Knowledge Management and Decision Support (KM/DS) depository, to allow the Services to see and adopt SOF efforts. This benefits the Services by enabling them to adopt USSOCOM-developed capabilities (without spending Service Research, Development, Technology and Evaluation (RDT&E) dollars), and USSOCOM receives the benefit once the Service adopts the solution as Service-common and provides it to our Components. Additionally, as the Department's proponent for Psychological Operations (PSYOP) and Civil Affairs capabilities, USSOCOM now has Service coordination and validation authority for these types of requirements for conventional forces. Consequently, when PSYOP and CA interests are coordinated through the SOF-CIDS process, the appropriate Service shall be invited to participate in that Special Operations Command Requirements Evaluation Board (SOCREB). We also leverage the Department's Integrated Priority List (IPL) process to highlight USSOCOM needs for Service support, as well as the Special Operations Policy Oversight Council for attempting to solve some of the complex issues that arise between USSOCOM and the Services.

##### IMPROVING PROCUREMENT PROCESS FOR ALLIES AND PARTNERS

3. Senator PERDUE. Secretary West and General Thomas, what actions does SOCOM take to encourage allies and partners to utilize the Direct Commercial Sales (DCS) program for platforms and capabilities, like light attack aircraft?

Secretary WEST. Industry is our ally and partner in enabling the SOF enterprise with cutting-edge capabilities and also in ensuring we equip allied and partner forces to meet interoperability requirements. Industry engages directly with allies and partners through DCS, and DOD partners with allied and partner countries

through the FMS process. Regardless of mechanism, we are committed to working with allies and partners to meet their needs.

General THOMAS. When an ally or friendly country requests to procure SOF Peculiar platforms or capabilities, USSOCOM follows Department of Defense (DOD) policy and is generally neutral regarding the customer's choice to purchase by means of Foreign Military Sales (FMS) or Direct Commercial Sales (DCS). Although most defense items or services can be purchased through either FMS or DCS, in limited instances, technology or security concerns may require that sales of specific items be restricted to FMS-Only.

4. Senator PERDUE. Secretary West and General Thomas, in your experience, have allies and partners expressed frustration about navigating the DCS program?

Secretary WEST. Industry is our ally and partner in enabling the SOF enterprise with cutting-edge capabilities and also in ensuring we equip allied and partner forces to meet interoperability requirements. Industry engages directly with allies and partners through DCS, and DOD partners with allied and partner countries through the FMS process. Regardless of mechanism, we are committed to working with allies and partners to meet their needs.

General THOMAS. USSOCOM has no formal or informal record of an ally or partner expressing frustration with the Direct Commercial Sales (DCS) process. USSOCOM's role in the DCS process is relatively limited. We conduct assessments of proposed dual-use and defense related SOF-P technology, articles, and services transfer cases as requested and provide coordinated positions to the Director, Defense Technology Security Agency.

5. Senator PERDUE. Secretary West and General Thomas, in your opinion, would a streamlined process for procuring non-standard items through Foreign Military Sales (FMS) be helpful when allies and partners want to procure weapons/platforms that cannot be acquired through the DCS process?

Secretary WEST. We are committed to reforming the way we do business at DOD in order to support building partnership capacity. This includes improving contracting timelines and processes. Business reforms will streamline our ability to deliver capabilities across the DOD enterprise. USSOCOM, DSCA, the Services, and my team are working together to support allies and partners.

General THOMAS. Building partner capacity is of critical importance to SOF operations. We would support a tailored OSD approach to FMS of non-standard items based on technical or performance risks to US operations.

#### CONTINUING RESOLUTIONS

6. Senator PERDUE. General Thomas and General Nakasone, in as much detail as possible, through specific examples, please describe the operational and financial impact continuing resolutions have on SOCOM/U.S. Cyber Command (CYBERCOM).

General THOMAS. While a Continuing Resolution (CR) continues to allow mission accomplishment for USSOCOM, it introduces readiness risks that intensify in direct correlation to CR length, including: Operationally, CRs negatively affect Special Operations Forces (SOF) Components' ability to train and equip SOF, both organically and via Building Partner Capacity engagements. These disruptions potentially result in mission cancellations or postponements and fluctuations to deployment timelines. These impacts weaken SOF credibility with foreign partners, diminishing their view of the U.S. as the "partner of choice." Inability to execute USSOCOM's new start programs, production increases, major weapon platform recapitalization, and Military Construction projects. For example, our PB20 request includes two fiscal year 2020 classified procurement new starts totaling \$45 million, numerous production increases including the MH-47 Renew Program growing from seven fiscal year 2019 airframes to eight in fiscal year 2020 at a unit cost of \$16 million each, and recapitalization of one MH-60 and one MH-47 Battle Loss Replacements for \$28 million and \$38 million, respectively. Our MILCON PB20 request includes 15 major construction projects at \$494 million. None of these examples could be executed under a CR. Financially, constrained CR funding levels, particularly when funds are depleted towards the end of CR periods, can cause increased contract actions resulting in higher costs associated with having to restructure contracts, and reduced/restructured/delayed/deferred non-combat related SOF training and maintenance/sustainment activities. Overall, USSOCOM is typically able to manage the impacts of short-term CRs (less than 3 months), assuming an appropriation follows shortly thereafter. As CRs extend in the 3-6 month timeframe, risk moves from mild to moderate depending on the specific appropriation, program or capability as

new starts and production increases slip to the right in a direct correlation to CR length, if not longer. Long-term CRs (6 months or longer) are high risk and begin to erode combat effectiveness and SOF readiness, training, and modernization efforts, which negatively impact USSOCOM's ability to provide timely and essential mission support, eventually elevating risk levels to deployed operators and bringing the command dangerously close to sinking below a reasonable degree of risk. Service constraints under a CR risk exacerbating impacts on USSOCOM as their ability to provide consistent service support to SOF is jeopardized.

General NAKASONE. [Deleted.]

---

QUESTIONS SUBMITTED BY SENATOR MARSHA BLACKBURN

ARTIFICIAL INTELLIGENCE

7. Senator BLACKBURN. General Nakasone, given the capabilities required to meet the 2018 cyber strategy, is a 6,200-person Cyber Mission Force sufficient?

General NAKASONE. [Deleted.]

8. Senator BLACKBURN. General Nakasone, can you rely on artificial intelligence (AI) to close the capability gap?

General NAKASONE. [Deleted.]

9. Senator BLACKBURN. General Nakasone, what AI programs and applications offer such potential?

General NAKASONE. [Deleted.]

10. Senator BLACKBURN. General Nakasone, what advancements in military utilization and deployment of AI by our adversaries, namely China and Russia, do you find most concerning and why?

General NAKASONE. [Deleted.]

11. Senator BLACKBURN. General Nakasone, where are you prioritizing investment dollars to modernize our enterprises and counter these capabilities?

General NAKASONE. [Deleted.]

12. Senator BLACKBURN. General Thomas, what advancements in military utilization and deployment of AI by our adversaries, namely China and Russia, do you find most concerning and why?

General THOMAS. China and Russia continue to hone and field artificial intelligence (AI) capabilities and technologies that enable the near-real time identification and monitoring of our personnel abroad. Advancements in AI-based biometric systems over the past two years have significantly improved the ability of both the Chinese and Russians to clandestinely collect biometrics at greater distances and with greater accuracy. These advancements present an ever-increasing force protection and operations security risk to U.S. military personnel, U.S. Government civilians, and our allies and partners. We anticipate that vast improvements in autonomous facial/voice-recognition surveillance will challenge U.S. SOF cover activities and clandestine operations moving forward. The global proliferation of Chinese smart city surveillance systems and technology gives Beijing an advantage in the effort to identify, track, and potentially threaten Special Operators as they traverse various locations around the world.

13. Senator BLACKBURN. General Thomas, where are you prioritizing investment dollars to modernize our enterprises and counter these capabilities?

General THOMAS. [Deleted.]

---

QUESTIONS SUBMITTED BY SENATOR JACK REED

INFORMATION OPERATIONS CAPABILITIES

14. Senator REED. Secretary West, General Thomas, and General Nakasone, SOCOM and CYBERCOM sit at the nexus of the Department's efforts to address the challenges posed by adversaries' weaponization of information. SOCOM is the Joint Force Proponent for Military Information Support Operations (formerly known as "psychological operations") and its forces operate closely with those from CYBERCOM at the tactical and operational levels. In your view, what are the pol-

icy, resource, and capability gaps that limit the Department of Defense's (DOD)'s ability to be successful in information operations mission space?

Secretary WEST. The complex nature of the information environment presents challenges and opportunities for DOD's role in that environment and for DOD's strategic partnerships with other government agencies. Our strategic competitors and other adversaries increasingly and aggressively operate in the information environment below the threshold of armed conflict. The Department is communicating how it is evolving to conduct operations in the Information Environment through quarterly reports to the congressional defense committees. The Department recognized that gaps exist and to address those gaps DOD began a 2019 revision of the Strategy for Operations in the Information Environment (SOIE) published in 2016. That revision is guided by a core of seven Secretary of Defense-approved framing principles, which we are currently converting into seven Lines of Effort (LOEs). The seven LOEs are: affecting perceptions, acquiring the right authorities, leveraging and strengthening partnerships, improving DOD's base of knowledge, refining how we plan, developing and managing people, and developing technology for OIE. This revision is being done concurrently with the development of a companion implementation plan and investment framework to sharpen the Department's focus on the effort and in recognition of urgency. Revisions to the SOIE are ongoing, and DOD will report updates in the quarterly reports to the congressional defense committees required by Section 1637 of the NDAA for fiscal year 2018.

General THOMAS. The complex nature of the information operations environment presents challenges and opportunities for DOD's role in the information environment and its strategic partnership with other government agencies. As our competitors increasingly operate in the information operations realm outside of traditionally declared hostilities, DOD's role and activities are restricted by extant policy and legal considerations. The Department is currently working on the fiscal year 2019 NDAA Section 1065b report to identify and analyze any doctrine, organization, training, material, leader, personnel, and facilities gaps in DOD Military Information Support Operations (MISO) capabilities. The report is due on May 13th.

General NAKASONE. [Deleted.]

15. Senator REED. Secretary West, General Thomas, and General Nakasone, what are the relative roles of SOCOM and CYBERCOM forces in this mission space?

Secretary WEST. USSOCOM has specific responsibilities outlined in the Unified Command Plan and ones inherent in its designation as the Joint proponent for military information support operations (MISO). USSOCOM's main role in information operations is to integrate and coordinate DOD MISO capabilities, and, when directed, execute MISO in support of combatant commands. The role of MISO is to influence foreign audience behaviors. USSOCOM is supporting integration of MISO capabilities by leading the establishment of the Joint MISO Web Operations Center (JMWC). The Department submitted a report to Congress on January 4, 2019, that outlined how USSOCOM intends for the JMWC to consolidate and coordinate combatant commands' Internet-based MISO capabilities. USCYBERCOM conducts technically focused cyberspace operations. DOD's Strategy for Operations in the Information Environment (SOIE) reaffirms that all operations in and through the information environment must be integrated as part of institutionalization and operationalization efforts. Revisions to the SOIE are ongoing, and DOD will report updates in the quarterly reports to the congressional defense committees required by Section 1637 of the NDAA for fiscal year 2018.

General THOMAS. As the DOD joint proponent for MISO, USSOCOM's role in the information operations mission space is to integrate and coordinate DOD MISO capabilities, and when directed, execute MISO in support of combatant commands. USSOCOM is supporting integration of MISO capabilities by leading the establishment of the Joint MISO Web Operations Center (JMWC) that will consolidate and coordinate combatant commands' internet-based MISO capabilities.

General NAKASONE. [Deleted.]

16. Senator REED. Secretary West, General Thomas, and General Nakasone, do you believe that a combatant command should be designated as the global synchronizer or coordinating authority for all DOD information operations (similar to the responsibilities SOCOM has for synchronizing counterterrorism and combatting WMD efforts)? If so, what additional resources do you believe that would require?

Secretary WEST. SecDef designated the Chairman of the Joint Chiefs of Staff as the Global Integrator for Operations. This includes operations in the information environment. The Under Secretary of Defense for Policy remains the principal staff advisor to the Secretary of Defense for information operations, and is the designated senior official for the integration of strategic information operations and cyber-en-

abled information operations. The Department is examining the optimal alignment of internal organizations and resources. The Department will report progress in quarterly reports to the congressional defense committees required by Section 1637 of the NDAA for fiscal year 2018.

General THOMAS. The complex and pervasive nature of information operations and the associated mission sets pose a challenge for designating a single coordinating authority construct for operations. DOD information operations is an integrating function rather than a single capability. Adding a coordinating authority role for all IO capabilities to a single combatant command could increase the complexity of an already challenging coordination environment. However, a combatant command could be designated coordination authority for one or more specific information related capabilities (IRC) as SOCOM has been for the MISO capability.

General NAKASONE. [Deleted.]

17. Senator REED. Secretary West, General Thomas, and General Nakasone, during the hearing, General Nakasone stated “the Fiscal Year 2019 National Defense Authorization Act was critical for us at U.S. Cyber Command. It gave us capabilities and authorities that—that were important for us as we look to further enable. That included the ability for us to rapidly deploy elements of our force to the Department of Homeland Security, the ability for us to look at networks that are not part of the Department of Defense networks. The other piece of it that was critical is, as Ranking Member Reed mentioned, is the idea of cyber as a traditional military activity. I think those are areas that are going to help us immensely with near-peer competitors.” Do you believe similar reforms are necessary to better enable the information operations by the Department of Defense against near-peer competitors?

Secretary WEST. DOD is revising and updating its 2016 Strategy for Operations in the Information Environment (SOIE) in 2019. That effort must necessarily address DOD’s requirements, capabilities, and capacity to conduct information operations that would not be attributable to the United States. At this time, the Department has not identified specific concerns that could be addressed by legislation. However, operational concepts and capabilities must and will evolve to address increasingly sophisticated threats posed by near-peer competitors that are actively challenging the United States below the threshold of active hostilities. DOD welcomes further discussions with the Committee as the strategy develops to ensure that the U.S. Armed Forces are well positioned to engage in traditional military activities to counter adversary threats in an information environment that is more complex and diverse than ever before, when hostile actions by our adversaries may not be easily recognizable.

General THOMAS. Yes, a review and possible reform to 50 USC, 3090 may assist DOD in the information operations mission space with regards to near-peer competitors. Currently, DOD uses a contextual legal analysis to determine if an information operations-related activity, such as MISO, is a traditional military activity (TMA). Such analysis requires a relationship to an on-going or anticipated hostility involving US forces. This requirement often restricts some of what DOD can do in the information operations mission space, especially with our interagency partners, when our near-peer competitors challenge us in environments where overt hostilities are not present or easily recognizable. A Congressional review of the definition of anticipated hostilities may afford DOD greater flexibility.

General NAKASONE. [Deleted.]

#### ADVISE, ASSIST, AND ACCOMPANY REPORT

18. Senator REED. Secretary West, Section 1212 of the Fiscal Year 2019 National Defense Authorization Act (NDAA) required the Under Secretary of Defense for Policy, in coordination with the General Counsel of the Department of Defense and the commanders of the appropriate combatant commands, to conduct a legal and policy review of advise, assist, and accompany missions to ensure consistency of authorities, Executive Orders (EXORDs), doctrinal definitions, and other matters with legal and policy requirements. This report was due to the congressional defense committees on January 10, 2019. When will this report be provided to the congressional defense committees?

Secretary WEST. On March 6, 2019, I sent a letter to the congressional defense committees indicating that DOD needs additional time to analyze the data required by the statute and to deliver the report to the congressional defense committees. We anticipate the report to be complete by May 15, 2019.



## QUESTIONS SUBMITTED BY SENATOR JEANNE SHAHEEN

## PROHIBITION ON KASPERSKY LAB SOFTWARE

19. Senator SHAHEEN. General Nakasone, the Fiscal Year 2018 NDAA included a provision that prohibits the use of products and services developed or provided by the Kaspersky Lab. Can you provide the Federal Government's progress in banning all Kaspersky hardware, software and services?

General NAKASONE. [Deleted.]

20. Senator SHAHEEN. General Nakasone, the Fiscal Year 2018 NDAA provision also required a report that includes procedures for removing suspect products or services and an assessment of gaps no later than April 1, 2019. Can you provide a status on the report and whether it is on track to be completed?

General NAKASONE. [Deleted.]

## QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

## CYBER OPERATIONS DURING THE 2018 ELECTION

21. Senator BLUMENTHAL. General Nakasone, according to your understanding, did Russia attempt to conduct espionage or engage in influence campaigns during the last election?

General NAKASONE. [Deleted.]

22. Senator BLUMENTHAL. General Nakasone, we have seen that our failure to deter Russia has invited others to attempt to interfere. Recently Facebook and Twitter disclosed Iranian influence operations targeting Americans. Clearly the threat is growing. What countries have the capabilities and willingness to meddle in our politics?

General NAKASONE. [Deleted.]

23. Senator BLUMENTHAL. General Nakasone, you state in your testimony that with the consent of several European countries, you sent teams forward to conduct midterm election security operations. How important was this forward basing to the success of your midterm security mission?

General NAKASONE. [Deleted.]

24. Senator BLUMENTHAL. General Nakasone, is cooperation with European allies essential to your enduring mission of election security?

General NAKASONE. [Deleted.]

25. Senator BLUMENTHAL. General Nakasone, the President has raised the potential of political interference from China on several occasions. Have you seen any indication that China has sought to conduct campaigns similar to Russia against the United States?

General NAKASONE. [Deleted.]

26. Senator BLUMENTHAL. General Nakasone, countries such as Taiwan tend to be the first target of Chinese meddling—are there examples of tactics and operations used by China against its neighbors that we should be prepared for?

General NAKASONE. [Deleted.]

## TALENT RECRUITMENT IN THE CYBER DOMAIN

27. Senator BLUMENTHAL. General Nakasone, as we know, part of the challenge for the Cyber Mission Force is that the private sector can provide very attractive offers to our best and brightest. You note that you track attrition. Can you provide me metrics of attrition for our CYBERCOM?

General NAKASONE. [Deleted.]

28. Senator BLUMENTHAL. General Nakasone, how much higher is this than other military occupational specialties?

General NAKASONE. [Deleted.]

29. Senator BLUMENTHAL. General Nakasone, you mentioned in your testimony the need to utilize the Reserve Component to fill certain "low-density" skill sets. Do you have a plan in place to increase our Reserve components in this mission?

General NAKASONE. [Deleted.]

30. Senator BLUMENTHAL. General Nakasone, you also note that CYBERCOM is working with the Services to ensure that there is a joint common standard and proficiency with foundational cyber tools. Where are we in that process?

General NAKASONE. [Deleted.]

31. Senator BLUMENTHAL. General Nakasone, when do you expect the Services will meet the common standard?

General NAKASONE. [Deleted.]

32. Senator BLUMENTHAL. General Nakasone, how can this Committee assist you in this goal to recruit and retain CYBERCOM talent in the Reserves?

General NAKASONE. [Deleted.]

#### SYRIA WITHDRAWAL

33. Senator BLUMENTHAL. General Thomas, do you agree with General Votel that it is always best to operate with your partners? If so, are we accepting greater risk to force and mission if we leave our partners in Syria to instead attempt to fight the Islamic State of Iraq and Syria (ISIS) remotely from Iraq?

General THOMAS. Absolutely. Fundamentally, the worldwide military network of Allies and Partners is vital to our success and serves as a vehicle for the U.S. to achieve national policy objectives. In building this military network of capable Allies and Partners, SOF demonstrates U.S. commitment, deters potential adversaries, and creates options and access for the Joint Force. Additionally, we mature this network through providing our Allies and Partners equipment, funding, and training in those locations we operate in. Operating with our partners in the Defeat-Islamic State of Iraq and Syria (D-ISIS) campaign in both Iraq and Syria has been critical to our success. In both countries, we have relied heavily on our partners to do the fighting. Our job has been to enable them with fires, intelligence, surveillance and reconnaissance (ISR), and advice. Concerning risk to force and mission in the D-ISIS campaign, I defer to the CENTCOM CDR, as he has Operational Control of those forces and is ultimately responsible for determining appropriate risk to force and mission in those areas. Between our partner forces, our coalition partners, and our operational capability, we will continue to be successful in suppressing ISIS. This partnered approach has been successful over the past few years and in the end, our partners will own what is left behind.

34. Senator BLUMENTHAL. General Thomas, what are the advantages to operating from the same geographical location as your partners?

General THOMAS. Operating from the same geographical location as our partners has many advantages, i.e., we can provide timely support when needed, we can immediately exert direct influence at the point of friction, and we can effectively plan, coordinate and de-conflict operations as required. However, the primary advantage is the relationship of trust that we build with our partners. Our presence alongside a partner force allows us to directly enable them with operational support (fires, ISR, and advice), but more importantly, it demonstrates our commitment to their cause and enables the building of trust in our partnership.

35. Senator BLUMENTHAL. General Thomas, what would we lose by relocating special operators from Syria to Iraq?

General THOMAS. While we are adjusting our military posture in Syria, we are preserving sufficient combat power in the region to ensure that we can continue to destroy remnants of ISIS fighters and ensure it does not return.

36. Senator BLUMENTHAL. Secretary West and General Thomas, how have our Kurdish partners specifically added value to SOCOM forces operating in Syria?

Secretary WEST. The SDF have been a reliable partner for USSOF since 2014, and have suffered thousands of killed and wounded. Their leadership, sacrifice, and determination to drive ISIS from their homelands was instrumental in the liberation of the vast majority of ISIS's physical caliphate.

General THOMAS. Our local partners, the Syrian Democratic Forces (SDF), were essential to our operations in Syria. Since 2014, the SDF, our main indigenous partnered force in Syria, have suffered tens of thousands of killed and wounded driving ISIS from SDF homelands and remain instrumental as we conclude the ISIS fight and move forward. Without the SDF, the physical caliphate would still comprise an area of 34,000 square miles, compared to the less than one single square mile it tenuously holds today.

## OPERATION TEMPO STRAINS

37. Senator BLUMENTHAL. General Thomas, can you describe the type of mental health evaluations your servicemembers receive before and after deployments?

General THOMAS. Servicemembers are required to complete the DOD deployment health assessment cycle to collect information on physical and mental health status. DD Form 2795, Pre-Deployment Health Assessment is mandated within 120 days prior to deployment. DD Form 2796, Post-Deployment Health Assessment, is completed 30 days prior to or 30 days after redeployment. DD Form 2900, Post-Deployment Health Reassessment is accomplished between 90 and 180 days post-deployment. DD Form 3024, Periodic Health Assessment (PHA), is completed annually. The Mental Health Assessment (MHA) is included in the PHA. The MHA is a screener which must be performed in-person (telephonically or face-to-face).

38. Senator BLUMENTHAL. General Thomas, is the evaluation conducted by a mental health specialist or is it conducted by a general practitioner?

General THOMAS. The DOD-directed evaluations can be conducted by a variety of medical providers. If mental health issues are noted, the servicemember is referred to a mental health provider/specialist. The MHA can be administered by any trained medical professional but must be performed in-person (telephonically or face-to-face). Referral to a mental health professional is made if the MHA is positive for MH issues.

39. Senator BLUMENTHAL. Secretary West and General Thomas, when servicemembers are on dwell time, how often are they away from their home base for training?

Secretary WEST. The amount of time a servicemember may spend away from his or her home base for training purposes varies significantly by Service Component, force element, unit, occupational specialty, and other variables. USSOCOM's personnel tempo policy sets a threshold that a servicemember may not spend more than 480 days away from his or her home station in a 24-month period. This includes training, operational deployments, and performance of other official duties when circumstances prevent the servicemember from spending off duty-time at their normal residence.

General THOMAS. Deployment-to-Dwell (D2D) and operations tempo (OPTEMPO) are distinctly different than personnel tempo (PERSTEMPO). Dwell begins when the unit, detachment or member thereof, arrives at its homeport/stations/base from an operational deployment. Dwell ends when the unit, detachment or member thereof, departs on an operational deployment. A unit is either on operational deployment or in dwell. PERSTEMPO begins when a member's official duties require them to be at a location make it infeasible for the member to spend off-duty time in the housing in which the member resides when on garrison duty at the member's permanent duty station. The premise for USSOCOM PERSTEMPO measurement has not changed since the establishment of the policy in June 2012. Threshold is no more than 480 days away from home (head on pillow) in a 730 day window (66% at any given time). Dates for calculating the 24 month PERSTEMPO number are a rolling count of 18 months back and 6 months forward from the current day. The amount of time a servicemember may spend away from their home base for training purposes varies significantly by Service Component, unit, occupational specialty, and other variables. Greater than 99 percent of assigned forces are within the USSOCOM PERSTEMPO threshold. In 2018, there was only one waiver submitted to exceed the 480 day threshold; the waiver was disapproved.

40. Senator BLUMENTHAL. Secretary West and General Thomas, is time spent training in the continental United States (CONUS) or outside the continental United States (OCONUS) away from the servicemembers home base factored into the 1:2 ratio?

Secretary WEST. DOD policy defines deployment-to-dwell ratio for active components as the ratio of time a unit, detachment, or individual is operationally deployed to the time the unit, detachment, or individual is in dwell. Dwell is the period of time that a unit or individual is not on an operational deployment. Generally, the time a servicemember spends training in the continental United States (whether at or away from his or her permanent duty station or homeport) is not considered an operational deployment and is therefore factored as dwell time in the deployment-to-dwell ratio. Certain SOF overseas training events are considered operational deployments and are factored as deployment time in the deployment-to-dwell ratio. Time spent training in the continental United States or outside the continental United States may be factored into an individual's personnel tempo if it is infeasible

for a servicemember engaged in his or her official duties, including circumstances such as training as well as operational deployments, to spend off duty-time in his or her normal residence.

General THOMAS. Yes and no. The 1:2 ratio relates to deployment-to-dwell (D2D) calculations used to ensure individuals are not overly exposed to combat and operational deployments. Time a servicemember spends training in the continental United States (whether at or away from their permanent duty station or homeport) is not considered an operational deployment and is therefore factored as dwell time in their deployment-to-dwell ratio. However, certain SOF overseas training events, due to global force management consideration, (example: Joint Combined Exchange Training) are considered operational deployments and are factored as deployment time in their deployment-to-dwell ratio. Regardless of D2D calculations, time spent training in the continental United States or outside the continental United States will be factored into an individual's personnel tempo (PERSTEMPO) if it is not feasible for a servicemember to spend off duty-time in their normal residence.

41. Senator BLUMENTHAL. Secretary West, your testimony refers to your plan to improve the deployment-to-dwell ratio for the last 10 percent of your force. Please elaborate on this plan.

Secretary WEST. Our efforts to improve deployment-to-dwell ratios begins with continuing to improve our force management practices to ensure forces are being provided on a sustainable basis as well as refining our processes to prioritize SOF deployments in support of the Geographic combatant commands. Additionally, we have programmed relatively small end-strength growth in Combat Support and Combat Service Support (CS/CSS) personnel. This targeted growth is vital for us to alleviate deployment-to-dwell stress for some of our most strained critical enabler and support communities that are the result of structural imbalances in the size of our operator and enabler communities for certain force elements. These high-demand/low-density enablers perform critical specialized functions such as intelligence, communications, fire support, medical, maintenance, and other combat service support roles.

42. Senator BLUMENTHAL. General Thomas, you state in your testimony that you have achieved a minimum 1:2 deployment-to-dwell ratio with the "exception of a few critical skill sets and career fields." What are those skillsets and career fields, and why are they exceptions?

General THOMAS. The majority of career fields that continue to have a deployment-to-dwell ratio of less than 1:2 are the Special Operations Combat Support (CS) and Combat Service Support (CSS) skill sets. These high-demand/low-density enablers perform critical specialized functions such as intelligence, communications, fire support, medical, aircraft maintenance, Explosive Ordnance Disposal, and other combat service support roles. Typically, these skills sets are paired with Special Operators for deployment rotations. Due to current force generation cycles and manning issues, CS and CSS routinely experience an organizational imbalance between the support functions and operators. To address this issue, we have programmed relatively small end strength growth in CS and CSS personnel. This targeted growth is vital for us to alleviate deployment-to-dwell stress for some of our most strained critical enabler and support communities that are the result of structural imbalances in the size of our operator and enabler communities.

43. Senator BLUMENTHAL. General Thomas, both you and Secretary West mentioned in your testimony that the Preservation of the Force and Family (POTFF) program is important to enhance resilience and readiness through providing support to servicemembers and their families. Gen Thomas, you state that you have directed mandatory participation in the program. What are the physical and psychological services you referenced?

General THOMAS. Participation in the POTFF Human Performance Program is tailored to the requirements of our servicemembers' occupational specialties. For example, a Navy SEAL and a personnel clerk have much different needs to prepare for a mission; however, both share the need to be mission capable. The command is customizing its training programs to ensure that every member of the formation is performing at their best and are able to successfully accomplish their missions. Participation in the Psychological Performance Program will include periodic comprehensive assessments and specialized training to enhance cognitive functioning and decision making. We have directed immediate implementation of the training through the command's suicide prevention policy, and we are developing the assessment program with the assistance of the Defense Health Agency. Currently, we are testing assessment measures and processes at MARSOC units.

44. Senator BLUMENTHAL. General Thomas, when did you make participation mandatory?

General THOMAS. Participation in the command's human performance program has been a mandatory requirement since 2014 for all of our special operations qualified servicemembers, i.e. Special Forces, SEALs, Special Tactics and Marine Raiders. At a round table meeting with all of my commanders in August, 2019, I directed that every member of SOF will participate in the POTFF Human and Psychological Performance programs.

45. Senator BLUMENTHAL. General Thomas, did Chief Special Warfare Operator Gallagher participate in this program?

General THOMAS. As a Special Operations qualified sailor, Chief Gallagher was required to participate in the POTFF's Human Performance Program. Information as to whether Chief Gallagher participated in the Psychological Performance component of the POTFF program is protected under the Health Insurance Portability and Accountability Act.

46. Senator BLUMENTHAL. General Thomas, does the program require servicemembers to "self-report" mental health issues?

General THOMAS. Servicemembers cannot be compelled to self-report mental health issues; however, the command expects that all of our teammates will seek to continually improve their mental and physical performance. We afford every opportunity for our members to access behavioral healthcare, and have worked hard to normalize care and eliminate discrimination against those seeking care.

---

#### QUESTIONS SUBMITTED BY SENATOR TIM KAINE

##### HIGHER EDUCATION BENEFITS TO CYBER WORKFORCE.

47. Senator KAINE. General Nakasone, are there additional incentives Congress could provide you to better address talent and capacity gaps in our cyber security workforce?

General NAKASONE. [Deleted.]

---

#### QUESTIONS SUBMITTED BY SENATOR MARTIN HEINRICH

##### ARTIFICIAL INTELLIGENCE TECHNOLOGY

48. Senator HEINRICH. General Thomas, there is a massive amount of data coming from SOCOM's operations and from broader global intelligence collection efforts. What efforts is SOCOM taking to explore AI, and how would AI help SOCOM conduct its mission and operations?

General THOMAS. USSOCOM is pursuing an enterprise solution which incorporates the collection, storage, and analysis of big data with machine learning and AI platforms. AI and machine learning affords the ability to make better use of the massive amounts of data, to guide decision-makers on prioritization and inform potential future opportunities. While there is a significant amount of work to be done, we desire to be on the leading edge of AI capability in the DOD by partnering with government and non-government agencies to fully utilize the tremendous capabilities offered by AI. SOCOM established a Chief Data Office to lead the efforts to develop and apply AI technologies across the enterprise and recognize the return of increased data from AI application. SOCOM recognizes the value of AI/ML across the SOF Enterprise and have six initial focus areas where AI/ML is being introduced to improve speed, precision, and readiness in combat. These focus areas are: A. Targeting (kinetic and non-kinetic) B. Maneuver C. Communication, cyber protection, and reliance D. Recruiting, training, and talent management E. Predictive maintenance, logistics planning, and forecasting F. Vendor, contract, and budget management. SOCOM is finalizing an Artificial Intelligence Strategy and Data Strategy that will help guide our Enterprise to the leading edge of this technology by deploying AI at all echelons of the SOF enterprise, developing of an AI ready workforce, and executing an aggressive outreach program. The CDO has applied significant resources to ensure our efforts comport with the new DOD AI strategy, DOD Cloud Strategy, and soon to be released DOD Data Strategy. We intend to continue embracing the enterprise enablers being delivered by OSD and the Joint Staff enterprise enablers being delivered by the Joint Staff and OSD and intend to be constant partners who are willing to deploy new technologies into our formation to

improve our operations and due to the nature of AI, improve technologies with every turn.

49. Senator HEINRICH. General Thomas, does SOCOM see value in AI for countering weapons of mass destruction globally?

General THOMAS. Yes. USSOCOM certainly sees value in AI across multiple national security threats ... including countering weapons of mass destruction. Operationally, the use of AI will be essential for assisting special operations forces in analyzing and acting on information that may otherwise be missed due to the massive volume of data available. AI provides a platform to narrow the focus of our professionals at speeds that cannot be replicated by human operators alone. From a strategic perspective, the explosion of unstructured open source data has created an information challenge for SOCOM in its role as the Department's Coordinating Authority for CWMD. The SOCOM staff is exploring optimal employment of AI to ensure collection and assessment of CWMD critical information requirements. We are hopeful that AI will eventually aid predictive analysis. AI tools have the potential to identify and assess threats in a timely—if not real time - manner. Moreover, AI threat assessments, combined with staff estimates, will improve and inform our defense posture by enabling a more efficient allocation of finite defense resources. There remains much work ahead.

50. Senator HEINRICH. General Thomas, what other mission-sets does SOCOM see value in AI for?

General THOMAS. Artificial Intelligence has many applications within the Special Operations Enterprise and as we develop our capability, we will expand the use but initially, SOCOM is focused on six areas for the initial application of narrowly focused AI projects that as we learn from their application we will be able to stretch to transform all warfighting functions in our enterprise. These focus areas are: A. Targeting (kinetic and non-kinetic) B. Maneuver C. Communication, cyber protection, and reliance D. Recruiting, training, and talent management E. Predictive maintenance, logistics planning, and forecasting F. Vendor, contract, and budget management. The goal is to increase our effectiveness by transitioning as many singular tasks to AI/ML as possible thereby freeing our talented workforce to conduct more complex human tasks and partner with automated machines to improve our speed, precision, and scale of operations.

51. Senator HEINRICH. General Thomas, what agencies is SOCOM partnering with to develop and incorporate AI systems?

General THOMAS. USSOCOM is connected to all combat support agencies and benefits from the shared experience as we all explore ways to insert this transformational technology into our formations. USSOCOM is proud to have been an early partner with USDI as Undersecretary Kernan launched Project Maven at the then-Deputy Secretary of Defense's direction. Since then, we've expanded our partnership and have also embraced the Joint Artificial Intelligence Center's initiatives, initiatives from the DOD Chief Data Office, and the Joint Enterprise Defense Infrastructure (JEDI) Cloud Program as critical enablers to our way forward. In the last 30-days we've hosted the Directors of all of the programs at this headquarters and have pledged to embed SOF professionals in those organizations to both ensure their success and reinforce SOF's intent to be a living laboratory for the advanced AI technologies they develop to deploy. We believe a continued SOF to service model applies with AI and are ready to facilitate the introduction of any AI technologies the Combat Support Agencies believe will improve SOF operations.

#### RED TEAM CYBER OPERATIONS

52. Senator HEINRICH. General Nakasone, last month, the Director of Operational Test and Evaluation released his annual report. One of their observations was that red teams used to assess cyber vulnerabilities across the military were severely lacking in the personnel, time, and funding to accomplish their assessments. How critical is Red Teaming to our cyber security and operations?

General NAKASONE. [Deleted.]

53. Senator HEINRICH. General Nakasone, what is CYBERCOM doing to address this issue?

General NAKASONE. [Deleted.]

54. Senator HEINRICH. General Nakasone, another major concern is retention of master-level Red Teamers. What is CYBERCOM doing to recruit and maintain this expertise?

General NAKASONE. [Deleted.]

#### CHINA AND RUSSIA—CYBER THEFT

55. Senator HEINRICH. General Nakasone, China's cyber operations include tapping into our own research and development. What is CYBERCOM doing to protect against China's access of our emerging technologies?

General NAKASONE. [Deleted.]

56. Senator HEINRICH. General Nakasone, what efforts is CYBERCOM taking to protect major acquisitions projects from foreign espionage?

General NAKASONE. [Deleted.]

57. Senator HEINRICH. General Nakasone, are you working with defense contractors to help safeguard proprietary information and prototypes?

General NAKASONE. [Deleted.]

#### INFORMATION WARFARE

58. Senator HEINRICH. General Thomas, we are all worried about the weaponization of disinformation, especially with countries like Russia, who already excel at these malign operations. SOCOM is standing up an operations center to "provide global messaging capabilities," according to your testimony. Under what principles and guidelines will SOCOM operate in terms of those global messaging capabilities?

General THOMAS. The Joint MISO WebOps Center and partner combatant commands will support U.S. Government objectives and operate under approved MISO authorities to detect, deter, and counter as necessary, inaccurate and untruthful narratives in the information environment. This is no different than standard MISO activities, except it will occur on the internet. The principles and guidelines for conducting Military Information Support Operations will not change.

Cyber Acquisitions

59. Senator HEINRICH. General Nakasone, the Fiscal Year 2019 NDAA extended CYBERCOM's acquisition authority through 2025. What are you doing to better execute the entirety of your acquisition authority cap?

General NAKASONE. [Deleted.]

60. Senator HEINRICH. General Nakasone, what sorts of technology are you acquiring and looking for?

General NAKASONE. [Deleted.]

61. Senator HEINRICH. General Nakasone, do you have the skills and resources in place to handle CYBERCOM's contracting needs?

General NAKASONE. [Deleted.]

---

#### QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

##### CYBER MISSION FORCE SIZE AND MANNING

62. Senator MANCHIN. General Nakasone, the current cyber workforce shortage is estimated at approximately 300,000 jobs in the United States and almost 3 million jobs worldwide. It took since initiation of the process in 2013 until this past year to fully man the DOD cyber mission force of 133 teams. You stated that we would likely need an increase to this force. How great of an increase do you foresee us needing given the risk to advanced military capabilities and our civilian partners?

General NAKASONE. [Deleted.]

63. Senator MANCHIN. General Nakasone, how do you plan on recruiting and retaining this cyber force given the extensive shortages already documented and competition from the private sector?

General NAKASONE. [Deleted.]

##### CYBER OPERATIONS AND THE NATIONAL GUARD

64. Senator MANCHIN. General Nakasone, in 2018 West Virginia National Guard members were brought on board at Joint Force Headquarters—Department of De-

fense Information Network (JFHQ-DODIN) to help lead development of the first Concept of Operations (CONOPS) for use of National Guard forces to support States' domestic cyber operations and for cyber defense support to civil authorities. The CONOPS are most effective with an automated mechanism for information sharing between States. Where are you currently in the effort to automate this information sharing process and what else needs to happen to enable this CONOPS?

General NAKASONE. [Deleted.]

65. Senator MANCHIN. General Nakasone, the National Guard is quickly becoming a major player in the Cyber Operations fight. Last year the West Virginia National Guard began sending soldiers to attend jointly developed courses in cybersecurity at the University of Charleston to grow capability despite a lack of cyber force structure in the State. Previous to this the first National Guard cyber battalion was stood up in 2017 in Virginia. What is the future of force structure developments for National Guard units and how will National Guard units be utilized in the future cyber battlespace?

General NAKASONE. [Deleted.]

#### ADVERSARY CYBER OPERATIONS

66. Senator MANCHIN. General Nakasone, we've seen a significant increase in adversaries operating in the "gray zone" short of outright armed conflict utilizing cyber-attacks and information operations. Examples include Russian election interference, Chinese espionage and intellectual property theft, and Iranian and violent extremist information operations. Where are we seeing the greatest increase in these "gray zone" attacks and where are our associated greatest vulnerabilities to these attacks?

General NAKASONE. [Deleted.]

#### U.S. SPECIAL OPERATIONS COMMAND AND THE NATIONAL GUARD

67. Senator MANCHIN. General Thomas, the West Virginia National Guard maintains a robust special operations capability primarily in the 2nd battalion, 19th Special Forces Group of the Army National Guard. Are you able to effectively utilize National Guard special operations personnel and training spaces to ease workloads on Active Duty troops and achieve or attain better than your desired 1:2 deployment ratio?

General THOMAS. Yes. USSOCOM consistently utilizes National Guard Special Operations Forces (SOF) residing in 17 states to augment Active Duty SOF elements in order to meet directed readiness and 1:2 Deployment to Dwell requirements. National Guard SOF are generated and managed at a 1:4 Mobilization to Deployment ratio. USSOCOM expects all Active Duty Special Operations Forces will be at or above the 1:2 Deployment to Dwell Ratio by the start of fiscal year 2021. USSOCOM could not accomplish this without the effective use of the National Guard SOF.

#### U.S. SPECIAL OPERATIONS COMMAND AND ARTIFICIAL INTELLIGENCE

68. Senator MANCHIN. General Thomas, the Department just released the Defense Artificial Intelligence Strategy. In the unclassified summary, it says that it "is likely that the most transformative AI-enabled capabilities will arise from experiments at the 'forward edge'", which means that is "discovered by the users themselves in contexts far removed from centralized offices and laboratories." It seems clear that the special operations community is going to play a huge role in the artificial intelligence spaces. How are commanders embracing AI now and what are some things down the road we can expect to see our SOF community executing using artificial intelligence.

General THOMAS. USSOCOM is finalizing its AI Strategy, which clearly states it's our intention to be an AI Command accelerating SOF's ability to produce and use decision grade data at the speed of computers across every facet of our operations. Through the USSOCOM CDO, we are embracing an "applied AI" model, inspired by industry, where we focus on rapidly deploying AI technologies from our tactical elements to strategic headquarters. We are undertaking steps to create an aggressive workforce that can master the application of AI. As we improve our understanding of the technology our SOF operators and professionals will find creative applications for its use and continue deploying the new technologies increasingly rapid rates. As we build the team who can help deliver this technology and manage the data associated with it we've undertaken efforts with Project Maven to expand the deployment and capability of their technology into our formation beyond just full motion video but also exploring the opportunities to leverage smart system tech-



nologies to merge intelligence and operational data layers. We've also made our data, domain experts, and formation available to deploy new AI technologies to facilitate the rapid exploitation of captured enemy material. Further, we partnered with the JAIC to introduce the use of data-engineering and AI into our rotary wing fleet within the 160th Special Operations Aviation Regiment. This initiative provides our maintainers with the ability to predict engine failures and plan accordingly to avoid the lack of aircraft during operational peeks. The predictive model aligns needed maintenance based on data obtained from the aircraft with operational requirements to ensure peek readiness rates during mission peeks. Over the coming months we plan to initiate projects with the JAIC and others to build upon our successful AI technology integrations but also expand into other areas that include messaging and counter-messaging, identity protection and management, human performance, and maneuver.

---

QUESTIONS SUBMITTED BY SENATOR DOUG JONES

RECRUITING

69. Senator JONES. General Thomas, it's my understanding that the numbers of women and minorities in the Special Operations Forces are pretty low. I think we all understand the intrinsic value of a diverse force, but it seems to me also that recruiting effectively among all groups can help you reach your recruitment numbers and that diversity among the force can be very helpful when you are operating in other cultures and countries, especially in the types of missions Special Operations Forces undertake. Do you have a handle on the reasons for the low numbers of women and minority Special Operations Forces members and are you making efforts to increase those numbers?

General THOMAS. Keeping in mind that most in-service recruiting comes from the combat arms fields in the Army and Marines, the composition of our Special Operations Forces is highly reflective of the diversity make up of those forces. As women and minorities increase in the Army and Marine infantry, the numbers in the Raiders, Rangers and Special Forces will increase, but it will take time. Likewise, as the Air Force continues to recruit more diversity into Battlefield Airmen and as the Navy continues to recruit diversity into the SEALs, the diversity in SOF will grow. While recruiting is a Service responsibility, SOCOM is making every effort to offer all qualified servicemembers the opportunity to assess into special operations. To this end, we have recently graduated our 25th and 26th women rangers with numerous additional women currently in the course. As people self-select into the special operations forces, we do have limited ability to increase the diversity of the force beyond marketing, recruiting and mentoring. Nevertheless, special operations will continue to seek qualified diverse personnel to fill our ranks.

RECRUITING

70. Senator JONES. General Nakasone, how diverse is the CYBERCOM force and what efforts are you making to recruit from groups that are underrepresented?

General NAKASONE. [Deleted.]

PRESERVATION OF THE FORCE AND FAMILY

71. Senator JONES. General Thomas, I think the Preservation of the Force and Family program is an excellent and creative effort to address the unique pressures on Special Operations Forces and their families. In my hometown of Birmingham, Alabama, we are proud to host the 20th Special Forces Group (Airborne), an Army National Guard unit that has been regularly actively deployed to Iraq, Afghanistan, and a number of other places around the world as part of the Global War on Terror. I think they could benefit tremendously from the POTFF, as do Active Duty troops. Although I know there are key differences between Active and Guard units, are you considering extending the program to Special Forces Guard members and how would you accomplish that?

General THOMAS. We recognize the sacrifices and challenges faced by our SOF Reserve and National Guard forces and their families and acknowledge the need for POTFF services similar in scope to those provided to our Active forces and families. We are exploring alternatives to deliver POTFF to our SOF Reserve and National Guard forces. Options being considered include mobile training teams and remote/virtual instruction. USSOCOM is actively engaged with the DOD and Military Services to conduct a Capabilities Based Assessment (CBA) of Reserve and National Guard forces as related to the DOD's Total Force Fitness (TFF) initiative. The CBA is intended to identify capability gaps, which will lead to programming resources to

fulfill those gaps. In an effort to reach SOF families and remotely located personnel, including Reserve and National Guard, POTFF is developing a website to virtually deliver health and fitness material and to better connect SOF communities. The website will be active by mid-2019. Reserve and National Guard units that are located in proximity to active SOF units are welcomed and encouraged to utilize POTFF resources at those units.

**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**TUESDAY, FEBRUARY 26, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**UNITED STATES STRATEGIC COMMAND AND UNITED  
STATES NORTHERN COMMAND**

The Committee met, pursuant to notice, at 9:29 a.m. in room SH-216, Hart Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee Members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Perdue, Cramer, McSally, Scott, Blackburn, Hawley, Reed, Shaheen, Gillibrand, Blumenthal, Hirono, Kaine, King, Heinrich, Warren, Peters, Manchin, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. Our meeting will come to order. The meeting today is going to receive testimonies from two great guys, and it is a really good timing for this event to take place. They are General John Hyten, Commander of the USSTRATCOM [United States Strategic Command], and General Terry O'Shaughnessy, Commander of NORTHCOM [United States Northern Command].

This Committee's top priority is to support the effective implementation of the National Defense Strategy (NDS). The NDS Commission, which we have had a hearing on already—I think it leads us in the right direction. It is a blueprint that we are using in this commission. They made it clear that maintaining and modernizing the nuclear deterrent is required. While we ignored the nuclear weapons after the Cold War ended, Russia and China have focused on more and more nuclear programs. We, I guess, assumed that they were not doing anything because we were not doing anything at that time. Nonetheless, we have fallen behind.

Now we need to modernize all three legs with the nuclear triad, as well as the warheads and infrastructure in the Department of Energy (DOE). We have some questions about that because there is a lot of comments around negating the necessity of the nuclearization modernization that we feel is necessary.

The President and the Department of Defense (DOD) have also rightly identified space as a warfighting domain that is growing more important every day.

General Hyten, you are a career space professional and your current command both directs and relies upon many space systems every day. I look forward to hearing your views on establishing the U.S. Space Command (SPACECOM) as a full combatant command and also your thoughts on the new space force. We had a chance to visit in my office, and I appreciate it. I have heard that you visited others too. It is kind of a confusing thing when you talk about a space force and you talk also about the combatant command and where the two are similar. I have some questions along that line.

General O'Shaughnessy, you have operational responsibility for the defense of the United States Homeland. What an awesome responsibility that is. The Missile Defense Review recently enumerated a number of challenges to U.S. missile defenses, including cruise and hypersonic missiles. I am interested in your views on the most pressing priorities in the missile defense arena, as well as what we should be doing to address them.

Lastly, General O'Shaughnessy, I am eager to hear your assessment of the ongoing southern border deployment and how that might be affecting our readiness. Some interpretations of what is happening down there say that that could actually improve our readiness. I am anxious to hear your views on that.

Senator Reed?

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Well, thank you very much, Mr. Chairman.

I want to join you in welcoming our witnesses, General Hyten and General O'Shaughnessy. We thank you and your families and the many men and women who serve with you to serve the nation and protect the nation. Thank you very much.

General Hyten, first and foremost, we would like to hear from you about the administration's decision to withdraw from the Intermediate-Range Nuclear Forces (INF) Treaty with nothing to replace it. I understand that Russia was in noncompliance and that China also poses a threat, but I believe a better path would have been to continue to pressure Russia back into compliance and ask modifications to the treaty, if necessary.

Treaties are a major component of our security strategy. We build and modernize nuclear weapons, but we also have treaties which prescribe numbers and use. Withdrawing from this treaty puts the extension of New START [New Strategic Arms Reduction Treaty] in 2021 on very shaky ground. I am interested in your views on this matter.

The second issue I am concerned about is Russia's successful launch of the long-range hypersonic weapon, which I understand will be nuclear-capable. China also has a multitude of similar systems although not long-range like those of Russia. I am interested in hearing your thoughts on the capabilities of our near-peer competition and what we need to do to counter these capabilities.

The third issue I would like you to address is the administration's space force proposal. I understand the importance of space and the need for additional focus and resources for that effort. I am

also supportive of creating a full unified command for space. However, I remain dubious of the need to create an entire new bureaucracy of a separate service and all that entails. I think it is inevitable that such a creation will distract rather than provide focus to the critical mission of space. I know you have studied this issue closely, and I am interested in your views on the pros and cons of this proposal.

Finally, General Hyten, you are also responsible for the synchronization of global missile defense plans and operations. I would like to hear your thoughts about the recently released Missile Defense Review and the Department's plans for our current missile defense systems and how to address future threats.

General O'Shaughnessy, your mission is to protect the Homeland, to deter and defeat attacks on the United States and to support civil authorities in mitigating the effects of attacks and natural disasters. We saw this demonstrated in DOD's support to the States and territories affected by hurricanes and wildfires this past year, and we thank you and your command for your significant efforts.

You are also dual-hatted as the Commander of the North American Aerospace Defense Command, NORAD, which brings unique responsibilities and partnering opportunities with Canada to deter and defend against advancing threats to our nations.

You are also responsible for the operation of our Homeland ballistic missile defense system. We look forward to hearing about your priorities for further improvements to the ground-based missile defense system in the context of the Missile Defense Review. This is particularly important in light of the threat from North Korea and potentially Iran.

Lastly, at a time when the National Defense Strategy and our intelligence community's annual worldwide threat assessment are stressing the absolute necessity of using scarce resources to meet the challenge of near-peer adversaries like Russia and China, the administration is committing significant DOD resources and attention to what the President has taken to calling a national emergency at our southern border. In fact, nowhere in these two documents I have referenced, the National Defense Strategy particularly, are migrant caravans or drug traffickers crossing our southern border mentioned as threats to our national security. Russia, China, cybersecurity, and a host of other items are in those documents, but nowhere is there a finding that calls for 4,000 Active Duty troops to be deployed to the southern border. For comparison's sake, we have approximately 5,000 troops deployed in Iraq. I have yet to hear from a witness before this Committee who has not stressed the real threats we face and the need to restore readiness and provide modern facilities for our troops and their families. Instead, DOD is planning to reallocate funding that has been authorized and appropriated for installation commanders' top priorities in support of a wall that has no connection to a military threat and does not support military effectiveness.

I will also add that is the responsibility of the Department of Homeland Security and Customs and Border Protection, not DOD, to patrol and enforce our borders. If this administration is serious about dealing with the drug epidemic in our Nation, then it should

properly fund these federal agencies and other associated federal agencies.

General Hyten and General O'Shaughnessy, again thank you for your service, and please pass our regards on to the men and women that you lead. Thank you.

Chairman INHOFE. Thank you, Senator Reed.

Well, General Hyten, we will start with you and then go to General O'Shaughnessy. Try to keep your statements in the realm of 5 minutes. Your entire statement will be made a part of the record. We will start with you, General Hyten.

**STATEMENT OF GENERAL JOHN E. HYTEN, USAF,  
COMMANDER, UNITED STATES STRATEGIC COMMAND**

General HYTEN. Thank you very much. Chairman Inhofe, Ranking Member Reed, distinguished Committee Members, good morning. It is an honor to be here today alongside my friend, General O'Shaughnessy, and a continuing privilege to represent the 162,000 Americans accomplishing the missions of U.S. Strategic Command each and every day.

This is my third year appearing before this Committee as the STRATCOM Commander, and I appreciated the opportunities to meet with many of you one on one and to testify before you. I want to begin by thanking this Committee for your enduring support to our national defense.

The last time I testified before the Committee, we had begun our 10th consecutive year under a continuing resolution. Not this year, thanks to your leadership. I cannot overstate the importance of an on-time budget. The stability afforded with an on-time budget this year came at a critical time for us and had a positive impact on our modernization efforts and our overall force readiness.

STRATCOM is a global warfighting command, and as part of the joint force, we are responsible for strategic deterrence, nuclear operations, global strike, space operations, joint electromagnetic spectrum operations, missile defense, and joint analysis and targeting. That is a big portfolio. To execute our assigned missions, the soldiers, sailors, airmen, and marines and civilians of my command operate globally across land, sea, air, space, and cyber. Our forces and the strategic deterrence they provide underpin and enable all joint force operations and are the ultimate guarantors of our national and allied security.

The most important message I want to deliver today is that I am fully confident in our ability to preserve the peace and decisively respond in any conflict. We are ready for all threats that exist on the planet today, and no one should doubt this.

Strategic deterrence is an active mission. It is not a passive mission. It is dynamic. Our capabilities must continue to evolve as the global threat environment changes over time. With this evolution, the adversary's decision calculus changes, which drives modification to our own deterrence approach. Today we are challenged by multiple adversaries with an expanding range of capabilities, and we must adapt as well. To effectively deter and respond, if necessary, in this multi-polar, all-domain world, we must out-think, outmaneuver, out-partner, out-innovate our adversaries. Deter-

rence in the 21st century requires the integration of all our capabilities across all domains.

For over 2 decades, China and Russia have studied the way we fight. They study the American way of warfare. They have watched and learned how we train and fight. They understand the advantages we gain from integrating capabilities across all domains to accomplish our strategic objectives. To counter our long-held advantages, they are actively seeking to exploit perceived vulnerabilities and are directly challenging us in areas of long-held strength.

While our advantages are beginning to erode, we have not yet ceded the advantage. My focus this year is to continue to focus on the operations and modernization of our nuclear capabilities, focus first on the nuclear triad of ICBMs [intercontinental ballistic missiles], submarines, and bombers to support a seamless transition as the Department stands up a new space-focused organization and to continue the implementation of my new responsibilities as the nuclear command, control, and communications, NC3, enterprise lead and the operator and architect for this critical capability.

To be successful in everything that we do, we must recapture our ability to go fast, faster than all our potential adversaries. That is my biggest concern these days. That means we must return to the dynamic that made us the strongest, most technologically advance military in the world. But over my 38 years in military service, I have watched as our Nation has collectively developed an increasingly unhealthy expectation of trying to remove all risk from everything that we do. The challenge I have issued in my command is go break down the bureaucracy, take some smart risks, informed risks, do this within the left and right limits that I established in my commander's intent, and we have to move fast. It is critical if we are to stay ahead.

I am very grateful for your support in helping us do just that. I look forward to an on-time budget this upcoming fiscal year so we can sustain the momentum invigorating this Department and our best-in-the-world people, our best-in-the-world commercial sector to go faster and innovate to bring more timely and affordable solutions to our most pressing deterrence challenges. It is critical because nuclear war cannot be won and therefore must never be fought. Therefore, for us to prevent war, we must be ready for war. Success means we have lived up to our motto coined over 60 years ago in Strategic Air Command: Peace is our profession.

Thank you for the opportunity to be here today, and I look forward to your questions.

[The prepared statement of General Hyten follows:]

#### PREPARED STATEMENT BY GENERAL JOHN E. HYTEN

##### INTRODUCTION

USSTRATCOM is a global warfighting command. This is my third year testifying in front of this Committee. My command priorities have not changed. They remain: (1) above all else, provide strategic deterrence for the Nation and assurance of the same to our allies and partners, (2) if deterrence fails, be prepared to deliver a decisive response, and (3) do this with a combat-ready force. The 162,000 men and women who make up USSTRATCOM are resilient, equipped, and ready thanks to your continued support. Budget stability over the past year was extremely important and had a positive impact on both our modernization efforts and our overall readiness.

As part of the Joint Force, USSTRATCOM is responsible for Strategic Deterrence, Nuclear Operations, Global Strike, Space Operations, Joint Electromagnetic Spectrum Operations, Missile Defense, and Analysis & Targeting. To execute our assigned missions, the soldiers, sailors, airmen, marines, and civilians of the command operate globally across the land, sea, air, and space. Our forces and the strategic deterrence they provide underpin and enable all Joint Force operations and are the ultimate guarantors of national and allied security.

The foundation that enables our strategic deterrence is the triad: nuclear-armed Intercontinental Ballistic Missiles (ICBMs), Submarines, and Bombers. A powerful, ready triad remains the most effective way to deter adversaries from conducting strategic attacks against the United States and allies. Its credibility backstops all U.S. military operations and diplomacy around the globe and ensures that tensions—regardless of where or how they arise—do not escalate into large-scale war.

However, as all the elements of the triad age beyond their planned service life, we must continue to execute our planned modernization strategy to maintain an effective deterrent. We require a robust and ready nuclear arsenal for the foreseeable future. This will remain the case until the myriad of legacy and emerging nuclear threats are reduced or eliminated. Unfortunately, the opposite is occurring.

Deterrence is created by much more than the 1,550 New START treaty-accountable deployed nuclear weapons and 700 deployed strategic delivery platforms. Today, our mission to deter major power conflict dictates we field ready, capable, and lethal forces, tailored to adaptive adversaries. Continued success means integrating the full range of missions in all domains and without geographic boundaries. We are increasingly integrating our planning and Tier 1 exercises to remove seams between global and geographic combatant commands. We are pursuing approaches to enhance real world planning and execution of globally integrated fires to best deliver the most effective capabilities and effects when and where needed.

The United States must never put our ability to deter in jeopardy. Our missions, capabilities, and forces must continue to be an integral part of our overarching national security posture. Therefore, to continue to provide the security our Nation deserves, we must clearly identify the threats we face, develop strategies to deter those threats, and ensure we have the required capabilities for decisive response if deterrence fails. Only with continued Congressional support, can this remain the case.

#### GLOBAL SECURITY ENVIRONMENT

The National Defense Strategy describes the increasingly complex global security environment in which we live. We characterize today's environment by the re-emergence of long-term, strategic competition between nations and overt challenges to the free and open international order. Although an era of great power competition is again a reality, that does not mean conflict is inevitable. It means we must continue investing in strength to preserve the peace.

It is increasingly apparent that China and Russia want to shape a world consistent with their authoritarian models—gaining veto power over global economic, diplomatic, and security decisions—seeking dominance within their perceived regional spheres of influence, and expanding their global reach.

For over two decades, China and Russia have studied the American way of warfare; observing first-hand how we train and fight. They now understand the advantages we gain from integrating capabilities across all domains to accomplish strategic objectives. To counter our dominance, China and Russia are actively seeking to exploit perceived vulnerabilities and are directly challenging us in areas of long-held strength. Their development of asymmetric capabilities across all-domains is not meant to challenge single aspects of our deterrence strategy; rather, their advancements in technology, strategy, tactics, and doctrine aim to invalidate our entire deterrence strategy.

#### CHINA

China continues to challenge the existing rules-based international order. It is advancing a comprehensive modernization program aimed at making the People's Liberation Army a world-class military. This program includes the continued development and deployment of a nuclear triad, combined with anti-access/area denial (A2/AD) and power projection operations. They are also pursuing advancements in offensive hypersonic strike weapons, advanced robotics, quantum computing, and artificial intelligence (AI) through a combination of research and development, forced transfer of intellectual property, and outright cyber theft.

Additionally, China's maturing military space capabilities in intelligence, surveillance, and reconnaissance, satellite communications, satellite navigation, meteor-



ology, and robotic space exploration present growing challenges in space. With their focus on counter-space capabilities, China is pursuing a strategy of denying the United States the advantage of space-based systems during crises and conflicts.

Once locked away in intelligence channels, news outlets are beginning to note specific threats to our space systems. January marked 12 years since China publicly tested its direct-ascent system, in which it destroyed one of its own satellites and created thousands of pieces of debris. This 2007 test demonstrated to the world that China is capable of destroying any satellite in low earth orbit, including many of our intelligence and communications spacecraft. Today, China has an operational ground-based anti-satellite missile intended to target low-earth orbit satellites and are pursuing numerous other capabilities. These developments, coupled with China's lack of transparency on nuclear policies, force disposition, and weapons and their growing assertiveness to challenge the existing free and open international order undermines regional and global stability. Further, these actions seek to erode the United States standing in Asia.

#### RUSSIA

Russia continues to conduct malign activities that negatively impact U.S. interests. Their invasion and attempted annexation of the Crimean Peninsula, destabilizing eastern Ukraine, intervening on behalf of Syrian President Bashar al-Assad, and shaping the information environment to suit Russian interests, pose a major challenge to the United States and NATO. Russia's military doctrine emphasizes the potential coercive and military uses of nuclear weapons. It mistakenly assesses that the threat of nuclear escalation or actual first use of nuclear weapons would serve to "de-escalate" a conflict on terms favorable to Russia. These mistaken perceptions increase the prospect for dangerous miscalculation and escalation.

As far back as 2006, Russia committed to modernizing and adding new military capabilities to its nuclear forces and upgrading its strategic nuclear triad. Today, Russia has completed roughly 80 percent of their modernization goals. As part of this program, Russia is upgrading to modern road-mobile and silo-based ICBMs, increasing ballistic missile submarine reliability and stealth, fielding new Submarine Launched Ballistic Missiles (SLBMs), Submarine Launched Cruise Missiles (SLCMs), and modernizing its fleet of long-range strategic bombers, to carry nuclear and conventionally-armed air-launched cruise missiles. Russia is also developing and intends to deploy novel strategic nuclear weapons, like its nuclear-armed, nuclear-powered underwater unmanned vehicle and intercontinental-range cruise missile, which Russia seeks to keep outside of existing arms control agreements.

Russia is also pursuing nuclear-armed hypersonic missiles and nuclear-capable cruise missiles, which when coupled with their newest intercontinental range ballistic missiles, improves upon its capability to attack anywhere on the globe with little or no notice. Additionally, their production of a new fifth generation bomber expected within the decade will enhance their ability for long-range deployment.

Russia's material breach of the Intermediate-range Nuclear Forces Treaty also remains a significant concern, as demonstrated by their deployment of a treaty-violating system, the SSC-8 groundlaunched cruise missile, multiple battalions of which have been fielded as of late 2018, and illustrates Russia's broader pattern of malign behavior and willingness to disregard negotiated agreements when they believe it is in their interest. Finally, Russia has an active stockpile up to 2,000 Non-Strategic Nuclear Weapons (NSNWs), which are not accountable under the New START Treaty. These include air-to-surface missiles, short-range ballistic missiles, gravity bombs, and depth charges for medium-range bombers, tactical bombers, and naval aviation, as well as anti-ship, anti-submarine, and anti-aircraft missiles and torpedoes for surface ships and submarines, and Moscow's antiballistic missile system.

Russia's diverse and flexible NSNW capabilities facilitate a doctrine that envisions the potential coercive use of nuclear weapons. Combined with its large nuclear weapons infrastructure and ready production base, this underscores Moscow's commitment to having nuclear weapon underpin its security and commitment to maintaining its nuclear forces for the indefinite future. Their doctrine of coercive use further enhances their ability to challenge the United States and NATO across the full spectrum of political, diplomatic, military, and information warfare.

#### NORTH KOREA AND IRAN

North Korea and Iran remain threats but not to the same degree as China and Russia. Both North Korea and Iran retain large arsenals of short- and medium-range ballistic missiles and are threats to regional stability. North Korea has tested ICBM-class missiles designed to range the United States. However, the Department

of Defense is working actively to reduce military tensions and remains in full support of our diplomats as they work to achieve the final, fully verified denuclearization of the DPRK. Iran remains the world's leading sponsor of terror and continues its malign influence and destabilizing activities across the region. None of these activities are helpful or supportive of peace and stability, and all introduce greater risk to an already complex and volatile environment. In both instances, we remain vigilant to the threats they pose to the United States, our allies and partners, and support the on-going international and whole-of-government approaches to reduce these threats peacefully.

#### STRATEGIC DETERRENCE

Strategic deterrence has underwritten our Nation's security and preserved our way of life since the end of World War II. While the fundamental principles of deterrence remain constant, the 21st century landscape is profoundly different. We can no longer focus on countering a single adversary with traditional means. Peer adversaries are aggressively pursuing outright theft of intellectual property, demonstrating willingness to corrupt supply chains, and are exploiting rapid advancements in disruptive technologies in destabilizing ways. These actions provide China and Russia, in particular, advanced strategic capabilities to threaten the United States and marginalize our global influence. This requires us to rethink how we continue to deter new types of strategic attacks.

The mission of our Nation's strategic forces of the last 73 years endures: to deter major attacks against the United States and if necessary employ strategic forces to defeat an ever-changing adversary. Effective command and control, that supports global integration, is a necessary and critical element.

The 2018 National Defense Strategy states the Department of Defense (DOD) "will modernize the nuclear triad—including Nuclear Command, Control, and Communications (NC3), and supporting infrastructure." Thanks to Congressional support and timely budgets, we are making solid progress modernizing these weapon systems. However, to fully realize the capabilities of a modernized triad we require an NC3 architecture responsive to evolving threats and able to adapt to technology innovations. Speed is essential. We are beginning to move faster, but we are still not moving fast enough. Our most critical weapon systems must deliver on time or early. The Services are making progress and I appreciate their efforts, but we must continue to strive for more timely, affordable programs. We must recapture the ability of our Nation to go fast, faster than all potential adversaries, in order to maintain an effective deterrent.

Going fast means that we return to the dynamic that made us the strongest most technologically advanced military in the world. Over my nearly 38 years of military service I have watched as we collectively developed an increasingly unhealthy expectation of removing all risk from everything we do. Admiral Hyman Rickover, the father of the Nuclear Navy once said, "Success teaches us nothing, only failure teaches." We seem to have forgotten this principle. Although success is the ultimate goal, we must accept some healthy failures along the way. Today, however, we seem to reward and promote people at all levels for never failing, subconsciously creating a collective mindset to maintain the status quo at all costs. The best way to never fail is to never try, or to try only when success is certain—which means we punish those who aggressively take risks. If we continue this trend, we will eventually fall behind our competition. In 1991, the United States had the only superpower-class military, and status quo at that time favored us greatly. We still have an advantage, but that advantage is shrinking. I appear before you today fully confident in our ability to preserve the peace and dominate any conflict. But without change—unless we recapture the ability to take intelligent risk—a future USSTRATCOM commander, a decade or so from now, may sit before you and not be able to make the same statement. This could put our whole nation at greater risk.

To emphasize that point—today, our forces are still dominant, the finest in the world, yet they are equipped with many of the exact same weapon systems fielded during the Cold War, including the triad and our NC3 capabilities. Moreover, our competitors are moving fast—particularly in the area of their strategic forces. Status quo no longer favors us; however, our underlying personnel, budgeting, and acquisition structures evolved since the end of the Cold War to preserve the status quo. This must change. We must counter this situation with ruthless determination to reward and promote thoughtful risk management aimed at applying innovative technologies and new business practices. We must improve our ability to protect our Nation's commercial sector where innovation thrives. We must move fast in space, in cyber, in all our strategic systems—to once again regain the advantage.

Our NC3 system is ready, reliable, and effective at meeting today's strategic deterrence requirements. However, to meet the evolving threat, advances in technology, and to prepare for a modernized triad we must update our NC3 system now. Our current legacy system reflects the needs of the Cold War, focused primarily on Soviet-era ballistic missile and bomber threats. The next generation NC3 architecture must maintain and even improve on the readiness and reliability of today while also dealing with the myriad of new threats from our potential adversaries. As we transition to a modern threat-based NC3 enterprise architecture and address the growing cyber, asymmetric, and kinetic challenges, we must ensure positive command and control of U.S. nuclear forces at all times, even under the enormous stress of a nuclear attack. Getting this right and doing so quickly is one of my top priorities.

The next generation NC3 architecture requires an innovative approach tightly linking mission needs, requirements, acquisition, and funding strategies to deliver capability on operational and threatrelevant timelines. We must transform the enterprise to operate with speed and agility, fully leveraging rapid prototyping and experimentation, to innovate and outpace the threat. We must continually change while maintaining predictability for the user. This is a challenging task and once defined must be consistently resourced.

The 2018 Nuclear Posture Review (NPR) identified a range of initiatives to ensure our NC3 capability remains survivable and effective in crisis. Among these initiatives is reforming NC3 governance due to the broad diffusion of authority and responsibility within the Department. On 03 Oct 2018, the Secretary of Defense designated the Deputy Secretary of Defense and Chairman of the Joint Chiefs of Staff accountable for all NC3 related activities. Under this new governance structure, the Commander of USSTRATCOM is the NC3 Enterprise Lead responsible for NC3 enterprise operations, requirements, and systems engineering and integration, while the Under Secretary of Defense for Acquisition and Sustainment (USD (A&S)) serves as NC3 Capability Portfolio Manager (CPM). We have codified NC3 governance roles and responsibilities, taken concrete steps to sustain the current NC3 architecture with selective modernization, and are moving forward to design and field the next generation NC3. This was a necessary step to place the authorities under one commander, and I am already moving forward in that role.

To execute these new responsibilities, we are well on our way to establishing the NC3 Enterprise Center (NEC) at USSTRATCOM and are on track to achieve initial operational capability this year. The NEC will improve mission effectiveness and efficiency while defining future NC3 capability requirements. The NEC will also establish core NC3 operational concepts as the basis for aligning the right mix of multi-domain capabilities necessary to execute the Nuclear Command and Control mission and achieve strategic deterrence objectives. Essential to this work, is the ability to direct enterprise-level systems engineering and integration activities. Working with the Director, Defense Information Systems Agency (DISA), the Joint Systems Engineering and Integration Office is now aligned to the NEC and receives operational direction and work prioritization from me.

To support the NEC, USD (A&S) as the NC3 CPM will oversee and advise on NC3 enterprise acquisition and resources. The NEC and USD (A&S) team will provide comprehensive enterprise-level understanding of operational risk, margin and investment priorities as we envision, design and field the next generation NC3 in partnership with our service and agency leads.

To ensure we remain aligned, responsive and relevant, the NC3 enterprise must have dedicated operational and intelligence resources to rapidly identify, understand, and anticipate current and future evolving threats to the NC3 enterprise. To satisfy this need and concurrently address section 1655 of the Fiscal Year 2018 National Defense Authorization Act (NDAA), PL 115-91, USSTRATCOM, in coordination with the Office of the Director for National Intelligence, is establishing an NC3 Intelligence Fusion Center within the USSTRATCOM Intelligence Directorate. This initiative will facilitate aligning operations with intelligence expertise to enhance future NC3 architecture security.

With the governance structure in place to address future needs, we will concurrently continue sustainment and operation of the existing NC3 enterprise. We have taken significant steps over the past year to improve service, agency, and nuclear command and control operations centers reporting to better understand operational risk and margin. This data will allow us to continue increasing the analytic rigor in our assessments and inform sustainment and modernization investment priorities.

In order to provide the Commander In Chief continuous communications and control of the nuclear forces, we are improving communications capabilities across all domains to ensure connectivity, enhanced conferencing, and decision support tools to the President. In the space domain, we continue to launch Advanced Extremely High Frequency (AEHF) satellites for integration into a combined Milstar/AEHF communications constellation. The AEHF satellites, using the eXtended Data Rate (XDR) waveform, coupled with requisite ground node and airborne platform Family of Advanced Beyond Line-of-Sight terminals (FAB-T) enable collaboration between the President and senior advisors under any circumstance and ensure connectivity with the nuclear forces.

In the air domain, the Air Force and Navy are executing an airborne platform Analysis-of-Alternatives for replacing existing E-4B National Airborne Operations Center, E-6B Airborne Command Post and Take Charge And Move Out (TACAMO), and C-32 Executive Transport fleets. Ongoing communications capability enhancements include Air Force programs to provide a Very Low Frequency (VLF) receiver for the B-2 bomber in 2020 and a replacement VLF receiver and AEHF-capable terminal for the B-52 bomber. These capabilities will provide resilient and robust worldwide connectivity lasting well into the next two decades.

Finally, in the land domain, the Air Force Global Aircrew Strategic Network Terminal program will deploy an AEHF terminal providing Air Force Wing Command Posts, Munitions Support Squadrons, and Mobile Support Teams with survivable ground-based communications to receive Presidential direction for relay to bomber, tanker and reconnaissance forces. This modernization initiative is essential to completing transition from legacy Milstar low data rate networks to AEHF extended data rate networks.

I am confident in the direction the Department has taken and the priority placed on modernization of the NC3 Enterprise as stated in the NPR. As the Enterprise lead, my command will aggressively move forward, ensuring a safe, secure, and reliable architecture is in place for years to come.

#### THE NUCLEAR TRIAD

Maintaining the planned modernization of our nuclear triad of ICBMs, SSBNs, and bombers with air delivered weapons remains the best approach to deterring potential adversaries and assuring our allies that we are committed to their security. Numerous reviews, including the 2018 NPR, validate the nuclear triad's importance in deterring Russia and China, providing operational flexibility, and dissuading other nations from pursuing their own nuclear weapon programs. With a credible and effective force and a supporting declaratory policy, our strategic competitors would be hard-pressed to believe they could attack the United States or our allies and achieve the benefits they seek.

A modernized triad provides both unique and complementary capabilities to address current threats and future uncertainty. Alert and always ready to respond, the ICBM force ensures no adversary, regardless of size, can be confident in the success of a preemptive attack. Our ICBMs create enormous targeting problems for our adversaries, requiring a massive raid that would be impossible to hide and would guarantee their own demise. With its range, payload, accuracy, and speed the ICBM is critical to our Nation's deterrent strategy.

Our strategic bombers provide the President the most visible, flexible, adaptable, and recallable options to provide strategic deterrence. Should an emerging crisis arise, we can rapidly deploy our bombers to clearly communicate our resolve and commitment to our global security partners. With the ability to provide a conventional or nuclear strike capability, the bomber force plays an indispensable role in our overall strategy.

Nuclear powered submarines with nuclear-armed ballistic missiles patrol the seas and provide a survivable response capable of holding targets at risk within hours. Their assured, survivable secondstrike capability means that regardless of any attack, our adversaries will always face the possibility of a devastating response. The most survivable leg of the triad, it is also critical to our Nation's strategic deterrent.

We continue to propose prudent investments in delivery system modernization programs across the triad. These modernization efforts improve our readiness, increase safety and security, and enhance our capabilities/credibility against the threats we face now and in the near future. Although some might consider these modernization plans expensive, I believe that America can afford survival. The only way to change our strategic deterrent is to convince our adversaries to reduce the threat. This is not occurring. China and Russia, in particular, are not only modernizing the traditional elements of their own triads, but are also building a myriad of additional nuclear capabilities to threaten the United States. Both nations employ

and are modernizing silo-based ballistic missiles, submarines and bombers, and both are deploying large numbers of mobile ICBMs—which the United States has chosen not to pursue. China and Russia are pursuing hypersonics as we are, but, in stark contrast, we have no plans to include them in our nuclear force structure. Russia is also building new intermediate range nuclear weapons, new cruise missiles, as well as new nuclear powered cruise missiles and torpedoes all to threaten the United States.

We continue to monitor and evaluate all these new threats. We did so in last year's NPR. In the NPR, we evaluated and discarded a course of action that would match and even exceed the capabilities of these adversaries. Our analysis showed that we could continue to deter any and all of these threats with a modernized triad augmented by a small number of low yield nuclear weapons deployed on our submarines and a measured sea launched cruise missile capability. Modernization of these capabilities is critical to our Nation's defense. We don't have to match all the specific capabilities of our adversaries as long as our capabilities are robust enough to deter and if needed respond to any attack; this is why we need a triad augmented by some small numbers of supplemental capabilities. By pursuing these capabilities, we make sure that nuclear-armed adversaries do not falsely conclude there are reasonable benefits and acceptable costs to attacking the United States and our allies. Sustaining and modernizing the triad requires investment, but its contribution to peace and stability far outweigh the projected cost required to maintain a credible nuclear deterrent.

#### LAND-BASED STRATEGIC DETERRENT

The Minuteman III has served the country for over 45 years. Its high availability rate is testament to its robust design and the diligent efforts of the airmen who operate and maintain the weapon system. The Air Force is committed, through such efforts as the Programmed Depot Maintenance and Airborne Launch Control System Replacement programs, to sustaining the Minuteman III ICBM through 2030. When the Minuteman III finally retires, it will have exceeded its initial 10-year service life by half a century. While still reliable, missile component and hardware attrition, coupled with the aging of 1960's era infrastructure, drive the requirement for a comprehensive weapon system replacement within the next decade. Further Minuteman III life extension is not cost effective nor will it provide a weapon system capable of adapting to advancing technology and changing adversary threats.

To maintain a viable land-based strategic deterrent capability, the Air Force must begin deploying the replacement Ground Based Strategic Deterrent (GBSD) by the late 2020s. We are working closely with the Air Force to ensure the GBSD is fully integrated into our modernized NC3 system and can adapt to an evolving and increasingly dynamic strategic environment. To ensure this, the Air Force is incorporating modularity and open system standards enabling future technology insertion. Additionally, to deliver GBSD on time and on budget, the Air Force is pursuing mature, low-risk technologies and working with other strategic partners to leverage investments that eliminate delays and reduce cost. When fielded, GBSD will be a capable and cost-effective ICBM able to deter potential adversaries and assure allies of our commitments to their security.

#### SEA-BASED STRATEGIC DETERRENT

The *Ohio*-class ballistic missile submarine's stout construction and pioneering maintenance program allowed it to be life extended from 30 to 42 years into the 2040s, making it the longest serving submarine in U.S. history. However, with no margin to extend the *Ohio*-class further, the *Columbia*-class SSBN must field on time to avoid a deterrent capability gap in the triad. It is also essential that we maintain our technological advantage in this critical mission, and *Columbia* will do just that. To this end, the Navy has elevated the *Columbia* program to its top ship-building priority, leveraging other efforts and implementing advanced procurement to reduce risk and ensure it is ready for its first strategic deterrent patrol in 2031. We must continue to support our industrial partners and give appropriate prioritization to funding throughout the life of the program.

To avoid complex concurrent strategic weapon modernization programs, the Navy life extended the Trident II D5 ballistic missile to transition from *Ohio* to *Columbia*. The Navy fielded the Trident II D5 over 25 years ago and is executing a life extension that will allow service into the early 2040s. In the face of continuously evolving threats, we must begin the effort of designing a flexible and adaptable follow-on SLBM that allows rapid and cost effective modifications.

To ensure our nuclear posture is successful in deterring adversaries, the 2018 NPR directed nearterm fielding of a small number low-yield ballistic missile (LYBM)

warheads and pursuit of a modern nuclear-armed SLCM. These capabilities are necessary to our strategic deterrence mission and will serve to disabuse any adversary of the mistaken perception they can escalate their way to victory.

The LYBM has begun production and will serve to provide a timely counter to Russia's NSNWs, their doctrine of limited first-use in a large-scale conflict on Russian territory, and their perceived advantage in low-level nuclear conflict. The SLCM will help close deterrence gaps and provide a considerable degree of assurance to allies.

#### AIR-BASED STRATEGIC DETERRENT

The current bomber fleet and its associated weapon systems have already exceeded or are rapidly approaching the end of their intended service life. To preclude a strategic capability gap associated with these essential nuclear platforms, ongoing sustainment and planned modernization efforts must continue.

The B-52 remains the backbone of the strategic bomber force today and well into the future. It is the only platform capable of employing the nuclear AGM-86B Air-Launched Cruise Missile (ALCM) which provides a standoff capability while providing the President the flexibility to recall a strike if necessary. B-52s will remain in service until 2050. Until the B-52 is replaced, the Air Force will continue to upgrade the aircraft to ensure its long-term viability. Modernization of the 1950's-era engines, avionics, and weapons systems is essential for continued airborne strategic deterrence.

The B-2, the Nation's only penetrating bomber is also undergoing several critical modernization programs to maintain its survivability against advanced air defenses. Similar to the B-52, the B-2 recently received weapon systems and communication equipment updates to improve effectiveness and lethality.

The B-21 is the bomber of the future, ensuring we maintain a technical advantage against planned adversary advancements. Armed with both direct attack weapons to hold emerging targets at risk and cruise missiles to deny geographic sanctuaries to any adversary, the B-21 will deliver the right capabilities based upon the tactical situation. Like other modernization programs, it is critical the Air Force deliver the B-21 on time and on budget to assure we can meet deterrence objectives and global security commitments.

Complementing the Nation's strategic bomber force, the Long Range Standoff weapon (LRSO) will replace the aging ALCM and maintain a viable nuclear standoff capability that can hold targets at risk in an evolving threat environment.

Strategic bombers require reliable and robust tanker support to execute their strategic deterrence and nuclear operations missions. While the Air Force is committing significant resources to maintain the aging KC-135 tanker fleet, it is critical we deliver its replacement on time. The Air Force remains confident the KC-46 will deliver the required capabilities to support our strategic forces. It is imperative that KC-135 sustainment and KC-46 deliveries remain top priorities to ensure a credible air-delivered strategic deterrent.

Our NATO partners rely on the credible deterrent of deployed F-15, F-16, and PA-200 Dual Capable Aircraft (DCA) to provide regional assurance against aggression in Europe. The B61 nuclear gravity bombs deployed to NATO are over 30 years old and will be replaced by the life extended B61-12. By the mid-2020s, the F-35 will be available in Europe and capable of delivering the B61-12 into defended areas, maintaining the credibility of our deterrent capability and of the nuclear alliance. The ontime delivery of these capabilities and our continued commitment in support of NATO is a cornerstone of our deterrence and assurance objectives.

#### NUCLEAR WEAPON STOCKPILE AND SUPPORTING INFRASTRUCTURE

Today, our nuclear weapons are safe, secure, effective, reliable, and able to meet deterrence mission requirements. Much like the modernization efforts of our delivery systems, we must also take a hard look at the components that make up the warheads themselves. Ensuring the viability of the nuclear deterrent requires continued resourcing and sustained effort to address the increasing uncertainty and growing risk in our nuclear stockpile and enterprise.

The majority of weapons in today's stockpile have surpassed their intended design life, thereby accumulating increasing risk. The United States has reduced its stockpile by 25 percent since 2010, while some potential adversaries have increased their numbers of nuclear weapons and significantly modernized their nuclear capabilities. Potential adversaries are elevating strategic uncertainty with new capabilities, escalatory doctrines, and actions threatening our nuclear forces' effectiveness and credibility.

To address these challenges, the Nuclear Weapons Council (NWC) recently updated its longrange strategic plan to align with the National Security Strategy and the National Defense Strategy, and implement actions directed in the 2018 NPR. The strategic plan aligns the Department of Energy's National Nuclear Security Administration (NNSA) nuclear weapons modernization and infrastructure recapitalization activities with DOD nuclear delivery system replacement programs in support of deterrence and military requirements.

The NNSA recently celebrated important stockpile modernization milestones by completing the Navy's W76-1 ballistic warhead life extension program (LEP) and achieving first production of key components in the Air Force's B61-12 gravity weapon nuclear package. The Air Force and NNSA are progressing with the LRSO missile and its associated W80-4 warhead to deliver required capabilities on schedule.

The next significant stockpile effort involves both Air Force and Navy ballistic missile warheads, the bulk of our deterrent force. While these weapons will not field until the 2030s, development activities need to start in earnest now in order to posture the enterprise for success. Starting now also provides expanded opportunities for the Navy and Air Force to collaborate and leverage investments to their mutual benefit.

None of the required stockpile surveillance, sustainment and modernization efforts will succeed without replacing key facilities and upgrading our aged nuclear infrastructure. Our present complex continues to accumulate serious risk due to atrophy and past lack of timely recapitalization. I visited all the design laboratories and production plants across the complex last year, and in too many cases the enterprise is operating at or near capacity or simply lacks the needed infrastructure. This results in little margin to execute planned work or respond adequately to an emergent technical issue. Options for future systems are constrained by design and production limitations. If not corrected with currently underway or planned investments, the complex's condition will place us at a strategic disadvantage.

The highest NNSA infrastructure priority is re-establishing a plutonium pit production and fabrication capacity to meet deterrent requirements. Our national requirement, supported by numerous studies and analyses, requires no fewer than 80 war-reserve pits per year by 2030. I support the NNSA plan to achieve this.

Additionally, critical infrastructure investments in uranium and tritium processing, lithium and non-nuclear component production, experimental facilities, and general supporting infrastructure are required. Shortcomings in these areas create operational risks to force readiness and our surge ability to respond to unforeseen technical issues or adversary advancements in their capabilities.

Along with recapitalizing our infrastructure, we must also recruit, train, and retain a qualified workforce to perform the highly specialized nuclear weapons work. The enterprise must enact a human resource strategy that identifies qualified candidates, fosters interest through internships or skilled trade programs, and clears them for classified work as quickly as possible. The critical nature of our nuclear deterrent mission should drive us to hire and retain the best workers our country has to offer.

#### NUCLEAR WEAPONS SAFETY AND SECURITY

The Nation's nuclear security standard is absolute denial of unauthorized access to nuclear weapons. We work closely with our Navy and Air Force partners to assess nuclear security requirements and adjust our force posture, training, and equipment to address any threat. While we continue to upgrade and evolve our security capabilities, there are areas where additional investments are necessary to maintain the high standards this mission demands.

The proliferation, ease of use, and sophisticated capabilities of small, unmanned aircraft systems (sUAS) represent a growing threat to our deterrence operations. We rapidly fielded counter sUAS capabilities and are refining tactics, techniques, and procedures to address the developing threat. Focused leadership, vigilance, and dedicated investment are necessary to remain ahead of this threat.

With Congressional support, we recently achieved an important security milestone with the Air Force awarding a contract to replace our aged UH-1N helicopter fleet with the new MH-139. The new helicopter is a critical element in securing our vast ICBM complex and our security forces eagerly await its deployment. The first production unit is already well along the production line in Pennsylvania. With this program moving forward, we can now focus our efforts on replacing security vehicles and deploying advanced communication systems that will provide security personnel uninterrupted situational awareness anywhere they operate.

## 21ST CENTURY DETERRENCE

Twenty-first Century deterrence not only requires effective NC3, a modernized triad of nuclear ICBMs, SLBMs, and bombers with air delivered weapons, and an ability to design and produce modern and more effective nuclear weapons, it also requires conventional global strike, space control, control of the electromagnetic spectrum, and missile defense. When effectively integrated these capabilities provide the Joint Force the ability to respond to adversary actions in the domain, location and time of our choosing.

## CONVENTIONAL GLOBAL STRIKE

Bombers are capable of carrying a variety of conventional and nuclear weapon types with diverse attributes contributing to the flexibility of the deterrent force. Additionally, bombers are integral to our international engagements and partnering through our Bomber Task Force (BTF) missions, and our demonstrated capability to conduct strike missions originating from the continental United States. BTF deployments to the Indo-Pacific and European theaters provide an opportunity to exercise and train with our allies and partners, demonstrate United States commitment and resolve, and deter potential adversaries.

The B-1 is the workhorse of the past 17 years of conventional fighting. The B-1 has had many successes in Iraq, Syria, and Afghanistan, while providing USSTRATCOM a credible conventional deterrent against global threats. As the threshold platform for the Long Range Anti-Ship Missile, the B-1 will remain a formidable asset for operations in the Pacific and across the globe. Similar to the B-52, the Air Force remains committed to maintaining the platform to ensure its continued operational effectiveness.

Strategic competitors are investing significant resources to develop offensive and defensive capabilities with the purpose of countering our entire deterrence strategy. To maintain peace, the United States must continue to invest in technological innovation and development of survivable, long-range strike systems able to hold time-sensitive and high-value targets at risk. Today, the only prompt longrange strike capabilities are ballistic missile systems armed with nuclear warheads. We need a conventional prompt global strike capability. This is the USSTRATCOM requirement. Conventional hypersonic strike weapons could meet this requirement and provide responsive, long-range, strike options against distant, defended, and/or time-critical threats when other forces are unavailable, denied access, or not preferred. While conventional hypersonic weapons are not a replacement for nuclear weapons, their unique attributes will increase traditional warfighting advantages and bolster conventional and strategic deterrence.

The DOD identified conventional hypersonic strike as a top research and development priority and is moving forward with a mix of land, sea, and air-launched weapon system options to hold high value, heavily defended and time critical targets at risk. This is a Department-wide, multi-Service, collaborative effort to provide operational capabilities as soon as possible. The Navy's Conventional Prompt Strike (CPS) program spearheads the initiative as the leading technology maturation effort allowing the Navy to field a submarine/ship launched intermediate-range CPS weapon system that can be leveraged into Air Force and Army efforts. The Air Force continues to explore both air-launched hypersonic boost-glide and cruise missile concepts for fielding on a variety of strike and bomber aircraft. The Army plans to incorporate hypersonic strike systems into their traditional long-range precision fires portfolio to expand the reach of surface-to-surface engagements. Each of these capabilities have the potential for early operational fielding within the next few years. This flexible mix of capabilities will provide combatant commanders persistent, visible and credible strike options without crossing the nuclear threshold.

## SPACE OPERATIONS

For decades, the United States has enjoyed unimpeded freedom of action in space. This allows us to deliver space capabilities that include intelligence collection, missile warning, weather monitoring, satellite communications as well as precise positioning, navigation, and timing essential to joint forces operating globally with unmatched speed, agility and lethality. These same capabilities also contribute to our economy and support our quality of life.

The President has directed a renewed commitment to space. Our commitment extends to the integration of space capabilities across every domain in order to deliver an unmatched global advantage to the Joint Force. What remains unchanged is the fact that our principal competitors regard space as a warfighting domain. While the United States prefers space to remain free of conflict, we are rapidly moving to meet



and overcome challenges impeding our ability to access and freely operate in space. The best way to deter a war that starts in, or extends into space, is to be ready to fight and win.

As part of this effort, the President has given direction for a more cohesive, robust space warfighting organization. In December, upon the recommendation of the Secretary of Defense and the Joint Chiefs, the President directed the establishment of U.S. Space Command (USSPACECOM) as a unified combatant command to improve joint warfighting in the space domain. Moving expeditiously to a unified space command reflects the importance of warfighting in space to the Joint Force, the value of space-focused deterrence elements, and the critical need for space-related response options for the Nation. USSTRATCOM will maintain its focus on this critical mission area until authorities and responsibilities governing space operations fully, and successfully, transition to a new combatant command.

In addition to realizing a dedicated unified space command, we are moving forward on a priority effort executing tasks directed in Space Policy Directive-3. USSTRATCOM is closely partnering with the Department of Commerce (DOC) to transition some non-military aspects of Space Situational Awareness (SSA) data publication and space traffic management-related functions to DOC, while continuing to provide SSA data to support U.S. Government customers and to advance military-tomilitary relationships that support worldwide combined military operations.

USSTRATCOM's new SSA data sharing initiative, executed through the Joint Force Space Component, releases information about space objects not previously available outside of DOD channels, to enhance SSA data sharing, transparency, and spaceflight safety. This initiative is in line with national policy as part of a larger effort to preserve the safety of, and accessibility to space, so that our Nation, allies, and even the rest of the world, can continue to reap the benefits of space.

Exercises and wargames continue to refine how we coordinate today and how we will work together in the future. This year, Japan participated in the Schriever Wargame for the first time, joining Australia, Canada, France, Germany, New Zealand, and the United Kingdom. We also executed Global Sentinel 2018, our fifth annual operational tabletop experiment for SSA, and increased its international participation to include Australia, Canada, the United Kingdom, France, Spain, Germany, Italy, Japan, and the Republic of Korea. Chile and Norway attended as observers.

USSTRATCOM continues to focus on cultivating a robust international engagement environment with several ongoing lines of effort. In doing so, we have generated significant momentum leading to a fully integrated partnership of nations dedicated to defending the peaceful use of space.

Improved partnership with allies is paramount for the safety and security of the space domain. As we continue our Combined Space Operations (CSpO) initiative with Australia, Canada, New Zealand, and the United Kingdom, we recently expanded it with the addition of France and Germany. In July 2018, the Joint Space Operations Center (JSPOC) transitioned to a Combined Space Operations Center (CSpOC), now the centralized hub for operational space planning and tasking with distributed execution through contributing partners. This effort goes hand in hand with our recent update to Operation OLYMPIC DEFENDER to include international partners and define our operational relationships and associated authorities as we conduct combined operations in the space domain.

The National Space Defense Center (NSDC) continues to mature as our 24/7/365 operational center to protect and defend the space domain. The NSDC remains the focal point for unity of effort across DOD, the Intelligence Community, and the National Reconnaissance Office for information sharing and to rapidly detect, warn, characterize, attribute and defend against threats to our Nation's vital space systems.

Future satellite communications (SATCOM) systems remain key to our continued strategic posture in space. We must design and fund replacement systems and remain on schedule for smooth transition of operations to these new systems. We must expand international SATCOM partnerships, strengthen our industrial base response to acquisition challenges, and integrate commercial opportunities to evolve future satellite payloads towards commercial solutions wherever possible.

The inclusion of our allies is key to building a robust SATCOM network that leverages commercial integration, synchronization and sharing of resources. Multilateral agreements with Canada, Denmark, Luxembourg, Netherlands, and New Zealand provide funding for the operation of Wideband Global SATCOM (WGS). Consequently, the department shares bandwidth proportionally with our partner nations and allocates bandwidth based on the amount of their financial contribution. The growth of the WGS constellation continues as we launch WGS-10 in early 2019,

and with newly-infused funding authorized in the fiscal year 2018 NDAA, we plan to procure and launch additional WGS capacity.

Addressing the synchronization gap between terminals, ground infrastructure, and on-orbit satellite capacity remains a significant concern. The narrowband SATCOM legacy constellation is aging, and we must continue to make progress transitioning to the Mobile User Objective System, leveraging commercial capabilities where appropriate. The fielding of new AEHF Extended Data Rate (XDR) capable satellites continued with the launch of AEHF-4 in October 2018. That event, coupled with the anticipated launch of two more AEHF satellites in the next two years, will cover our near term protected communications equities.

USSTRATCOM, in conjunction with the Services, continues to pursue an enterprise approach to fighting SATCOM in a contested domain through the stand-up of the SATCOM Integrated Operations Environment (SIOE). The SIOE is designed to leverage key wideband, narrowband, protected band, and commercial SATCOM enterprise capabilities and expertise to improve our ability to mitigate and fight through SATCOM degraded environment. We will also aggressively pursue the integration of commercial capabilities that have the ability to provide robust, resilient augmentation of our constellations for a very reasonable cost.

We must improve how we collectively organize, train, and equip ourselves for unfettered access to and freedom to operate in space, providing vital capabilities to joint and coalition forces in peacetime and across the spectrum of conflict. As potential adversaries continue to develop, test, and field more threats to our space systems, USSTRATCOM (and the future USSPACECOM) will benefit from increased focus on these key areas that enable us to deter aggression and protect our interests. We must go faster to stay ahead of potential adversaries, and USSTRATCOM is committed to ensuring sustained space operations with available forces during this transition period until USSPACECOM is ready to assume the lead role.

The President has also focused on the benefits of establishing a sixth branch of the military, the Space Force. The President and Vice President have been personally involved in developing this new Force and Acting Secretary of Defense Shanahan has worked across the Department to define the proposal. The Space Force will be a separate service within the Department of the Air Force. I support the creation of the Space Force within the Department of the Air Force. This will allow proper focus on the warfighting challenges, effective and aligned support to the new USSPACECOM, and given the threats and challenges in the domain, help to build an enduring “space-minded” culture in the department. This effort will not create or require a large, new support bureaucracy. Someday, the Space Force will be its own department, but this is not yet the right time. I thank the President and the Vice President for recognizing that space is a warfighting domain and proposing a fiscally responsible approach for the organizations needed to address these critical challenges. I encourage the Congress to support this proposal.

USSTRATCOM and the future USSPACECOM will directly benefit from the President’s intent to accelerate space acquisition timing. Current 10- to 15-year cycles from requirement to fielded capability are too long. Not only do we miss out on application of new technology and field equipment that is already obsolete on Day 1, but we also need a systemic change to counter potential adversaries with faster acquisition cycles. Commercial innovation has already adapted to exploit faster and faster technology discovery in commercial competition, and we must change to leverage these accelerating opportunities not only to defend our Joint Force in space, but also to protect commercial investments that sustain the global economy. USSTRATCOM (and the future USSPACECOM) look forward to leveraging the benefits of the new Space Force as our organizations focus on two things—defending the space domain and going fast.

#### JOINT ELECTROMAGNETIC SPECTRUM OPERATIONS (JEMSO)

The Electromagnetic Spectrum (EMS) is the one physical maneuver space shared by all forces in all domains. The EMS is central to the first strategic goal of organizing forces to achieve Joint Force commander objectives. The Joint Force operates in the EMS to achieve superiority at a time and place of our choosing. Our adversaries recognize the need to decisively achieve EMS control and have developed and organized their forces accordingly. In recognition, we must continue to pursue capabilities necessary to maintain EMS superiority. Achieving EMS superiority early in conflict is critical for effective U.S. operations in all domains.

USSTRATCOM, in coordination with DOD CIO/DISA, is actively pursuing development of an Electromagnetic Battle Management (EMBM) system to enable EMS superiority. We are supporting the EMS Operations governance study directed by the Joint Requirements Oversight Council and coordinating with other combatant

commands on the development and implementation of JEMSO cells and tactics, techniques, and procedures. Additionally, we continue to engage Australia and North Atlantic Treaty Organization partners to ensure compatible JEMSO doctrine and concepts of operation, and to lay the groundwork for interoperable EMBM systems.

Section 1053 of the Fiscal Year 2019 NDAA, PL 115–232, provides guidance to the Secretary of Defense on electronic warfare and JEMSO to improve our ability to advocate effectively for requirements. USSTRATCOM is working closely with the Acting Secretary and Services to implement measures of the act, the Electronic Warfare Executive Committee and the previously mandated cross-functional team to identify requirements and specific plans for addressing personnel, capability and capacity limitations in order to ensure effective implementation of DOD's Electronic Warfare Strategy.

#### THE MISSILE DEFENSE REVIEW

Conducted at the direction of the President, the 2019 Missile Defense Review (MDR) presents the Administration's missile defense policy and strategy. The MDR aligns with the National Security Strategy, the National Defense Strategy, and the 2018 NPR. The MDR reinforces the Administration's commitment to defending the United States and our deployed forces and allies from adversary missile attacks.

The United States and our allies and partners face potential adversaries who are increasing existing missile system capability and capacity; adding new and unprecedented types of armaments to their arsenals; and integrating offensive capability more thoroughly in their coercive threats, military strategy, and war planning. Left unaddressed, this expanding missile threat could embolden our adversaries into mistakenly believing they can coerce us, inhibit our freedom of action, or undermine our security alliances. A concerted U.S. effort is required to expand and improve existing capabilities for both Homeland and regional missile defense.

As stated in the National Security Strategy, the United States has a robust and credible layered missile defense system. When paired with offensive capabilities this combination sends a strong message allowing the United States to deny benefits and impose costs against any potential adversary. Although the United States relies on nuclear capability to dissuade near-peer strategic threats, missile defense endures as a critical component of comprehensive U.S. strategic and tailored regional deterrence strategies. Our regional missile defenses protect against missile attacks on deployed U.S. Forces, allies, and partners; assists allies and partners in better defending themselves; preserves freedom of action; and counters adversary anti-access/area denial tactics. The United States is pursuing new concepts and technologies to ensure continuing effectiveness against advanced future threats, including space-based sensors and boost phase intercept. As we address future threats, we must account for the air and missile defense assets required to defend the Homeland, while simultaneously improving our regional security architectures. In this effort, there is no one silver bullet, but several layered capabilities are in development.

#### MISSILE DEFENSE

The 2019 MDR sets the foundation for the next generation of missile defense efforts. Of importance to USSTRATCOM, it provides an opportunity to conduct focused reviews clarifying and optimizing missile defense roles and responsibilities across the Department. This includes opportunity to assign responsibility for integrating pre-launch attack operations with defenses to mitigate missile threats, ensuring warfighter involvement in our Departmental requirements and fielding processes, and assessing how to better use missile warning assets against emerging threats. All of these efforts focus on reviewing current systems and addressing advanced adversary capabilities such as hypersonic threats.

U.S. missile defense capabilities will be sized to provide continuing effective protection of the U.S. Homeland against rogue states' offensive missile threats. The United States relies on nuclear deterrence to address the large and more sophisticated Russian and Chinese intercontinental ballistic missile capabilities, as well as to deter attacks from any source consistent with long-standing United States declaratory policy as re-affirmed in the 2018 NPR.

As the warfighter advocate for Missile Defense, it is imperative that we focus materiel developers on research, development, testing, and engineering against advanced threats. Rapidly transitioning ready systems with identified funding streams to the Services will free up needed resources for critical research and development efforts such as continued funding of next generation space systems. Research and development is key to ensuring we keep pace with evolving adversary threats across all domains. Space systems provide valuable solutions to layered tracking and dis-

crimination capability. A space tracking and discrimination constellation combined with next generation Overhead Persistent Infrared systems would provide significant improvements necessary to detect advanced threats. Future space-based sensors may be able to detect, track, and discriminate hypersonic glide vehicle and ballistic missile threats globally. These abilities cannot be fully achieved with the current or any future terrestrial-based radar architecture due to the constraints of geography and characteristics of future missile threats.

Boost phase intercept is also showing promise. Increasing the power and lethality of laser, neutral particle beam, and high power radio frequency systems for multi-mission applications, along with new fighter-delivered interceptors, can exponentially enhance our missile defenses.

#### ASSURING ALLIES AND PARTNERS

USSTRATCOM cannot accomplish its mission without integrating allies and partners. Allies are critical to responding to mutual threats, preserving our shared interests, and are the greatest asymmetric advantage the United States has over potential adversaries. The Command continues to expand and enhance the viability of our Nation's alliances and partnerships, setting conditions across the globe to deter our adversaries.

USSTRATCOM's engagements with allies and partners are critical in shaping the strategic environment, strengthening relationships, and building trust. In doing so, we are prepared to act in a combined manner to deliver a decisive response in crisis or during contingency operations.

During 2018, our Command conducted over 50 bilateral engagements with senior leaders from Australia, Brazil, Canada, Denmark, France, Germany, Great Britain, Iceland, Japan, Netherlands, Pakistan, the Republic of Korea, Taiwan, and Thailand.

Our 25-nation, multinational missile defense policy campaign of experimentation, NIMBLE TITAN (NT) 2018, concluded with a senior leader seminar held at the new NATO headquarters in Brussels, to include representatives from Europe, the Gulf States, the Indo-Pacific, and North America. The NT 2020 campaign is just beginning, and continues to show increased interest by partners and allies.

USSTRATCOM works closely with our allies and partners to enhance awareness within the space domain, increase the safety of spaceflight operations, and promote the responsible, peaceful, and safe use of space. During 2018, USSTRATCOM signed new national agreements with Brazil, Denmark, the Netherlands, New Zealand, and Thailand for sharing SSA services and data. Currently, USSTRATCOM has agreements with 18 nations, two intergovernmental organizations, and over 70 commercial satellite launchers, owners, and operators.

Our efforts in this area increase military interoperability, improve alliance capability and capacity, and integrate our critical defense missions. The Command's engagements assure allies and partners of the United States' extended deterrence commitments and reinforce non-proliferation goals and objectives.

#### CONCLUSION

USSTRATCOM is a global warfighting command. Success in all of our missions depend on the Command's greatest strength—our people. The 162,000 men and women stationed around the globe, operating in all domains, undertake the active defense of our Nation every day. These soldiers, sailors, airmen, marines, and civilians are warfighters, dedicated to preserving the peace and when called upon, ready to dominate and win in conflict. Successful mission execution has the appearance of “business as usual” which belies the effort and impact of executing at the highest standard every day.

Today, our capabilities are safe, secure, and effective and our forces are combat-ready. With continued support of the programmed major investments, our forces will prevent nuclear war and ensure that regardless of how would-be adversaries might choose to attack the United States, we will always retain decisive response options, across the spectrum of conflict, for the President.

We are dominant today. However, advantages we have long-held are eroding, challenging the Command's ability to deter strategic attack, engage in active defense, assure our allies and partners, and fight and win in and across all domains if necessary. We cannot let this erosion continue. We must maintain our strategic advantage. We must take calculated, smart risks and move fast once again. With sustained Congressional support, USSTRATCOM will continue to effectively defend the nation.

Nuclear war cannot be won and must never be fought. Therefore, to prevent war we must be ready for war. We must maintain today's triad of nuclear forces, while

simultaneously building the triad of tomorrow. We must integrate all domains and capabilities together to effectively deter in the 21st century. If we are successful, we will continue to live up to our motto, coined over 60 years ago. Peace is our Profession ...

Chairman INHOFE. Well, thank you, General Hyten. An excellent statement.

General O'Shaughnessy?

**STATEMENT OF GENERAL TERRENCE J. O'SHAUGHNESSY,  
USAF, COMMANDER, UNITED STATES NORTHERN COMMAND  
AND NORTH AMERICAN AEROSPACE DEFENSE COMMAND**

General O'SHAUGHNESSY. Thank you. Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, I am truly honored to appear today as the Commander of the United States Northern Command and the United States-Canadian bi-national command, North American Aerospace Defense Command. It is a pleasure to be testifying today alongside General John Hyten who is not only my good friend but someone who I have admired and respected for so many years.

USNORTHCOM and NORAD are two complementary but distinct commands driven by a single unyielding priority: defending the Homeland from attack. In this era of rapidly evolving technology and renewed great power competition, the need for an energized and active defense of the Homeland cannot be overstated. Revisionist powers, Russia and China, have given every indication that their own security strategies are based on holding the United States at risk with both conventional and nuclear weapons, and they have signaled that we must anticipate attacks against our civilian and defense infrastructure in the event of a conflict.

Russia has modernized its aviation and submarine fleets and fielded long-range cruise missiles designed to evade radar detection. Russia and China continue their efforts to penetrate our networks while developing and testing hypersonic glide vehicles. Both have also established a noticeably stronger foothold in the Arctic along the northern approaches to the United States and Canada. As a result, the strategic value of the Arctic as our first line of defense has reemerged, and USNORTHCOM and NORAD are taking active measures to ensure our ability to detect, detract, and defeat potential threats in this region.

Our adversaries have engaged in deliberate, focused efforts over a number of years to exploit our perceived gaps and erode many of the advantages previously afforded by our geography and technological superiority. As a result, it is clear that our Homeland is not a sanctuary.

Our mission to deter our adversaries is dependent on our ability to detect and ultimately defeat potential threats to our Homeland. I am grateful to the Committee for the strong support of USNORTHCOM and NORAD priorities along those lines of effort. Your support for fielding AESA [Active Electronically Scanned Array] radars for our aerospace control alert fighters and improving the capability and capacity of our missile defense sensors and interceptors clearly demonstrate our shared sense of urgency and resolve.

In that same spirit, we must take prudent steps now to ensure our next generation defensive capabilities, to include a space-sensing layer of space-based missile defense centers are not late to need. That effort cannot start too soon, given the fact that our adversaries are already developing and testing advanced weapons specifically intended to avoid detection in order to hold targets in the Homeland at constant risk.

I sincerely appreciate the Committee's work to provide much needed predictability and stability with an on-time budget in fiscal year 2019. I am also grateful for the Committee's ongoing efforts to ensure that we avoid the devastating deep-cutting impacts that a return to sequestration would bring to the Department of Defense.

USNORTHCOM and NORAD work every day with our partners to keep our citizens safe while confronting the challenges emanating from multiple approaches and in all domains. I especially want to take this opportunity to express my gratitude to the amazing men and women in the National Guard who are great partners and critical in our ability to perform our missions. Whether intercepting Russian bombers off the coast of Alaska or providing much needed support to our federal law enforcement partners along the southern border, the airmen, soldiers, sailors, marines, coast guardsmen, and civilians of USNORTHCOM and NORAD are deeply committed to defending our Nation, and I am honored to represent them today.

Senators, we have the watch.

Thank you, and I look forward to your questions.

[The prepared statement of General O'Shaughnessy follows:]

PREPARED STATEMENT BY GENERAL TERRENCE J. O'SHAUGHNESSY

Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, I am honored to appear today as the Commander of United States Northern Command (USNORTHCOM) and North American Aerospace Defense Command (NORAD)—two complementary but distinct commands.

USNORTHCOM is the geographic combatant command laser-focused on defending our Homeland from an increasingly assertive set of competitors who are committed to holding the United States at risk in multiple domains. USNORTHCOM is also responsible for defense support of civil authorities (DSCA) and theater security cooperation (TSC) within our area of responsibility. Nested under the broader Homeland defense mission, DSCA and TSC play a critical and visible role in protecting our citizens and enhancing security for the United States and our international partners.

NORAD is the bi-national United States-Canadian command that deters, detects, and, if necessary, defeats air threats to the United States and Canada while also providing aerospace warning and maritime warning. The six decades of NORAD's unmatched experience and shared history are proving more vital than ever as we face the most complex security environment in generations. This unique and long-standing command serves as both a formidable deterrent to our adversaries and a clear symbol of the unbreakable bond between the United States and Canada.

USNORTHCOM and NORAD are driven by a single unyielding priority: defending the Homeland from attack. Revisionist powers Russia and China have changed global strategic dynamics by fielding advanced long-range weapons systems and engaging in increasingly aggressive efforts to expand their global presence and influence, including in the approaches to the United States and Canada. Our competitors currently hold our citizens and national interests at risk, and we must anticipate attacks against our defense and civilian infrastructure in the event of a conflict. As a result, it is clear that the Homeland is no longer a sanctuary.

These shifting global military and political dynamics will be with us for the foreseeable future. Our competitors have fielded weapons systems and employed new methods in a concerted effort to exploit perceived vulnerabilities and erode our stra-

tegic advantage. The successful defense of our Homeland today relies more than ever on constant vigilance by USNORTHCOM and NORAD, tightly coupled with a reinvigorated emphasis on close integration with our fellow combatant commands, the intelligence community, and our allies and partners. Collectively, these dynamics reinforce the importance of nuclear deterrence to our national security, given that nuclear deterrence backstops all U.S. military operations and diplomacy across the globe.

The threats facing our Nation are not hypothetical; our competitors' reach is now global, and they are conspicuously undermining international norms and standards of behavior while possessing the capability to strike targets in North America with both nuclear and advanced non-nuclear weapons launched from well beyond our territory. In light of this reality, the Homeland defense mission is more essential than ever, and USNORTHCOM and NORAD must be energized, proactive, and determined to actively shape our strategic environment. Together with our Department of Defense (DOD), interagency, and international partners, we have taken active measures to ensure the Homeland defense enterprise is globally integrated, well-exercised, and positioned to take quick, decisive action to protect our interests and preserve the ability to project all of the elements of our national power, and, should deterrence fail, USNORTHCOM and NORAD stand always ready to defeat any threat to our Nations.

Our collective ability to confront these challenges is dependent on a national commitment to protecting and defending the Homeland. Budget stability and predictability are essential underpinnings of this commitment, and I ask for the Committee's support of the President's budget for fiscal year 2020—and specifically for relief from the budget caps directed in the Budget Control Act of 2011. A return to sequestration will devastate total force readiness and delay or terminate modernization efforts that are necessary to maintaining our strategic and technological advantage. Simply put, sequestration will make it impossible for USNORTHCOM and NORAD to advance necessary Homeland defense efforts and shape our changing national security environment as articulated in the National Defense Strategy.

#### THREAT

##### *Russia:*

Russia has posed a nuclear threat to North America for over half a century, but has only recently developed and deployed capabilities to threaten us below the nuclear threshold. Russia continues to hone and flex its offensive cyber capabilities, and its new generation of air- and sea-launched cruise missiles feature significantly greater standoff ranges and accuracy than their predecessors, allowing them to strike North America from well outside NORAD radar coverage.

Since 2015, Russia has employed its new air- and sea-launched cruise missiles against anti-regime targets in Syria, providing real-world training for Russian crews and demonstrating its growing precision-strike capabilities to the West. In a parallel effort, Russia has implemented a modernization program for its heavy bombers that will ensure their ability to perform nuclear and non-nuclear deterrence and strike missions in the coming decades.

Russian heavy bombers such as the Tu-95MS BEAR and Tu-160 BLACKJACK continue to conduct regular air patrols in the international airspace along the coastlines of other countries to underscore Russia's capabilities. Russian bomber crews are demonstrating increasing proficiency in their flight activities, developing a new generation of air crews capable of employing this highly visible implement of Russian deterrence and messaging in peacetime, crisis, and war.

Patrols by Russian military aircraft off the coasts of the United States and Canada have grown increasingly complex in recent years. NORAD fighter aircraft routinely intercept Russian military aviation missions inside the United States and Canadian Air Defense Identification Zones, and there is no indication that Russian leadership intends to reduce the number of these missions in the near future.

In addition to its highly capable cruise missiles that enable its anti-ship and land-attack missions, Russia has introduced the *Severodvinsk*-class guided missile submarine, which is armed with advanced land-attack cruise missiles and is much quieter and more lethal than previous generations of Russian attack submarines. Russia's growing non-nuclear capabilities provide Moscow a range of options to dissuade an adversary from escalating and to terminate a conflict on terms favorable to Moscow, increasing the potential for miscalculation or opportunistic actions.

Russia has demonstrated a willingness to conduct disruptive cyberattacks and cyber-enabled influence operations against its competitors, as it demonstrated during the 2016 election cycle in the United States. In a crisis or conflict, we would

expect Russia to conduct cyber operations against critical infrastructure in an attempt to compel de-escalation.

In the Arctic, Moscow is planning to deploy surface vessels armed with the modular KALIBR-NK cruise missile system that will offer highly precise land-attack capabilities and introduce a new cruise missile threat from our northern approaches. Separately, Moscow continues to bolster its military defenses in the Arctic with the deployment of a K-300P Bastion coastal defense cruise missile system on the New Siberian Islands, significantly increasing Russia's ability to defend and control a large stretch of the Northern Sea Route.

Finally, Russia is developing multiple weapon systems specifically designed to circumvent United States missile defenses and hold our Homeland at risk. This includes the Intercontinental Ballistic Missile (ICBM)-delivered AVANGARD hypersonic glide vehicle, which was highlighted in a speech by Vladimir Putin in March 2018 and is expected to become operational in the next few years, complicating our missile warning mission.

#### *China:*

China is pursuing a comprehensive military modernization program that includes a rapid expansion of its strategic nuclear capabilities while working to improve the survivability of its nuclear forces and increase their ability to ensure a credible second-strike capability. Over the last decade, China has supplemented its modest silo-based ICBM force with dozens of road-mobile ICBMs capable of delivering multiple independently targetable reentry vehicles that could significantly increase the number of survivable warheads available for a retaliatory strike. During that same timeframe, China operationalized its first class of ballistic missile submarines, adding a second leg to its strategic deterrent. China maintains its longstanding no-first-use nuclear policy, but its growing nuclear, conventional, and cyber capabilities are significant.

China's military strategy and ongoing People's Liberation Army (PLA) reforms reflect the abandonment of its historically land-centric mentality, as evidenced by emerging doctrinal references to strategies that would move potential conflicts away from Chinese territory, suggesting that PLA strategists envision an increasingly global role for their military.

On the economic front, China plans to invest heavily in infrastructure projects in Asia, Europe, Latin America and the Caribbean, and Africa through its Belt and Road Initiative in a major effort to develop stronger economic ties with other countries and shape their interests to align with China's, simultaneously seeking to deter confrontation or international criticism of China's approach to sensitive issues.

In the cyber domain, Chinese leaders view computer network operations as a low-cost deterrent that demonstrates capabilities and resolve to an adversary and allows them to manage the escalation of a conflict by targeting critical military and civilian infrastructure. Ongoing military reforms are aimed at accelerating the incorporation of information systems that enable forces and commanders to carry out missions and tasks more effectively.

#### *Advanced Threat Technologies:*

Defending the United States and Canada against long-range weapons systems capable of striking targets in the Homeland is a major focus of both USNORTHCOM and NORAD. Russian aircraft and submarines are now armed with long-range cruise missiles designed to evade radar detection, while both Russia and China are developing and testing maneuverable hypersonic glide vehicles. In the cyber domain, our adversaries continue their non-stop efforts to penetrate defense and civilian networks. Collectively, these advanced technologies could be capable of creating strategic effects with non-nuclear weapons, potentially affecting national decision making and limiting response options in both peacetime and crisis.

#### *North Korea:*

After decades of research and development activity marked more by failure than success, North Korea's ICBM program turned the corner in 2017 when North Korea successfully flight-tested multiple ICBMs capable of ranging the continental United States and detonated a thermonuclear device, increasing the destructive yield of its weapons by a factor of ten. Following these successes, Kim Jong-un declared the completion of his nuclear ICBM research and development program, implying the production and deployment of these systems would soon follow.

Kim Jong-un developed these strategic weapons to deter the U.S. from overthrowing his regime, and he almost certainly has plans to use them against our Homeland should a conflict erupt on the Peninsula. Meanwhile, North Korea's cyber capabilities continue to grow, as does the country's willingness to employ them dur-



ing peacetime, as North Korea demonstrated by its cyber attacks on Sony Pictures in 2014.

*Iran:*

Iran is not yet able to strike the United States with strategic weapons, and its leaders have declared a unilateral 2000 kilometer range restriction that limits its missile force to threatening only regional targets in the Near East. Iran's SIMORGH space launch vehicle has yet to successfully place a satellite in orbit, but its most recent launch in January 2019 demonstrated continued progress on long-range missile technologies. Although we have no information to indicate that Iran intends to test and deploy an ICBM, the SIMORGH would be capable of ICBM ranges if configured for that purpose, and progress on the vehicle could enable Iran to field an ICBM in as little as a few years if its leaders chose to pursue that objective.

However, Iran has the largest ballistic missile arsenal in the region and has expended significant resources on its space launch and civil nuclear capabilities that could enable it to develop a nuclear-armed ICBM relatively quickly if its leaders chose to do so. In the meantime, Iran retains the ability to conduct attacks abroad via covert operations, terrorist proxies, and its growing cyber capabilities. Iran considers disruptive and destructive cyberspace operations as a valid instrument of statecraft and a means of imposing costs on its adversaries, even during peacetime.

*Violent Extremist Organizations:*

The terrorist threat to our Homeland has grown more diffuse, typified by simple attacks inspired from afar and carried out by individuals or small networks that are difficult to detect and interdict. Foreign terrorist groups remain committed to attacking the United States, either directly or by inspiring homegrown violent extremists to act in their stead. Despite their territorial losses, the Islamic State and their counterparts in al-Qa'ida remain highly adaptive foes committed to attacking the United States.

Commercial aviation persists as a preferred target, probably because of the potential for large numbers of casualties, economic damage, and widespread media coverage generated by such attacks. I am concerned that terrorists could also continue to pursue 9/11-style fly-and-crash attacks or the use of unmanned aerial systems against soft targets. Meanwhile, terrorists continue to target U.S. military personnel both on and off base, compounding our force protection challenges.

DEFENDING THE HOMELAND

Homeland defense is USNORTHCOM's essential mission and the number one priority of the DOD per the 2018 National Defense Strategy. In light of the complex and significant threats to our Homeland, USNORTHCOM and NORAD take assertive, proactive measures each day to shape our strategic environment, deter aggression, and ensure that we are always ready to defeat any adversary should deterrence fail. As the Commander of USNORTHCOM and NORAD, I view everything the commands do through the lens of Homeland defense, and I am committed to ensuring that each of our missions help to preserve decision space and maintain the ability for our national leaders to project power and exert influence in the best interest of our nations.

In pursuit of their own perceived national and ideological interests, our competitors have developed advanced capabilities and demonstrated their intent to hold our Homeland at risk in multiple domains and along numerous avenues of approach to North America. In light of that reality, we simply do not have the luxury of waiting for others to act before we formulate a response. Instead, USNORTHCOM and NORAD work constantly to shape our theater while making it obvious to potential adversaries that they will face overlapping dilemmas and extraordinary costs should they choose to challenge us. This active and continuous enterprise requires strong relationships and close coordination with our fellow combatant commands, the military Services, the U.S. Federal interagency community, and our international allies and partners.

The diverse threats arrayed against the United States and Canada challenge our defenses in a number of domains and along multiple avenues of approach. The men and women of USNORTHCOM and NORAD work around the clock to monitor those approaches and are ready to respond at a moment's notice should our adversaries choose to challenge our defenses.

*Ballistic Missile Defense:*

USNORTHCOM continues to prioritize our mission to defend the United States against potential intercontinental ballistic missile (ICBM) attacks from North Korea and Iran, should Iran develop that capability. I remain cautiously optimistic that

the ongoing negotiations will lead North Korea to abandon its nuclear weapons and ICBM programs. But, in the meantime, I continue to emphasize the necessity of fielding improved discriminating radars, a more survivable sensor network, and improving the reliability and lethality of our interceptor fleet in order to remain well ahead of North Korea or Iran's capability to strike the defended area.

I am confident in the ability of the Ground-based Midcourse Defense System to defend the United States against ICBMs fired from North Korea or Iran, if Iran develops an ICBM, but that confidence is contingent on our continued pursuit of system-wide enhancements to outpace our adversaries' rapid technological advancements.

The success of the Ballistic Missile Defense mission is also dependent on strong cooperation between USNORTHCOM as the supported warfighting command and the technical experts of the Missile Defense Agency (MDA). The MDA Director, Lt Gen Sam Greaves, is an outstanding partner, and I am grateful to him and the entire MDA team for their dedicated support of this enormously complex, no-fail mission. I fully support MDA's plans to field the Long-Range Discriminating Radar, Homeland Defense Radar-Hawaii, and Pacific Radar, along with the Redesigned Kill Vehicle and a selectable 2- or 3-stage interceptor booster. Additionally, I believe we must pursue space-based sensors to detect and track advanced threats from Russia and China. Each of these improvements to our sensor network and interceptor fleet will help to ensure our ability to defend the United States against an ICBM attack now and into the foreseeable future.

Going forward, advanced technologies such as space-based sensors and directed-energy missile defense weapons systems show significant promise—and will, in fact, become a necessity in the foreseeable future in order to defend the Homeland against a rapidly developing missile threat. At present, I believe the DOD is striking an effective balance between ensuring our ability to defend against current and near-term threats while simultaneously investing in the research and development of advanced technologies capable of defeating future threats. This vision for meeting anticipated requirements is well articulated in the recently published Missile Defense Review, and I fully support the plan for defending the Homeland.

#### *Arctic Northern Approaches:*

It has become clear that defense of the Homeland depends on our ability to detect and defeat threats operating both *in* the Arctic and passing through the Arctic. Russia's fielding of advanced, long-range cruise missiles capable of flying *through* the northern approaches and striking targets in the United States and Canada has emerged as the dominant military threat in the Arctic, while diminished sea ice and the potential for competition over resources present overlapping challenges in this strategically significant region. Meanwhile, China has declared that it is not content to remain a mere observer in the Arctic and has taken action to normalize its naval and commercial presence in the region in order to increase its access to lucrative resources and shipping routes.

I view the Arctic as the front line in the defense of the United States and Canada, and as the DOD Advocate for Arctic Capabilities and the combatant commander responsible for defending the approaches to the Homeland, I constantly assess the changing environmental and strategic conditions throughout the region—across borders and operational boundaries—in an ongoing, active, and collaborative effort to mitigate the risks associated with increased civilian and military presence in the northern approaches to North America.

The effort to rapidly adapt to the evolving strategic landscape and associated challenges in the Arctic includes a deliberate and ongoing effort to fully assess our collective missions and associated requirements in the region. As one key example of those ongoing assessments, in 2018, USNORTHCOM planners conducted a Homeland Defense Mission Analysis for the Arctic Region. This comprehensive, classified assessment of our capability to operate in the far north revalidated a number of known capability gaps in the region and provided an updated overview of current and future requirements.

As confirmed by our Mission Analysis, civil and military operations in the Arctic continue to be impeded by limited communications capability, harsh environmental conditions, and vast distances between population centers. Improving communications and domain awareness in the region are among my top priorities for the region, and the DOD and the military Services have demonstrated their support of those requirements through investment in programs such as the Multi User Objective System (MUOS)—a satellite-based communications network that significantly expands the ability of United States and Canadian assets to operate in the far north.

To detect and track potential airborne threats, to include Russian long-range bombers and cruise missiles, USNORTHCOM and NORAD both rely on radar systems such as the North Warning System (NWS), a network of aerospace surveillance radars in northern Canada. In August 2018, NORAD, working in close coordination with USNORTHCOM, the Canadian NORAD Region, and the United States Navy's Naval Air Warfare Center, conducted an operational assessment of the NWS against representative targets, and the data collected from the test will inform the design for the air domain defense of the United States and Canada for years to come.

In recognition that the number of military and civilian activities in Alaska and the Canadian Arctic will only continue to grow, USNORTHCOM is working hand-in-glove with the United States Air Force and the National Guard Bureau (NGB) to procure additional Arctic Sustainment Packages (ASPs) for use by the Alaska National Guard. Each ASP is a palletized, air-droppable shelter kit that provides shelter, heat, and other life support capability for several weeks in Arctic environments in the event that weather or other environmental factors delay a rescue operation.

The ability of the joint force to fight and win in the extreme cold and isolation of the far north increasingly depends on placing specialized technology in the hands of military personnel who routinely train and operate in the region. Fortunately, there are units and DOD installations who are already well positioned to share that expertise. Essential experience resides in the units stationed in the far north—from the airborne brigade and fighter wings stationed in Alaska to the LC-130 Skibird pilots and crewmembers of the New York Air National Guard, we have a solid foundation to build on as we continue to increase Arctic experience across the force.

The military Services have committed to building on that that foundational experience and expertise through a number of efforts that will further the ability of the joint force to operate, fight, and win in the far north. In a key example, between 3,000 and 5,000 personnel will participate in the next iteration of USNORTHCOM's premier Arctic exercise, ARCTIC EDGE 2020, more than doubling the number of troops who participated in 2018. Arctic Edge 2020 will take advantage of the vast training area and unmatched training opportunities afforded by the Joint Pacific Alaska Range Complex (JPARC) and will integrate personnel and platforms from all four Services—to include ground, air, and cyber operations. This deliberate evolution sends the clear signal that USNORTHCOM, strongly supported by the Services, is fundamentally committed to expanding the ability of the joint force to defend our Arctic approaches and our vital interests in the region.

#### *Air Domain:*

Variants of the advanced cruise missiles that could fly through our northern approaches also present a threat along our coasts. Russian *Severodvinsk*-class submarines are capable of firing low radar cross section cruise missiles against critical targets along our coasts. This emerging threat requires advanced capabilities to ensure surveillance, detection, identification, targeting, and destruction to protect the Homeland and key strategic targets in the United States and Canada.

The Homeland Defense Design will be a phased approach to employ advanced detection and tracking technologies to defeat a cruise missile attack against the Homeland. However, the rapidity of our competitors' development of advanced cruise missile technology demands a continued, aggressive, and focused commitment to ensure our ability to defeat a cruise missile attack.

In addition, small unmanned aerial systems (UAS) continue to present challenges to safety and security within U.S. airspace. NORAD has the capability to address larger UAS, but systems that are readily available in the commercial marketplace are difficult to detect and track due to their small size and relatively slow speeds. While we work to enhance our ability to detect, and—if necessary—neutralize potential threat UAS in the national airspace, the authorities provided by the fiscal year 2019 Federal Aviation Administration Reauthorization Bill that extend counter-UAS authorities to the Department of Justice and the Department of Homeland Security (DHS) reflect the need for a whole-of-government approach to address the potential security challenges presented by this rapidly emerging technology.

As with emerging military cruise missile technologies, the proliferation of small UAS requires us to consider new approaches for how best to defend the Homeland. We cannot address these new capabilities with outdated technology or with old ways of thinking, and I look forward to working with the Committee to develop innovative technology and strategies to ensure that we are capable of outpacing the threat.

#### *Southern Approaches:*

The threats to our Nation from our southern border are not military in nature, but they are significant and deadly. The flow of illegal narcotics into the United

States continues to inflict a heavy toll on our citizens, as clearly demonstrated by the 72,000 Americans who were killed by drug overdoses in 2017. USNORTHCOM is proud of our role in the counter narcotics fight in support of Federal law enforcement and our military partners in Mexico and The Bahamas as they battle transnational criminal organizations that have inflicted such harm on both sides of the border.

USNORTHCOM personnel actively collaborate with partners throughout the United States interagency and in Mexico to illuminate the networks used by the cartels to transport drugs, victims of human trafficking, and other illicit goods in a strategic effort to strike at the heart of these massive and well-financed criminal enterprises.

On the U.S. side of our southern border, USNORTHCOM's subordinate element Joint Task Force North (JTF-N) supports U.S. Federal law enforcement efforts to interdict narcotics shipments into the United States. Employing military personnel, unique technologies, and specialized skill sets developed in contingency operations overseas, JTF-N provides critical support to Federal law enforcement interdiction missions operations.

#### THEATER SECURITY COOPERATION

USNORTHCOM's theater security cooperation mission pays enormous dividends for our defense of the Homeland as well as for our relationships with our international partners. These collaborative efforts with our international partners seek to sustain our strategic advantage in the Western Hemisphere while always seeking to strengthen our regional security and reinforce our defense in depth throughout the region.

In particular, USNORTHCOM's relationship with the Mexican military is strong. USNORTHCOM supports Mexico's efforts to expand its role as a regional defense and security leader. The ties between USNORTHCOM and our Mexican military partners are close at every level of leadership and continue to grow thanks to concerted efforts by commanders on both sides of the border. I am proud of the fact that every Mexican Marine has trained with a United States Marine, just as I am honored to share close relationships with the Mexican Secretary of National Defense (SEDENA), General Luis C. Sandoval Gonzalez, and the Secretary of the Navy (SEMAR), Admiral Jose Rafael Ojeda Duran. I am proud to work with partners who share our commitment to regional stability and security throughout North America.

The Bahamas remains a willing partner with whom the United States enjoys a deep and long-standing bi-national relationship, and our shared theater security cooperation focus is improving The Bahamas' air and maritime domain awareness. In 2018, the United States provided the first maritime surveillance system to The Bahamas and secured funding for two more systems that will be networked with existing surveillance assets, generating a significant increase to The Bahamas' maritime surveillance capacity. The Bahamas remains a strong partner in the defense of North America as they invest heavily in new capabilities that will make them a more significant contributor to our shared defense and security.

Finally, Canada continues to be our indispensable partner in reinforcing the defense and security of our countries. USNORTHCOM's security cooperation activities with Canada are extensive and reflect many years of shared effort and common cause with our allies to the North. In June 2017, Canada announced a new approach to defense investment that will provide significant benefit to the common defense of our nations. This approach, titled "Strong, Secure, Engaged," acknowledges the significant shifts in the global strategic environment and commits accordingly to an active and renewed NORAD partnership and investments that will directly benefit the security of both our nations.

In a military-to-military context, the tri-command partnership between USNORTHCOM, NORAD, and the Canadian Joint Operations Command is of tremendous importance to all three commands. The bond between these organizations reflects the cooperative approach we share with our Canadian partners as we work together to outpace the threats arrayed against the United States and Canada, maintain a credible deterrent, and take steps forward together to ensure the combined defense of our nations.

#### DEFENSE SUPPORT OF CIVIL AUTHORITIES

USNORTHCOM's mission to provide defense support of civil authorities provides military personnel and assets to support Federal law enforcement and disaster relief agencies in times of need. In the nine months since I assumed command, USNORTHCOM has supported DHS, the Federal Emergency Management Agency (FEMA), U.S. Customs and Border Protection, and the National Interagency Fire-

fighting Center during hurricane relief operations, wildland firefighting missions, interagency collaboration to ensure that our elections were free from cyber interference, and presidentially-directed efforts to secure our southern border. For each of these events, USNORTHCOM rapidly delivered military-unique capabilities and skilled personnel to augment and enable our Federal partners.

In September 2018, Hurricane Florence provided USNORTHCOM the first opportunity to execute the Commander of USNORTHCOM's expanded role as the DOD Synchronizer for defense support of civil authorities. The consolidation of the DOD effort under one Synchronizer enabled significantly improved coordination and collaboration across the entire spectrum of the DOD response and consolidated the responsibility for collecting and delivering timely and accurate information to the Secretary of Defense. In addition, the DOD Synchronizer role increased the coordination and information exchange amongst the DOD agencies with major roles in the response, to include the National Guard Bureau, the Defense Logistics Agency, the United States Army Corps of Engineers, and United States Transportation Command (USTRANSCOM).

USNORTHCOM support of hurricane relief operations had barely ended last fall, when, in response to requests for assistance from DHS and U.S. Customs and Border Protection, the Command was directed by the Secretary of Defense to deploy Active Duty military personnel and equipment to support Federal law enforcement operations along the southern border of the United States. Beginning in October 2018, this operation has demonstrated the close partnership between USNORTHCOM and our Federal law enforcement partners, as well as the outstanding support provided by each of the military Services and the Joint Staff in response to a USNORTHCOM request for forces.

Within hours of notification, airmen, soldiers, sailors, and marines from installations across the United States were on the move to support our DHS partners, and they have performed their assigned tasks with extraordinary professionalism and skill. From laying over 70 miles of concertina wire to reinforce existing border obstacles, flying support missions, delivering medical care, and providing security, the USNORTHCOM border support mission has improved our Nation's border security while providing our forces with training and real-world experience that will serve them well in both peace and conflict.

Every mission presents unique challenges, and each is dependent on collaboration, strong partnerships, and close relationships throughout the Federal interagency and between the active and Reserve component. In a key demonstration of the strong collaboration between the components in the combined response to Hurricane Florence, North Carolina and South Carolina established Dual Status Commanders and successfully integrated National Guard and title 10 personnel and assets in a wide variety of rescue and recovery operations.

I am proud of the great partnership demonstrated by USNORTHCOM and the National Guard Bureau before and during each of those responses. My friend and wingman Gen Joe Lengyel and the citizen airmen and soldiers he leads are a tremendous group of professionals who proved time and again their selflessness and readiness to respond whenever and wherever needed.

While hurricane relief operations may have been the most visible DSCA mission for the Command over the last several years, USNORTHCOM serves as the designated DSCA synchronizer for the DOD in a variety of other efforts. In a notable example of innovative interagency collaboration, prior to the 2018 midterm election season, USNORTHCOM partnered with U.S. Cyber Command (USCYBERCOM) to determine how best to provide DOD cyber support to the DHS-led mission to secure the elections infrastructure. The partnership between USCYBERCOM, USNORTHCOM, the National Guard Bureau, and DHS was groundbreaking, and each of the agencies involved learned a number of important lessons for future interagency efforts.

Interagency cooperation in the defense of our critical cyber infrastructure will remain an enduring necessity as networks throughout the United States continue to weather near-constant attacks and infiltration attempts. In light of this need, I am grateful to the Congress for its strong support for the establishment of the DHS Cyber Infrastructure Security Agency (CISA). Although CISA was only established in November 2018, it is already clear that we have an energized, high-level interagency partner dedicated to our shared mission to address and mitigate cyber threats against civilian networks and critical infrastructure. Within weeks of its establishment, CISA assigned a senior liaison officer to the USNORTHCOM headquarters to work alongside the rest of our whole-of-government team, and I look forward to many years of close collaboration with our newest partner in the defense of our Nation's vital interests.

Whenever our assistance is requested by our Federal partners, USNORTHCOM relies on the military Services to provide trained and ready personnel and assets whenever and wherever needed. As we saw firsthand in the days before Hurricane Florence made landfall in September 2018 and in the initial stages of our support to U.S. Customs and Border Protection along the southern border, the Joint Staff and all four of the military Services worked around the clock to identify, source, and deploy the personnel and equipment necessary to fulfill all anticipated requests for support from our Federal partners.

Due to the unhesitating support of the Joint Staff and each of the Service Chiefs, the requested forces were on station and ready to execute their support missions in a matter of hours and days following notification. In both scenarios, the remarkable men and women of our armed forces were ready to deploy on short notice and executed their assigned missions thanks to their training, professionalism, and discipline. USNORTHCOM will continue to work closely with the Joint Staff and the Services to exercise our response forces in anticipation of future needs, and I am grateful to the Committee for your ongoing support of the Services' modernization and readiness requirements.

#### UNITED EFFORTS TO DEFEND THE HOMELAND

USNORTHCOM's defense of the Homeland would not be possible without cooperation, collaboration, and a fundamental commitment to mission success across a remarkable interagency and intergovernmental enterprise. Over 27 unique Federal agencies, from DHS to the Federal Aviation Administration and the Federal Bureau of Investigation, have permanently-assigned liaisons and representatives in our USNORTHCOM and NORAD headquarters in Colorado Springs. Nearly 150 Canadian military personnel are assigned to NORAD billets in our headquarters, and we are proud to host two permanently assigned Mexican military liaison officers, along with liaison officers and representatives from a host of DOD agencies and commands to include the Defense Threat Reduction Agency (DTRA), the Defense Intelligence Agency, and U.S. Strategic Command. National Guard personnel are also fully integrated into our headquarters staff and maintain a full-time office specifically dedicated to coordinating actions between our headquarters and the National Guard Bureau. The National Guard continues to be an essential and integral part of our USNORTHCOM and NORAD team.

Our command's integration with the U.S. interagency community is a requirement for success, which is why those interagency representatives are not simply assigned to the headquarters; they are truly integrated members of the USNORTHCOM team. Whenever possible, they are invited to participate in command briefings and updates, and I rely on their subject matter expertise and professional judgment on a daily basis as we work hand in glove to address the challenges and threats facing the command.

The commitment to cooperation shared by each of our interagency partners has contributed immeasurably to the broader USNORTHCOM mission. For example, during the 2018 hurricane season, DTRA provided around-the-clock modeling support that located all of the hazardous material production and storage facilities in the storms' paths and allowed our planners to develop well-researched plans to mitigate potential impacts if the sites were damaged.

Our collective ability to meet threats head on and to provide a rapid, effective response in the wake of natural and manmade disasters is absolutely dependent on constant communication, routine interagency exercises, and close working relationships between each and every one of the civilian and military professionals who strive each day to keep our Nation and our citizens safe from harm.

From USNORTHCOM's components and subordinates to NORAD, which has served as the absolute gold standard for international collaboration for over 60 years, and our locktight relationship with FEMA, we work every day to exercise the interagency and inter-DOD processes required to ensure that we are always ready to deliver the right assets in the right place at the right time to meet whatever mission we are assigned. To ensure USNORTHCOM and our interagency partners are ready at a moment's notice in the event of a crisis, we conduct regular command-led exercises in each of our mission sets, such as Ardent Sentry for DSCA and Vigilant Shield for Homeland defense.

Finally, I would like to make special note of USNORTHCOM's support to the state funeral of former President George H. W. Bush in December 2018. The men and women of USNORTHCOM's Joint Task Force—National Capital Region, under the superb leadership of MG Mike Howard, demonstrated exemplary professionalism and decorum throughout a three-day program in Texas and Washington, DC. The flawless execution of this mission was made possible by many months of

rigorous planning, close communication with President Bush and his family, coordination with dozens of Federal, state, and local agencies, and multiple rehearsals to ensure no detail was overlooked. USNORTHCOM's support of this historic event was both a profound honor for all involved and a conspicuous example of the no-fail nature of all USNORTHCOM missions.

#### CONCLUSION

Today and every day, the men and women of USNORTHCOM and NORAD are standing watch over our Homeland. These dedicated professionals work around the clock surveilling our skies, monitoring our oceans, and ensuring that we are always ready to counter a staggering range of threats to our Homeland, ranging from inter-continental ballistic missiles and long-range bombers to lethal opioids and cyberattacks. The strategic and technological innovation that will be required to defend our Nation in the coming years depends entirely on the quality and experience of our people.

Today and always, our people are our strength, and I am proud to lead the outstanding airmen, sailors, soldiers, marines, and civilians of USNORTHCOM and NORAD. While the threats facing our Nation can be daunting, I have absolute confidence in our ability to meet any challenge and defeat any adversary because of the dedicated professionals I am honored to lead. We Have the Watch.

Chairman INHOFE. Thank you, General O'Shaughnessy.

You know, General Hyten, there are two areas of disagreement that we have heard among our colleagues in both the House and in the Senate, and you have heard some this morning in our opening statements. But one of them is the significance of nuclear modernization. Now, it is disturbing when we see some of our adversaries, peer adversaries, China and Russia, have actually gotten ahead of us in some areas of artificial intelligence and hypersonics. But in the area of nuclear modernization, I know that Jim Mattis, Heather Wilson, and others have said that is the most significant thing that we could be doing, and yet, some are saying that is an area where we could be making cuts at this time.

I would like to have you start off by addressing that; do you agree with those who talk about the significance of that program and make your comments on that. Then I will get to the second one.

General HYTEN. It is the most important element of our national defense.

Chairman INHOFE. It is the most important element of our national defense.

General HYTEN. We have to make sure that we are always ready to respond to any threat. I can do that today because I have the most powerful triad in the world. I have ICBMs, submarine-launched ballistic missiles, and bombers that are ready to respond to any threat that comes. Because of the capabilities of each leg of the triad, I have the ability to respond to any threat. We did a Nuclear Posture Review. It was released last year. In it, it validated the need for a triad.

Our adversaries have also recognized the need for a triad. They are beginning modernization of their programs as well. In fact, Russia started their modernization program in 2006. They are about 80 percent through completing the modernization of their triad. They will be pretty close to being through by about 2020, and in 2020, we will still be starting. That is not a good place to be from a national security perspective.

Chairman INHOFE. That is right.

You have actually jumped to the second area of disagreement: the triad. Several people have said that we do not need a triad, all three legs. It could adequately be handled without all three. Just specifically on the triad element of the necessity of the three legs.

General HYTEN. When you look at the threat we face, the threat from the Russian triad, soon the threat from the Chinese triad, threats from North Korea as well, you have to look at the three elements of the triad.

The bombers are our most recallable element. They are the most flexible element of the triad. The bombers can be deployed and recalled by the President, deployed and recalled, before they employ their weapons. They are the most flexible element. We can do almost anything with a bomber.

The submarine is the most survivable element. It allows us to hide from our adversaries and make sure we can respond to any surprise attack.

The ICBM is the most ready element to respond to a quick surprise attack, and it also creates the most significant targeting problem for an adversary because there are 400 separate targets across the United States. All would have to be independently targeted by an adversary. That targeting problem is hugely problematic and creates a significant advantage for us.

When you put those three together, you get this great operational capability. But the other thing it provides for us is the ability to respond to a failure in any one of those legs. If you have a technical failure or intelligence failure, I can cover it with another leg, and that has happened during my tenure. I never have put this nation at risk because I have the flexibility in the triad.

Chairman INHOFE. Yes. General O'Shaughnessy, that is a big deal to you too.

We look at what we have done with our aging system. We are talking about now getting into a modernized ICBM. I do not know how long that would take. Some people say all the way through the 20s. At the same time, you have our adversaries who may have been late in starting, but they are starting in a more modernized way. Do you agree with that? They become a threat even though right now today they may not be ahead of us in these areas.

General O'Shaughnessy: Chairman, I would agree. I think as the NDS articulates, the security environment has fundamentally changed and part of it is because of what you alluded to. I think as we watch both Russia and China create success in some of their weapons programs and advancing the capabilities that they have, they are fundamentally changing not just on the ballistic missile side but, as you mentioned, the hypersonics and also in the cruise missiles. It is not just the cruise missiles themselves. It is also the platforms that deliver those cruise missiles. They have clearly invested very specifically with the ability to hold our Homeland at risk with things like submarines and bombers that they have modernized with the low RCS [Radar Cross Section] cruise missiles that they can then launch. Therefore, we have to also modernize. We have to stay ahead of that advancing threat. We cannot expect to have success with 20th Century technology against 21st century threats.

Chairman INHOFE. Which is what we have had.



Thank you very much.

Senator Reed?

Let me interrupt, Senator Reed, if I might, because we do have a quorum now.

I will ask the Committee to consider a list of 1,818 pending military nominations. All the nominations have been before the Committee the required length of time. Is there a motion?

Senator REED. So moved.

Senator FISCHER. Second.

Chairman INHOFE. All in favor, say aye.

[Chorus of ayes.]

Chairman INHOFE. No?

[No response.]

Chairman INHOFE. It carries.

[The list of nominations considered and approved by the Committee follows:]

MILITARY NOMINATIONS PENDING WITH THE SENATE ARMED SERVICES COMMITTEE WHICH ARE PROPOSED FOR THE COMMITTEE'S CONSIDERATION ON FEBRUARY 26, 2019.

1. **LTG Michael X. Garrett, USA to be general and Commanding General, U.S. Army Forces Command** (Reference No. 24)
2. **Col. Timothy J. Donnellan, ANG to be brigadier general** (Reference No. 266)
3. **Col. Stephen J. Mallette, ANG to be brigadier general** (Reference No. 267)
4. In the Air Force there is 1 appointment to the grade of lieutenant colonel (Jason D. Hoskins) (Reference No. 268)
5. In the Air Force there are 2 appointments to the grade of major (list begins with Nancy E. Costa) (Reference No. 269)
6. In the Air Force there is 1 appointment to the grade of major (Saiprasad M. Zemse) (Reference No. 270)
7. In the Air Force Reserve there are 125 appointments to the grade of colonel (list begins with Jeffrey Wayne Akin) (Reference No. 271)
8. In the Air Force Reserve there are 2 appointments to the grade of colonel (list begins with David C. Salisbury) (Reference No. 272)
9. In the Air Force Reserve there are 8 appointments to the grade of colonel (list begins with Craig K. Abee) (Reference No. 273)
10. In the Air Force Reserve there are 4 appointments to the grade of colonel (list begins with Michael J. Chung) (Reference No. 274)
11. In the Air Force there is 1 appointment to the grade of lieutenant colonel (Robert T. Hines, Jr.) (Reference No. 275)
12. In the Air Force Reserve there are 12 appointments to the grade of colonel (list begins with Marc A. Banjak) (Reference No. 276)
13. In the Air Force Reserve there are 12 appointments to the grade of colonel (list begins with Dennis M. Britten) (Reference No. 277)
14. In the Air Force Reserve there are 4 appointments to the grade of colonel (list begins with Jason G. Arnold) (Reference No. 278)
15. In the Air Force Reserve there are 12 appointments to the grade of colonel (list begins with David P. Bailey) (Reference No. 279)
16. In the Air Force Reserve there are 2 appointments to the grade of colonel (list begins with Kimberly J. Kloeber) (Reference No. 280)
17. In the Air Force there is 1 appointment to the grade of colonel (Joyce C. Beaty) (Reference No. 281)
18. In the Air Force Reserve there are 5 appointments to the grade of colonel (list begins with Timothy S. McCarty) (Reference No. 282)
19. In the Air Force Reserve there are 5 appointments to the grade of colonel (list begins with Jennifer J. Archer) (Reference No. 283)
20. In the Air Force there are 61 appointments to the grade of colonel (list begins with Andrew T. Allen) (Reference No. 284)

21. In the Air Force there are 15 appointments to the grade of colonel (list begins with Elham Barani) (Reference No. 285)
22. In the Air Force there are 121 appointments to the grade of lieutenant colonel (list begins with Homayoun R. Ahmadian) (Reference No. 286)
23. In the Air Force there are 25 appointments to the grade of lieutenant colonel (list begins with Francis E. Becker) (Reference No. 287)
24. In the Air Force there are 45 appointments to the grade of major (list begins with Margaret E. Abbott) (Reference No. 289)
25. In the Air Force there are 252 appointments to the grade of major (list begins with Joseph L. Abrams) (Reference No. 290)
26. In the Army Reserve there is 1 appointment to the grade of colonel (James B. Flowers) (Reference No. 291)
27. In the Army there is 1 appointment to the grade of colonel (Dylan T. Randazzo) (Reference No. 292)
28. In the Army Reserve there is 1 appointment to the grade of colonel (Jerry D. Hallman) (Reference No. 293)
29. In the Army there is 1 appointment to the grade of major (Christopher P. Moellering) (Reference No. 294)
30. In the Army there is 1 appointment to the grade of major (Joubert N. Paulino) (Reference No. 295)
31. In the Army there is 1 appointment to the grade of major (Saw K. San) (Reference No. 296)
32. In the Army there are 2 appointments to the grade of major (list begins with Rebecca J. Quackenbush) (Reference No. 297)
33. In the Army there is 1 appointment to the grade of major (Stacie L. Kervin) (Reference No. 298)
34. In the Army there is 1 appointment to the grade of major (Brian R. Kossler) (Reference No. 299)
35. In the Army there is 1 appointment to the grade of major (Katherine A. O'Brien) (Reference No. 300)
36. In the Army there is 1 appointment to the grade of major (Jessica N. Peralesludemann) (Reference No. 301)
37. In the Army there is 1 appointment to the grade of major (Julia C. Phillips) (Reference No. 302)
38. In the Army there is 1 appointment to the grade of major (Alain M. Alexandre) (Reference No. 303)
39. In the Army there is 1 appointment to the grade of major (Taliat A. Animashaun) (Reference No. 304)
40. In the Army there is 1 appointment to the grade of major (G010349) (Reference No. 307)
41. In the Army there is 1 appointment to the grade of lieutenant colonel (Jordanna M. Hostler) (Reference No. 308)
42. In the Army there is 1 appointment to the grade of major (Elizabeth N. Strickland) (Reference No. 309)
43. In the Army there is 1 appointment to the grade of major (Shawn M.T. May) (Reference No. 310)
44. In the Army there is 1 appointment to the grade of major (Kyle A. Zahn) (Reference No. 311)
45. In the Navy there is 1 appointment to the grade of lieutenant commander (Jessica M.P. Miller) (Reference No. 312)
46. In the Navy there is 1 appointment to the grade of lieutenant commander (Rosemary M. Hardesty) (Reference No. 313)
47. In the Navy there is 1 appointment to the grade of lieutenant commander (Brett T. Thomas) (Reference No. 314)
48. In the Marine Corps Reserve there is 1 appointment to the grade of colonel (Matthew T. Coughlin) (Reference No. 317)
49. In the Marine Corps there is 1 appointment to the grade of lieutenant colonel (Bethanne Canero) (Reference No. 318)
50. In the Marine Corps there are 5 appointments to the grade of major (list begins with Kevin T. Brownlee) (Reference No. 320)
51. In the Marine Corps there are 2 appointments to the grade of major (list begins with Kevin F. Champaigne) (Reference No. 321)
52. In the Marine Corps there are 3 appointments to the grade of major (list begins with Aaron J. Griffus) (Reference No. 322)

53. In the Marine Corps there are 4 appointments to the grade of lieutenant colonel (list begins with Daniel H. Cusinato) (Reference No. 325)
54. In the Marine Corps Reserve there are 5 appointments to the grade of colonel (list begins with Armando A. Freire) (Reference No. 329)
55. In the Marine Corps there is 1 appointment to the grade of lieutenant colonel (Stephen R. Byrnes) (Reference No. 330)
56. In the Marine Corps there are 2 appointments to the grade of lieutenant colonel (list begins with Herman E. Holley) (Reference No. 331)
57. In the Marine Corps there are 2 appointments to the grade of lieutenant colonel (list begins with Darren M. Gallagher) (Reference No. 332)
58. In the Marine Corps there are 799 appointments to the grade of major (list begins with Alexander N. Abate) (Reference No. 333)
59. In the Marine Corps there are 14 appointments to the grade of major (list begins with German Alicealpuerta) (Reference No. 334)
60. In the Marine Corps there are 106 appointments to the grade of colonel (list begins with Eric J. Adams) (Reference No. 335)
61. In the Marine Corps there is 1 appointment to the grade of colonel (Joseph W. Crandall) (Reference No. 336)
62. In the Marine Corps there are 2 appointments to the grade of major (list begins with Aaron S. Ellis) (Reference No. 338)
63. In the Marine Corps there is 1 appointment to the grade of major (Justin D. Mosley) (Reference No. 339)
64. In the Marine Corps there are 3 appointments to the grade of major (list begins with Andres J. Agramonte) (Reference No. 341)
65. In the Air Force Reserve there is 1 appointment to the grade of colonel (Katherine R. Morganti) (Reference No. 342)
66. **In the Navy there are 4 appointments to the grade of rear admiral (lower half) (list begins with Scott M. Brown)** (Reference No. 360)
67. **In the Navy there are 18 appointments to the grade of rear admiral (lower half) (list begins with Jeffrey T. Anderson)** (Reference No. 361)
68. **LTG VeraLinn Jamieson, USAF to be lieutenant general and Deputy Chief of Staff for Intelligence, Surveillance, Reconnaissance, and Cyber Effects Operations, Headquarters, U.S. Air Force** (Reference No. 376)
69. In the Air Force there are 6 appointments to the grade of lieutenant colonel and below (list begins with Patrick N. Westmoreland) (Reference No. 379)
70. In the Navy there are 46 appointments to the grade of lieutenant commander (list begins with Scott A. Adams) (Reference No. 385)
71. In the Marine Corps there are 2 appointments to the grade of major (list begins with Bethany S. Peterson) (Reference No. 386)
72. In the Air Force there is 1 appointment to the grade of lieutenant colonel (Tolulope O.A. Aduroja) (Reference No. 394)
73. In the Air Force there is 1 appointment to the grade of major (Erick L. Jackson) (Reference No. 395)
74. In the Army there is 1 appointment to the grade of major (Joseph J. Fantony) (Reference No. 396)
75. In the Army there is 1 appointment to the grade of major (Chariti D. Paden) (Reference No. 397)
76. In the Army Reserve there is 1 appointment to the grade of colonel (Donald W. Rakes) (Reference No. 398)
77. In the Army Reserve there are 7 appointments to the grade of colonel (list begins with Ronnie S. Barnes) (Reference No. 399)
78. In the Army there is 1 appointment to the grade of major (Charles A. Riley) (Reference No. 401)
79. In the Army there is 1 appointment to the grade of major (Richard S. McNutt) (Reference No. 402)
80. In the Army there is 1 appointment to the grade of major (Lloyd V. Lozada) (Reference No. 403)
81. In the Army Reserve there are 18 appointments to the grade of colonel (list begins with Julio Acosta) (Reference No. 404)
82. In the Navy there are 14 appointments to the grade of lieutenant commander (list begins with Peter D. Allen) (Reference No. 405)

---

TOTAL: 1,818

Senator Reed?

Senator REED. Thank you, Mr. Chairman.

General O'Shaughnessy, as I have indicated in my opening statement, I have concerns about the use of American military forces along the southern border and a hard time understanding the nature of an emergency that would require military forces when nowhere in the National Defense Strategy, the worldwide threat statement from the intelligence community, nor the statement from the Commander of SOUTHCOM indicate that migrant caravans of civilians across the border are a military threat. In fact, in your opening statement, you say "the threats to our Nation from our southern border are not military in nature."

Just to be clear, in your professional opinion, does the illegal crossing of the border by civilians represent a military threat?

General O'SHAUGHNESSY. Senator, first, I would say that I do think a secure border does reduce threats to the Homeland.

Now, specific to your question about is it a military threat that is coming towards us, it is not a military threat, but that is slightly [different] than answering whether the military should be responding to the situation.

Senator REED. Following up, in your professional opinion again, would a wall be effective in defending a military attack on the United States?

General O'SHAUGHNESSY. Senator, I would say that border security is national security. I do see that any barrier in place to secure our Nation does have some ramifications to our ability to defend against a military threat as well. Right now, there is not a specific military force from the south that we are trying to take action against.

In this particular case, though, Senator, I would say over the last 5 months I have spent a tremendous amount of time on the border, as you would imagine, working with our CBP [United States Customs and Border Protection] partners. In all of those trips and discussions, it has been clear to me that the Customs and Border Protection personnel very much value the border protection and seeing it, having the awareness, having some impediments, whether that be a barrier or wall, et cetera, and then having the ability to respond to it. That has been fairly universal as I have been doing my trips to the border.

Senator REED. They are civilian law enforcement officials who have a law enforcement mission, and the context of their evaluation is based upon that law enforcement mission.

General O'SHAUGHNESSY. That is correct, Senator.

Senator REED. Thank you.

You have mentioned many real threats that have been articulated in the National Defense Strategy, Russia and China in particular. Many of them really are not focused on our southern border but our northern border, the opening of the Arctic, the operations by both China and Russia in the Arctic, and also I think maintaining the capabilities of NORAD. Those are multibillion dollar tasks. Do you think they are of more military significance than any operation along the southern border?

General O'SHAUGHNESSY. Senator, what I would say is those threats are very real. Those threats are what we are focused on

within both NORTHCOM and NORAD because we do see that the evolving threat, as articulated within the NDS, very much is trying to take advantage of the northern approach. We have vulnerabilities there that we need to continue to close the gap on, and so that is a focus area for us at both NORTHCOM and NORAD.

Senator REED. Thank you very much, sir. Again, thank you for your service.

General Hyten, I just have a few minutes. But the issue of hypersonic weapon systems are increasingly critical to us. It seems from our perspective that our adversaries are shifting more into the hypersonic realm for many reasons. One reason is that our defense systems were built for ballistic missiles, not hypersonic missiles.

Do you feel that in the short run you can deter these hypersonic vehicles?

General HYTEN. Senator, the hypersonic activities in both China and Russia are not the majority of their activities right now. The majority are still the traditional ballistic missile, submarine, bomber threats that we can deter.

I also believe that we have the ability to deter any adversary that would deploy nuclear weapons against us. My one concern in this area is that in order to effectively deter, you have to be able to see, characterize, and attribute where the threat is coming from. As our adversaries are moving into cruise missile technology and hypersonic technology, that challenges our ability to provide those attributes of detection and characterization. We need to move in that area to sense the threat so we can effectively deter it.

Senator REED. Let me ask a couple questions because my time is running out.

Is your sense that they have, as we have, a legacy system of missiles, medium-range, long-range, intercontinental, but they seem to be moving with great energy into hypersonics. That could be the weapon of choice in the future.

The second part of that is that, as I understand it—you can clarify it—hypersonics are not governed by the INF Treaty so that we could develop hypersonics and still remain within the treaty. Where are they going, and can we do that without leaving the INF?

General HYTEN. They are clearly moving aggressively in the area of hypersonics. Their testing is fully integrated systems, long-range and medium-range, as has been well documented, as opposed to—what was the second part of the question?

Senator REED. The second part was we can conduct hypersonic research without violating the INF.

General HYTEN. Right. That is correct. The INF Treaty says that it covers ballistic missiles, and ballistic is defined as the majority of the trajectory of the missile is ballistic. The hypersonic missiles that we are talking about, less than half of that trajectory is ballistic. Therefore, they are not covered in the INF Treaty.

Senator REED. Thank you very much.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Senator FISCHER?

Senator FISCHER. Thank you, Mr. Chairman.

General Hyten, in your prepared remarks, you said the only way to change our strategic deterrent is to convince our adversaries to reduce the threat and this is not occurring. China and Russia in particular are not only modernizing the traditional elements of their own triads, but they are also building a myriad of additional nuclear capabilities to threaten the United States.

In your comments to Chairman Inhofe, you explained the desperate need that we have for modernization and to continue with our triad, the importance that has for our national security and for the security of this world.

I would ask you, are you aware of any intelligence or threat assessment supporting the courses of action that are called for from some that we need to unilaterally cut our nuclear forces?

General HYTEN. I am not.

Senator FISCHER. Is it your view that taking such actions would make us more vulnerable and reduce our ability to deter threats?

General HYTEN. It would significantly reduce our deterrent.

Senator FISCHER. We are looking at a budget in the Department for nuclear forces and the plan for modernization. Some people consider it a wish list just to give the Department everything that they desire, and no effort has been made to sort through things to look at what we truly need to address the threats that we have. I am talking about need versus want here.

That is not an accurate statement, is it, that it is a wish list?

General HYTEN. I look at our nuclear capabilities, our triad, our modernization program as the minimum essential capabilities required to defend this nation if we have to defend against the most existential threat—and Russia and China and their capabilities are the most existential threat. To me that is the most minimum essential capabilities that we have to build, and even at the highest rate, it will still be just roughly 6 percent of the overall defense budget. I think we can afford that security.

Senator FISCHER. Do you fully support the Nuclear Posture Review as it was put forward by the Department?

General HYTEN. I do, ma'am.

Senator FISCHER. Do you truly believe it is needed that we continue on a path forward to reach the goals of that Nuclear Posture Review?

General HYTEN. I think it is essential.

If I could comment on the Nuclear Posture Review, I think it is very interesting to look at our approach defined in the Nuclear Posture Review and our adversaries' approach. The elements in the Nuclear Posture Review that we have put forth all stay within our treaty responsibilities. We do not recommend developing new nuclear-powered torpedoes, new nuclear-powered cruise missiles. We do not look at anything. We believe that we can secure this nation through the modernization of the triad and the addition of a couple of small elements to respond to specific threats. In that case, it is the low-yield nuclear weapon and the submarine-launched cruise missile. But that is a very measured response to what our adversaries are doing.

Senator FISCHER. I appreciated your very clear and concise explanation of the importance and really the mission of each leg of

the triad, and I am very pleased that you made that clear and concise for the record today. Thank you.

I would like to ask you a little bit about the New START treaty. In your opening statement, you note that Russia is also developing and intends to deploy novel strategic nuclear weapons like its nuclear-armed, nuclear-powered underwater, unmanned vehicle and intercontinental-range cruise missile, which Russia seeks to keep outside of existing arms control agreements.

Do you believe that these new systems, if they are deployed, should be counted under a New START treaty limitation?

General HYTEN. The way the New START treaty is defined is that the New START treaty only covers existing weapons when it was put in place in 2011. That means it covers the ballistic missiles, both submarine- and ground-launched. It covers the bombers and the cruise missiles on the bombers, and the platforms that carry them.

There is also a clause in the treaty that says if one of the parties of the treaty sees the development of new strategic arms, they can come to the bilateral consultative commission and bring those things forward. I have not seen that happen. But we see them developing capabilities outside of that treaty, which is concerning to me.

Senator FISCHER. Do you believe a decision to extend the treaty should be made on its national security merits and Russia's behavior figures heavily into that evaluation with just the example that I gave you, that we need to be looking at these not just to renew a treaty?

General HYTEN. I do, ma'am. I want Russia in every treaty. I want Russia in the INF Treaty. I want Russia in the New START treaty. I support those treaties. But they have to be parties to those treaties. It takes two to participate in a treaty at least.

Senator FISCHER. Russia has not been a party to the INF Treaty. Is that correct?

General HYTEN. Russia has violated the INF Treaty for 5 years now, and despite our best efforts, we have not been able to bring them into compliance. I have talked about that to the President. I have talked about New START with the President. We all want Russia in that treaty. We want them to participate, but if they will not, we are tying our own hands to deal with the adversaries in the world, including China, who is not part of that treaty.

Senator FISCHER. It does not help when your partner in a treaty is not in compliance and we remain in compliance.

General HYTEN. Yes, ma'am.

Senator FISCHER. Thank you, sir.

Chairman INHOFE. Thank you, Senator Fischer.

Senator Shaheen?

Senator SHAHEEN. General Hyten, General O'Shaughnessy, thank you both for your testimony this morning and for your service to the country.

I want to begin my questions with you, General O'Shaughnessy, because I understand that part of your responsibilities as the leader of a combatant command is to look at counter-drug operations at our borders. Is that correct?

General O'SHAUGHNESSY. Ma'am, what we do is support law enforcement agencies in a supporting role for some of the counter-narcotics work.

Senator SHAHEEN. Have you been made aware of any plans that would take money from what is being proposed already to fund the President's recent directive to reprogram DOD interdiction funding to pay for a border wall?

General O'SHAUGHNESSY. Ma'am, as you know, with a declaration of a national emergency that is now being considered, the Secretary of Defense and I, actually together with the Chairman, went down to the border this weekend on Saturday in order to see firsthand both what our troops are doing now, as well as looking at the border and potential applications of DOD funding for the border, to inform his decisions. Those decisions—and that is ongoing this week. At this time, that is work in progress with the Acting Secretary of Defense.

Senator SHAHEEN. But do I understand you to say then that plans are being drawn up that would take money from those drug interdiction efforts to use for funding a wall?

General O'SHAUGHNESSY. That is one of the options that is being looked at. It is premature at this time and that work is being done literally as we speak.

Senator SHAHEEN. Well, as I am sure you are aware, the opioid crisis in the United States has taken tens of thousands of lives. In New Hampshire, we have the second highest opioid overdose death rate in the country. This is an issue that we care tremendously about. It is my understanding that most of the illicit drugs that come into this country come through ports of entry (POE) as opposed to coming across the border in other places. Is that what you have seen?

General O'SHAUGHNESSY. Ma'am, I have seen a little bit of both. There has recently been a DEA [United States Drug Enforcement Agency] report that talks about the most common method of transportation through the borders is, in fact, through the POEs, but it is most common, not necessarily that all of it goes through there. It further delineates and talks.

I will give you an example. Just this week, twice I have been to the border. In one of my trips down there, what they talked about was the TCOs [Transitional Criminal Organizations] that run the migrants coming are the same criminals that also run the narcotics. What we are seeing now is a coordinated effort, for example, where they will send a large number of migrants through over the border to take the Border Patrol agents off of the line, and then they will use that as an opportunity to bring drugs across the border while the Border Patrol agency are processing the migrants. It is a coordinated effort here that brings it all together that is very disturbing as we go forward.

Senator SHAHEEN. Do you agree that it is helpful to have technology and more people at our ports of entry so we can better interdict drugs coming through there?

General O'SHAUGHNESSY. Absolutely, ma'am.

Senator SHAHEEN. General Hyten, I want to follow up on Senator Reed's question about hypersonic weapons because I very much ap-



preciated your strong statement that we are in a position to defend this country against all threats.

Does that include hypersonic weapons? There have been public reports that we do not have a defense against those hypersonic weapons.

General HYTEN. Our defense against hypersonics is our nuclear deterrent. If somebody attacks us with a nuclear hypersonic capability, we have the ability to respond. Now, it is important for us to be able to track that to understand where it comes from.

If you look at the way a hypersonic missile works, the first phase is ballistic, but it is a fairly short phase. That phase we will see. We will see the launch. We will be able to characterize it and understand it came from Russia, it came from China. But then from our sensor perspective, it basically disappears and we do not see it until the effect is delivered. We need to build sensors to be able to understand exactly where those things are going so we can better defend ourselves. You cannot defend yourself if you cannot see it.

Senator SHAHEEN. I am sorry. I did not mean to interrupt. But do we have any sense about how much time we have from the point at which those weapons might be launched until when they might land in the United States?

General HYTEN. It is a shorter period of time. The ballistic missile is roughly 30 minutes. A hypersonic weapon, depending on the design, could be half of that, depending on where it is launched from, the platform. It could be even less than that. There are a lot of variables into that, but it is more challenging than a ballistic missile.

Senator SHAHEEN. Thank you.

The United States suspended its obligations under the INF Treaty. There has been some discussion about that. Can you talk about what our next steps might be to improve our position and to strengthen deterrence against Russia, China, and North Korea?

General HYTEN. I think the most important thing we can do is continue to modernize our nuclear triad. As long as we have nuclear capabilities that our adversaries cannot attack, they cannot take out, and they cannot eliminate, we will be able to prevent the use of nuclear weapons on our Nation. I remember when I interviewed for this job with President Obama and then I interviewed with Secretary Mattis after he took over, he asked me what is the reason we have nuclear weapons. I said the reason we have nuclear weapons is to prevent people from using nuclear weapons on us. That is exactly why we have them.

If you do not have a robust capability and our adversaries do not believe that you are willing to respond, then you run the risk that somebody will take that step across the line that nobody ever wants to experience. That is why we have to make sure we modernize as we go forward.

Senator SHAHEEN. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Shaheen.

Senator Rounds?

Senator ROUNDS. Thank you, Mr. Chairman.

Gentlemen, thank you for your service.

I want to follow up a little bit with regard to the nuclear triad and what makes it as important to us as it does today. Part of it is the reliability, and when we start talking about the reliability of the nuclear triad, one of the areas that I think we have identified as being in need of updating is the nuclear command and control of the different portions of the triad.

Could you share with us a little bit about, recognizing the setting that we are here, the weaknesses that we are trying to improve upon and include within that a discussion about the cyber threats that are shortcuts and that really do put our systems at risk today?

General HYTEN. One of the interesting things I have observed in my 27 months in command now—so that is a long period of time, 2 years and 3 months. Not one time in that 2 years, 3 months have I lost connectivity with the nuclear force. Can you imagine any other electronic system in the world where that has happened? That shows you how resilient, reliable, and effective the current command and control system is.

But what concerned me about it is I really cannot effectively explain that to you because it has been built 50 years ago through different kind of pathways, different kind of structures. We look at it hard each and every day, and we know that those things are going to have to be replaced in about a decade. The big challenges that we have is how are we going to replace that old, ancient thing that works so well that we know works, but will not work after about another decade. How do we replace that with something that works just as well and with modern technology when we have the cyber threats we have to look at? One of the great things about being so old is the cyber threats are actually fairly minimal.

Senator ROUNDS. Would it be fair to say that there is not an hour that goes by in which our system of protection of our communication system is not challenged someplace along the pathways?

General HYTEN. We see literally thousands, if not millions, of attacks against our systems every day. "Attacks" is defined as an unknown activity trying to get into a network. It may not be an attack, maybe just a curious person. But nonetheless, we look at all of those and make sure we defend those accordingly. We see that broadly on the network side. It is much more secure on the nuclear side because much of that is closed off to the world.

Senator ROUNDS. With regard to both hypersonics and the item of discussion lately, the torpedo, which has been discussed in terms of the Russian advancements, in both cases there is a question as to the vector that we receive them from. Both are capable of movement, changes in direction, and so forth, which really changes the way that we defend North America because in many cases, our defenses have been built on the closest to the most direct route from our near-peer adversaries into the North American continent.

Can you share with us a little bit about the needs, first of all, for the space-based capabilities that we are going to need in order to determine where hypersonics are at and so forth?

Second of all, General O'Shaughnessy, I would just ask, can you share a little bit about the changes within the threats that a torpedo that could hit along our shorelines could do with regard to how we have to refocus our North American defenses as well?

Really two questions, but if you could each.

General HYTEN. Real quickly, Senator, when I was a young officer and the Soviet threat existed, we had big radars on our southern border. We had a radar in Georgia and a radar in Texas, Robbins and El Dorado, that were looking south for threats that we had to worry about.

When the wall came down and Russia became our friend, we dismantled those radars. We have no radars that look south.

We have built radars and we are building a radar in Hawaii, built a radar in Alaska to defend against the Korean threat in particular to make sure we can enable General O'Shaughnessy's missile defense.

But there are not enough islands in the world to build a radar to defend every avenue. Therefore, we have to go to space, and we can go to space now in an affordable way with distributed constellations that can look down and characterize that threat in a global perspective so we can see them wherever they come from. That is the direction we need to go.

Senator ROUNDS. All at risk of cyber interference.

General HYTEN. All at risk of cyber interference, which is the big challenge of the day.

Senator ROUNDS. Thank you.

General O'Shaughnessy?

General O'SHAUGHNESSY. Yes, sir. As we talked about earlier with respect to Arctic as the geography is no longer the buffer that it once was, I would say the same thing from the sea. It was a time where we for decades actually used the sea as a moat and really did not have to worry from the threats directly coming against the Homeland from the sea. That has fundamentally changed, as you were mentioning relative to the weapons that are being created.

Therefore, we need to go and invest ourselves in our ability to have, first, the domain awareness. Just as General Hyten had mentioned, you have to see it if you are going to be able to react to it and ultimately defeat it. Right now, we need to invest in the IUSSS, which is our integrated undersea surveillance system, which has atrophied as it relates to the continental United States and our ability to defend there. We need to invest in that now to be able to defend against these advanced threats that are coming from the sea.

Senator ROUNDS. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Rounds.

Senator Blumenthal?

Senator BLUMENTHAL. Thank you, Mr. Chairman.

Thank you both for your service and for your very forthright and candid answers at this hearing.

General O'Shaughnessy, is there a national emergency at the border?

General O'SHAUGHNESSY. Senator, the President has declared a national emergency on the border.

Senator BLUMENTHAL. I am asking you in your military opinion does this nation face a national emergency at the border.

General O'SHAUGHNESSY. Yes, Senator. As the President has declared that national emergency, he has given guidance and direction down to the Secretary of Defense and then the Acting Sec-

retary of Defense. As that has happened, it has been parlayed to me in the form of an execution order, which makes it very clear to me of my actions that I need to take as a result of the guidance from our senior leadership.

Senator BLUMENTHAL. Did you recommend that he declare a national emergency?

General O'SHAUGHNESSY. Sir, I did not directly recommend either way, although I will say—

Senator BLUMENTHAL. Were you consulted before he did it?

General O'SHAUGHNESSY. Senator, I will say I have had multiple conversations, numerous conversations directly with the President with respect to the border. In addition, I have had multiple conversations as the Secretary of Defense and Acting Secretary of Defense has gone over to the White House for these conversations that have happened. I think I feel very comfortable that as the operational commander that our perspective was considered as those decisions were made.

Senator BLUMENTHAL. What is the threat to our national security that justifies declaring a national emergency, General?

General O'SHAUGHNESSY. Sir, what I see from my perspective is that a secure border will reduce the threats to the Homeland.

Senator BLUMENTHAL. That is a general statement. But what is it specifically at this moment in time that justifies declaring a national emergency?

General O'SHAUGHNESSY. Senator, again I would say that the President has made that declaration. We are responsible for that declaration—

Senator BLUMENTHAL. You are saying in fact—I do not mean to be disrespectful—that there is a national emergency because the President has said there is a national emergency.

General O'SHAUGHNESSY. No, sir. What I am saying from my perspective I get my orders from the Secretary of Defense and the President. Those orders are very clear to me. Just like any other mission that I am given, when I get that legal order and I have the troops that are able to enforce that and take those actions, I do it with the same vigor and professionalism that I do for my ballistic missile defense, my operational, legal, et cetera. I take that same look to the—

Senator BLUMENTHAL. I understand that you follow orders and you do it well and you are proficient and expert in your duties. I commend you. But you did not recommend that the President of the United States declare a national emergency, and you have not given me as yet a specific fact at the border now that justifies declaring a national emergency.

General O'SHAUGHNESSY. Senator, I spent a lot of time at the border over the last 5 months, had very specific conversation with our lead federal agency, in this case the Customs and Border Protection, as well as with the Department of Homeland Security and directly with Secretary Nielsen on a regular, routine basis. I would defer to them with respect to the characterization of the threat. I will say we are trying to be a good partner to another lead federal agency as they take on this challenge.

Senator BLUMENTHAL. I am concerned, General, very frankly that this administration is politicizing our military and militarizing

our immigration policy, in effect using the troops under your command as political props both in terms of declaring a fake emergency but also compromising our potential security by diverting them away from other assignments and missions that are absolutely necessary. My understanding is that these troops were engaged in various readiness and training exercises at the time they were deployed. Is that correct?

General O'SHAUGHNESSY. Sir, there have been quite a few different deployments and units within that, but to your point, some of them would. I will also say that many of the units that have deployed, especially the initial salvo that went out, are actually doing exactly what their military skills are. Military police do a military police business. Engineers do an engineering business. In fact, many of them come back and talked about the readiness advantage they have for the way that they have been deployed.

That said, readiness is a key concern of ours and mine in particular, and we will continue to look at the impacts to readiness as we go forward.

Senator BLUMENTHAL. General, recently—I think last week as a matter of fact—Under Secretary Rood and Vice Admiral Gilday testified that a minimum of \$237 million has been spent so far on deploying both Active Duty troops and guard personnel at the border. They were unable to provide a total cost estimate for fiscal year 2019 even though those deployments have been extended—correct me if I am wrong—through September of 2019. Can you give us a cost estimate?

General O'SHAUGHNESSY. Senator, I will confirm that the deployments have been extended through September of 2019.

The cost estimate—specifically on the title X side, which is the part that is under my command and control—was at \$132 million through the 31st of January of this year. We will continue to work with OSD [Office of the Secretary of Defense] who is ultimately the one who is running the calculations with respect to the cost.

Senator BLUMENTHAL. In connection with the declaration of national emergency and the diversion of money that is necessary to build the wall, have you made a recommendation as to military construction projects within your command that would be stripped of funding to fund the wall?

General O'SHAUGHNESSY. Sir, the actual funding is being worked by the Secretary of Defense as we speak. I did go down to the border to the El Paso area with the Secretary just this last weekend so he would have an understanding both of the military aspects of what our troops are doing right now, as well as be able to talk to the Customs and Border Protection that the folks actually doing the mission there and be able to take that into his calculations as this week he determines the funding that might be applied toward resourcing a wall or other efforts on the border.

Senator BLUMENTHAL. The money that will be taken from military construction projects under your command has not yet been determined as to what specifically and where it will come from.

General O'SHAUGHNESSY. That is a true statement, sir.

Senator BLUMENTHAL. Thank you.

Chairman INHOFE. Thank you, Senator Blumenthal.

Senator Ernst?

Senator ERNST. Thank you, Mr. Chair.

Thank you, gentlemen, for being here today. We truly do appreciate it. I appreciate both of your extreme professionalism in a very difficult time. Thank you very much for stepping up. I do appreciate it.

General O'Shaughnessy, let us go back and visit a little bit about the National Guard. You happened to mention it in your comments. This morning we had our National Guard breakfast caucus. A lot of our adjutant generals are here in town today and really excited to be here and speaking with all of their elected representation.

Can you talk a little bit about how the National Guard fits into the overall force structure here in the United States and what type of missions are they engaging in?

General O'SHAUGHNESSY. Yes, ma'am. Thanks for the opportunity to highlight the great partnership we have with the National Guard. I will say certainly from the NORTHCOM and NORAD perspective, they are absolutely integral and core to every single mission that we do within our commands. It goes all the way from whether it is the aircraft that are sitting, as we speak right now, across both the CONUS [Continental United States] as well as in Alaska or whether it goes to the command and control that is part of that, whether it is the ballistic missile defense that we have in place. Every mission set that we have right now the National Guard is actively employed in doing that. Frankly, I can just tell you plain and simply we could not do our mission set without the National Guard and their contributions.

Senator ERNST. We appreciate that very much. We want to utilize them as much as we can. We do know that there are a number of troops that have been activated or mobilized for work down on the southern border. We know that to be true.

I would just state that having served in the National Guard and responding to a number of different mobilizations, whether it is hurricane relief, whether it is working in flood situations, or whether it is down on the border, that our troops are actively engaging in their MOS [Military Occupational Specialty] specific skill sets. If you are a heavy equipment operator, you are out there driving a dozer or you are operating. If you are a truck driver, you are driving. You are actually doing those skills that have been assigned to you. Thank you for highlighting that. I think it is great for our readiness to actually be able to engage in our MOSs. Thank you for that.

I also want to go back. We have talked a lot with General Hyten about modernization and our nuclear capabilities, but let us focus a little more with you. What do you see the most pressing modernization requirements for NORTHCOM?

General O'SHAUGHNESSY. Yes, ma'am. Thank you for the opportunity to highlight this. It is actually fairly similar. The first thing is domain awareness. Over the years, we have just let atrophy our ability to understand and see what is happening in and around our Nation. It was done at the time for the right reasons because we had a sanctuary. We had the ability to not have more advanced sensors and more advanced capabilities. But now that it has fundamentally changed based on the security, based on our potential adversaries, our peer strategic competitors that now have the abil-

ity to reach out and hold us at risk, we need to fundamentally relook at the way that we are maintaining our domain awareness. That cannot be done with one single widget, one single particular program. It is going to have to be a family of systems. It is going to have to include both terrestrial based capability and a reassertion of technology in terrestrial based. It is going to have to include some air domain advances in technology and capability. But it is also absolutely going to have to include space. We really need to accelerate our work to put sensors in space that can help us understand the domain both on the sea and in the air of the threats that are coming towards our Homeland.

In particular, the Arctic is an area that we really need to focus on and really look at investing. That is no longer a buffer zone. We need to be able to operate there. We need to be able to communicate there. We need to be able to have a presence there that we have not invested in in the same way that our adversaries have. They see that as a vulnerability from us, whereas it is becoming a strength for them and it is a weakness for us, and we need to flip that equation.

Senator ERNST. Yes. You mentioned the Arctic, and I am sure that my colleague, Senator Sullivan, will have a lot of great questions there.

But when we talk modernization, have we identified a system to replace the aging northern warning system?

General O'SHAUGHNESSY. Ma'am, we have a study that is going on right now. It is a bi-national study. It is being done by our Air Combat Command within the United States Air Force, as well as with Canada, that is going to help us. But I will tell you that north warning system right now—the last hardware insertion of technology was 1985. That needs to be invested in, and again, it needs to be part not just of advancing that but also doing the all-domain awareness in addition to the terrestrial based.

Senator ERNST. Yes, I appreciate that.

General Hyten, thank you so much for hosting me last year at STRATCOM. I really appreciated the tour and the time you took to educate me on your mission set there.

Can you talk a little bit about the move that is ongoing at Offutt Air Force Base?

General HYTEN. Senator, I am glad to be able to sit here and say we are actually getting ready to move into the building. It has been a long time. It is a couple years late. The Guard did an amazing job. We brought in over 20 engineering and installation squadrons from the Guard to help us recapture some schedule. They saved over \$70 million of the taxpayers' money, and they saved us probably more than that in schedule. We are getting ready to move in. I think we will be able to start next week, and I hope to have the opening ceremonies this October. That will be a big day because we will be able to do our mission even better. That will become the hub of nuclear command and control.

Senator ERNST. Outstanding. Gentlemen, thank you both so much for your leadership.

Chairman INHOFE. Thank you, Senator Ernst.

Senator Heinrich?

Senator HEINRICH. General O'Shaughnessy, forgive me for jumping back and forth between Intel and this Committee this morning. There is a little bit of something going on over there as well.

I wanted to return to something that Senator Blumenthal came up and just make sure I have the correct information that you were not consulted by the White House before the decision to use military construction dollars to pay for the national emergency.

General O'SHAUGHNESSY. No, sir. That was not my response. Specifically, we have been in dialogue. I have been in dialogue with the President all the way down for multiple occasions, to include in coordination with the Secretary of Defense. The actual decision of how that funding will be placed is actually what the Secretary of Defense is actually working through literally right now.

Senator HEINRICH. Were you consulted before the announcement?

General O'SHAUGHNESSY. With multiple dialogues talking about the border, talking about the situation that we see.

Senator HEINRICH. Is that a yes?

General O'SHAUGHNESSY. Our ability to have the operational perspective known was absolutely present.

Senator HEINRICH. My question is were you consulted as to using military construction dollars as the source of funding to pay for the national emergency efforts?

General O'SHAUGHNESSY. Yes, in fact, with the Secretary of Defense.

Senator HEINRICH. That is a decision you support.

General O'SHAUGHNESSY. I gave my best military advice to the Secretary of Defense, to include going down, physically going down, with him to the border to make sure he understood the operational perspective.

Senator HEINRICH. If those dollars do flow to that priority rather than what they were appropriated for and authorized for, what impact of the cancellation of some of those construction projects have whether it is for military housing or air traffic control improvements or even runway upgrades? What impact would that have on military morale?

General O'SHAUGHNESSY. I think right now, Senator, that is premature. I think as we look at it, that is exactly the types of things that the Secretary is looking at. He is looking at it from what is the right balance, what is the right use of those funds, and in fact, what would the correct funds be, appropriate funds, to use given the direction that he has been given.

Senator HEINRICH. Given the Constitution, I would suggest that is a job for Congress.

General O'SHAUGHNESSY. Yes, sir.

Senator HEINRICH. General Hyten, DOD's initial requirements for plutonium pits are to produce 30 pits per year at Los Alamos by 2026. Are you and NNSA [National Nuclear Security Administration] still laser-focused on making that happen?

General HYTEN. We are laser-focused on 30 by 2026 and 80 by 2030, and my requirement is that. I never said where they had to be done, but if we do not get 30 in Los Alamos, we will never the 80.



Senator HEINRICH. If personnel and scientific expertise were shifted from one place to another during that effort, what would be the potential impact for the near-term goals?

General HYTEN. I have told the Secretary of Energy, as well as the Administrator of the NNSA, that we cannot move anything out of Los Alamos into Savannah River that would take our eyes off of the 30 in 2026. I am going down to Los Alamos and sending my people down to Los Alamos to make sure that that focus is always there because, again, if we cannot get to 30 by 2026 at Los Al, we cannot get there at all.

Senator HEINRICH. Well, I appreciate your focus on this effort. It is very welcome, and you are always welcome at Los Alamos, as you know.

I also understand that the administration, General Hyten, is currently reviewing whether it will seek to extend the New START agreement that limits United States and Russian strategic nuclear weapons to 1,550 treaty-accountable warheads with additional limits, obviously, on delivery vehicles. Is that information accurate? Is that correct?

General HYTEN. We are looking at that. The President asks me about that every time I see him. It is high on his mind. Again, the issue there is the efforts that Russia has going on right now that are not elements of the New START. The torpedo, the cruise missile, the hypersonics all are not part of that treaty. We believe that we would like to have all nuclear weapons as part of a future strategic arms treaty. That is my desire. I want Russia in that treaty. I want Russia in the INF Treaty, but if they will not participate—

Senator HEINRICH. I share that sentiment and certainly hopefully we can move to a world where there is control on more weapon systems rather than simply getting rid of the tools that we have to, in theory, get something that is perfect and more inclusive.

Does New START provide significant benefits to U.S. national security interests? If so, what would those be?

General HYTEN. No treaty is perfect, and New START is certainly not perfect. But what it gives me at STRATCOM, it gives me two very important things. Number one, it puts a limit on the basics of their strategic force. I understand what the limits are and I can position my force accordingly so I can always be ready to respond. Maybe as important, it also gives me insight through the verification process of exactly what they are doing and what those pieces are. Having that insight through my forces and our partners is unbelievably important for me to understand what Russia is doing. But we do not have insight into all the other things that are going on right now. That will be the challenge.

Senator HEINRICH. If we were to lose that insight without gaining more global insight, would that be a step forward or a step back?

General HYTEN. That is the balance that will be in the decision that the country has to make as we go forward on the benefits of New START. I would like everything on the table.

Senator HEINRICH. Thank you, General.

Chairman INHOFE. Thank you, Senator Heinrich.

Senator Sullivan?

Senator SULLIVAN. Thank you, Mr. Chairman.

Gentlemen, thanks for your exceptional service of both of you and all the hard work you are doing.

I want to talk about the Arctic and missile defense, but I actually wanted just to add a little bit to the exchange you had with my colleague, Senator Blumenthal, who I have a lot of respect for and work with on a lot of issues.

But, General O'Shaughnessy, let me ask. How many Americans were killed by drug overdoses last year? Do you know?

General O'SHAUGHNESSY. Yes, Senator, I do. 72,000 in the last year and 70,000 the year before.

Senator SULLIVAN. More than all the men and women killed in the Vietnam War just last year, 72,000 Americans.

General O'SHAUGHNESSY. That is correct, sir.

Senator SULLIVAN. That is opioids, heroin, meth. How much of the heroin in America comes from Mexico?

General O'SHAUGHNESSY. Sir, there is a significant portion that comes up through the southern approaches.

Senator SULLIVAN. The number I have heard is over 90 percent.

General O'SHAUGHNESSY. Yes, sir.

Senator SULLIVAN. Okay. If that is not an emergency, 72,000 dead Americans killed by opioids and heroin in 1 year, I have no freakin' idea what an emergency is. That is just my view on that. Do you have any comment on that? Is that an emergency, 72,000 dead Americans?

General O'SHAUGHNESSY. Sir, I would say that clearly this is a national issue that we have to take on with a whole-of-government approach.

Senator SULLIVAN. Yes, okay. Thank you.

Let me talk about the Arctic. By the way, General O'Shaughnessy, I really want to commend you. You are by far and away the NORTHCOM Commander who has actually put this on the radar as a serious issue. Just today in your testimony about so many of the threats operating both in the Arctic and passing through I think is a wakeup call. This Committee has been doing a lot of work in that regard. Let me ask a couple issues with regard to capabilities.

The Russians have a fleet of polar icebreakers. It is 40. They are building 14 more, including nuclear-powered icebreakers, weaponized icebreakers. We are finally getting our act together on that. Last year's NDAA [National Defense Authorization Act] authorized six. This past appropriations bill recently signed by the President has about close to \$700 million on the first one.

But do we have the required capabilities to answer the Russian and, by the way, Chinese challenge in the Arctic? If so, what more capabilities do we need?

General O'SHAUGHNESSY. Senator, you started with icebreakers, and I will highlight that as well. On paper, we have four icebreakers. In reality we have one that is actually a polar level.

Senator SULLIVAN. We have two and one is broken. Right?

General O'SHAUGHNESSY. Two. They are sister ships. We have one that is cannibalized and one that is——

Senator SULLIVAN. They were commissioned in the early 1970s.

General O'SHAUGHNESSY. Yes, sir. They are 43 years old.

Senator SULLIVAN. Have you ever seen those icebreakers?

General O'SHAUGHNESSY. I have been on the Polar Star.

Senator SULLIVAN. They are a disgrace to the men and women who wear the uniform of the United States. Are they not?

General O'SHAUGHNESSY. Yes, sir. Just this year alone, for example, as the Polar Star was going down to Antarctica, she had multiple major casualties to include a propeller shaft seal that went out that ended up in flooding. Its incinerator actually caught on fire. There was a fire and flooding on that ship.

Senator SULLIVAN. Yes. I commend the men and women of the Coast Guard who try to keep that ship afloat, but it is a disgrace. You put men and women wearing the uniform of our Nation on a ship that is that old and dangerous.

But I interrupted you. Please go on.

General O'SHAUGHNESSY. In that regard, we are working closely with the Coast Guard and, of course, the U.S. Navy who is helping the Coast Guard get the six icebreakers, at least three that will be polar-capable icebreakers. Those are absolutely critical for us even within the Department of Defense even though it is ultimately for the Coast Guard to be able to clear the access for us to be able to have operations in the Arctic. So that is a high priority for us in U.S. Northern Command.

Senator SULLIVAN. Let me ask another question. Again, this Committee has focused a lot on the Arctic, which I appreciate in a bipartisan way. We mandated this strategy that had to come out of DOD. Two years ago we mandated the concept of a strategic Arctic port. The Secretary of the Navy recently testified that we need a strategic Arctic port to protect our interests in the Arctic. Do you agree with him?

General O'SHAUGHNESSY. I had a conversation with the Secretary of the Navy just last week on this regard. Clearly what we need—I will use an example. We have a requirement for fuel north of Dutch Harbor. Right now we do not have access to that. Nome, if we were able to make Nome a deepwater port, would serve that requirement.

Senator SULLIVAN. You think we need that the way he said that?

General O'SHAUGHNESSY. I think we need to ultimately have the ability to have the infrastructure to allow us to do the operations. A deepwater port would certainly be part of that going forward.

Senator SULLIVAN. General Hyten, let me ask you. You have been a great advocate on missile defense. The Trump administration recently put out its Missile Defense Review. The President actually announced it at the Pentagon with the Vice President and SecDef, the Secretary of Defense.

Again, this Committee has been doing a lot of work in regard to that.

Do you agree with the priorities outlined in the Missile Defense Review? Can you just briefly talk about what other areas we need and how Alaska is the cornerstone of our Nation's missile defense in terms of LRDR [Long Range Discrimination Radar] radar, missile fields, and other areas that we need to continue to build on?

General HYTEN. I agree with the findings of the Missile Defense Review. The thing I liked most about the Missile Defense Review is that it was not just a ballistic missile defense review. It was a

missile defense review looking at the entire spectrum of capabilities that we have to have not just against ballistic missiles but all the missile threats that we face. It talked about getting left of launch, as well as the response after the launch.

When you look at Alaska, all you have to do is look at a globe and look at where Korea is and look at where the United States is and you understand the importance of Alaska. That is why we are putting the long-range discrimination radar in Alaska. That is why that is going to be a critical portion.

I continue to look at the radar architecture and be concerned about vulnerabilities in that architecture. That is why I think we need to augment the ground element, as General O'Shaughnessy talked about earlier with the space element, and then defend that space element as well. That will allow us to see, characterize, and hopefully discriminate the threat so we can make more efficient use of our interceptors in Alaska.

Senator SULLIVAN. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Sullivan.

Senator Peters?

Senator PETERS. Thank you, Mr. Chairman.

Gentlemen, thank you for your testimony.

I want to pick up on a comment made by my colleague, Senator Sullivan, about the Coast Guard icebreakers, and I would be remiss if I did not take this opportunity to mention we have a very aging fleet in the Great Lakes as well. In fact, I was on a Coast Guard ship earlier last week, and it was well over 50 years old. You can only keep those things running so long and you start running out of bubblegum and tape and you need to have it replaced. Hopefully we will be able to recapitalize that fleet in a much broader way.

General O'Shaughnessy, you have a very big responsibility and an important one with a very large AOR [Area of Responsibility]. I am sure you have a lot of sleepless nights thinking about various threats. What do you believe is the most significant threat to your AOR? We have heard a number of different ones here today, but I am just curious as to the one that you think most about.

General O'SHAUGHNESSY. Senator, I think right now it in the near term is Russia. As we look at the advancement that Russia has made, it is not only the capability and the capacity that they have, but it is also the investments they made, the training they are doing, and the patterns of behavior that clearly show they intend to not only hold us at risk but in conflict, they would actually take action on the conventional side as well as on the nuclear side potentially. It is not just a cyber threat. This is a kinetic threat with the cruise missiles that we talked about. We need to invest in our ability to defend if we are going to be able to maintain our ability to defend. That is something that I think we need to have a sense of urgency on.

Senator PETERS. Well, I appreciate that. That is our number one threat to the Homeland in your estimation.

However, we just recently deployed troops to our southern border. As you know, as we have talked about here, we have a national emergency that was declared on February 15th.

My question to you, General, is we sent troops to the border last October and into November. Could you tell us how the threat environment has changed from November to February? Have you seen an increased threat?

General O'SHAUGHNESSY. Well, first, I would say for the specific clarification of the threat we rely on our Customs and Border Protection personnel in close cooperation with them. I would defer the specifics of that actual threat to them.

What I will say it is a dynamic that we are seeing where the response that we did in October was to a very large caravan, and we were tasked to do a request for assistance from the Department of Homeland Security to respond very rapidly. We did so. I am very proud of the response that was made with our military members taking the orders they were given, the mission that they were given, and executing it with the professionalism that you would expect of our military members.

Senator PETERS. I apologize, General. But just from that point forward, what has happened since then to now? What have you seen?

General O'SHAUGHNESSY. Sir, we have seen the caravans are not as large, but they are still out there. I would use the example of a couple weeks ago where we had to respond to Eagle Pass where we had migrants show up there where the Customs and Border Protection asked for our assistance again to be able to harden the port of entry and provide them assistance in their ability to respond.

Senator PETERS. Well, I think we all agree that border security is incredibly important. I do not think you will find any disagreement with anybody on this Committee. I sit on the Homeland Security Committee as well. It is clearly a nonpartisan issue. We all believe that borders must be secure. It is a fundamental aspect of our government to keep the Homeland safe.

The question is usually how do you do that in the most effective way and understand that we have to do it in a way that is respectful of taxpayer dollars as well. That I think is really the crux of what we are deciding right now.

You mentioned that you were part of the consultation with the administration as to the need for a national emergency. I would assume, because of your repeated trips down to the border, you have seen significant gaps from Customs and Border Patrol. However, as you mentioned earlier in your testimony, the DEA has come up with a report that shows that most of the drugs, for example, that are coming across the border are coming through ports of entry. They are not folks walking across the open desert, and if they are, there are probably much more effective ways to track those folks down either with unmanned aerial vehicles, sensors, National Guard troops. I understand those National Guard troops use Department of Defense drug interdiction program money to go down there. Yet now I hear that that drug interdiction money may be diverted to something else.

Could you explain why you think drug interdiction money is simply not an effective way of dealing with drugs coming across the border and we should look at other avenues?

General O'SHAUGHNESSY. Senator, what I would say is that we have been in consultation with the Secretary of Defense on exactly these issues. With our role within USNORTHCOM, we have JTF-North [Joint Task Force North], for example, that is dedicated to the counternarcotics mission. That gets funding through the 284 money that you are alluding to. That is something that we are articulating up to the Secretary of Defense with the aspect of saying we want to preserve that ability for that particular program, as just an example of what inputs the Secretary of Defense is getting as he works through what is the appropriate way to work the funding and what is the report and response from the Department of Defense to this demand signal.

Senator PETERS. You are recommending that that money stay in place. That would not be diverted.

General O'SHAUGHNESSY. I am talking about very specifically the USNORTHCOM perspective of a very small sliver of the overall funding piece that needs to be considered within the broader context of the requirements that the Secretary of Defense has been given.

Senator PETERS. Great. Thank you.

Chairman INHOFE. Thank you.

Senator Hawley?

Senator HAWLEY. General Hyten and General O'Shaughnessy, thank you for being here. Thank you for your exemplary service, and thank you for the service of the men and women under your respective commands.

General Hyten, I want to go back and talk about something you have touched on several times already this morning, the need for the modernization of our nuclear arsenal. I want to focus in on, in particular, one aspect of that as it relates to low-yield tactical nuclear weapons.

We know that Russia and China, our two peer or near-peer competitors, have been investing significantly in these types of weapons. Russia, for instance, in anti-ship cruise missiles, nuclear torpedoes, nuclear depth charges. China, other nuclear weapons designed for regional conflict like the DF-21, DF-26 ballistic missiles. For these reasons, of course, the Nuclear Posture Review that was released last February called for us, the United States, to deploy new low-yield tactical warheads.

Can you explain? Do you agree with that assessment by the Nuclear Posture Review? Can you explain why this type of weapon might be important given the strategic choices that we are now facing?

General HYTEN. Senator, I do agree with the Nuclear Posture Review. I had a lot of input into the creation of those recommendations. The thing I liked best about the Nuclear Posture Review and our National Defense Strategy is they are threat-based documents. When you have a threat specifically in Russia, which is my biggest concern, with low-yield nuclear weapons where they have deployed an order of magnitude more of those than we even have in our inventory, we need to be able to quickly respond to that and provide the President a spectrum of options in order to do that. Now, we have low-yield nuclear weapons in the air leg of our triad, but not in another leg of our triad. I talked about the attributes before

about timely, responsive. We want to make sure the President always has a responsive option to respond.

We are recommending that, but it is important to note that is inside the New START treaty. Russia is building those outside the New START treaty. We are going to take missiles off of the submarines, take big weapons off the submarines, put little weapons on the submarine, put it back on. We will still have 1,550 deployed nuclear weapons, but the total yield will be smaller. I do not think that is escalatory in any way. I think that will allow the President to have options to manage the threat effectively.

Senator HAWLEY. Thank you for that.

I wonder if you could go on, General Hyten, and just explain how it is that deploying new low-yield nuclear weapons can, if we do it effectively, if we do it right, actually reduce the risk of nuclear conflict.

General HYTEN. Because the adversary watches exactly what we have and then they look for gaps. If they think they can deploy a nuclear weapon and get away with it, they very well may do that. The Russian doctrine is escalate to win, and if they execute that doctrine as they have said—and I have to believe them at their word—if they execute that doctrine as they have said and they may consider if something is going bad on the battlefield somewhere to deploy a low-yield nuclear weapon and the United States will not respond because if we do that, we have to respond with a high-yield nuclear weapon, they might take that chance. But if they see we have a low-yield nuclear weapon, they will not go that direction. That is the whole theory of deterrence is if they see an effective response to that, they will not use that weapon.

Senator HAWLEY. Given that, General, what place do you think that the use of these tactical low-yield nuclear weapons ought to have in our own strategic doctrine? I think you have touched on it, but explain a little bit more.

General HYTEN. The most important thing to realize is they are deterrent weapons. The first use of a deterrent weapon is to make sure the weapon is not used against you. Now, in order for that to happen, the adversary has to look at that and see a rational response. The second priority is to use that in response to that option. But the goal of that weapon is to make sure that weapon is not used on you.

Senator HAWLEY. This is particularly important, is it not, General, as we face peer competitors, near-peer competitors who may well have significantly larger conventional military forces than we do so that we do not find ourselves in a position where a disadvantage that we may have with conventional forces tempts aggression. Is that fair to say?

General HYTEN. I never want to be at a disadvantage in any element of our architecture. I think it was Senator Inhofe, Senator Reed talked about disadvantages or places our adversaries are ahead of us. As far as I am concerned, that should never happen in the United States of America. But it is happening. I never want to be there.

On the conventional side, we are still the most dominant conventional force on the planet. If we can move our capabilities into an operation, we will dominate the battlefield today. That is where the

threat of a low-yield nuclear weapon becomes at risk because an adversary may see the opportunity to deploy conventional forces and have that short-term advantage, but eventually that advantage will turn and that is where that escalation risk exists and we have to be able to respond.

Senator HAWLEY. Very good. Thank you so much, General.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hawley.

Senator Kaine?

Senator Kaine. Thank you, Mr. Chair.

Thanks to our witnesses.

I am sorry that Senator Sullivan left. I want to return and say that 72,000 deaths, overdose deaths, is an emergency. 40,000 people died in 2017 by gun violence in the United States, murders and suicides. That would seem to me to be an emergency.

The question is not whether 72,000 drug deaths or 40,000 gun deaths are an emergency. The question is should we allow a President to unilaterally declare an emergency and to take \$6 billion out of the Pentagon's budget to apply to a situation, General O'Shaughnessy, that you said the threats to our Nation from our southern border are not military in nature. The question that Congress and the Senate is going to grapple with in the next couple weeks is will we allow a President to declare that drug overdose deaths are an emergency, but the threat is not military and still will take \$6 billion out of the defense budget to deal with it because if we set that precedent, I could certainly foresee a day when a President is going to say 40,000 gun deaths a year are an emergency, and why do we not take the money out of the Pentagon budget to deal with that? If we let the President take \$6 billion out of the Pentagon's budget to deal with a non-military threat of drugs, then you guys are going to see money taken out of your budget for other emergencies as well. That is the vote that we are all going to be casting in the next couple of weeks.

General O'Shaughnessy, I applaud the honesty of your written testimony. It is 23 pages of testimony. The first section of it is threats, five pages. You identify six threats, nothing to do with the southern border. The second section is defending the Homeland, eight pages of testimony, four different domains. The last is southern approaches, and you acknowledge that it is not a military threat. You focus in your three paragraphs of testimony on illegal narcotics.

The question we are going to have to vote on is do we want the President to take Pentagon money for a threat that you acknowledge is non-military in nature.

The President proposes \$6 billion. The first chunk is \$2.5 billion of drug interdiction money. The Pentagon account on drug interdiction does not have \$2.5 billion in it. Right now, an ABC news this morning article—one of the two Pentagon funds the Trump administration plans to tap to help secure the southern border after declaring a national emergency has nowhere near the \$2.5 billion that is projected for use. It has \$85 million, not \$2.5 billion. It has \$85 million that is available. The Pentagon is saying that they are going to have to reprogram or shift money from other accounts into the account to make the \$2.5 billion.



I gather, General O'Shaughnessy, from your testimony earlier you do not yet know where the Pentagon plans to find the money to shift into the drug interdiction account to then take to use for the President's emergency. Is that correct?

General O'SHAUGHNESSY. That is correct, Senator. That is beyond the purview of USNORTHCOM. That is something that OSD is working with the joint staff.

Senator KAINE. Within the Pentagon but not NORTHCOM.

General O'SHAUGHNESSY. That is correct.

Senator KAINE. Secondly, I want to make sure I understand your testimony. That is the \$2.5 billion. The \$2.5 billion to be taken is a fund that has \$85 million in it. There is apparently an attempt to shift other Pentagon monies into it. We do not yet know where it will come from.

The second chunk is \$3.5 billion out of MILCON, military construction, projects. General O'Shaughnessy, in NORTHCOM I gather there are ongoing military construction projects as well as projects that you would like to do that either are further out or not yet funded. Correct?

General O'SHAUGHNESSY. That is a true statement, Senator.

Senator KAINE. I gather from your testimony you have not yet been asked to provide a list of NORTHCOM MILCON projects that you would propose or you would recommend to be reduced, eliminated, or delayed. Is that correct?

General O'SHAUGHNESSY. We are actually working very closely with the Secretary of Defense's office with respect to the prioritization of that, not necessarily specifically related to this issue, but we have had communication with them with our prioritization of those MILCON dollars.

Senator KAINE. I want to make sure I understand this. Obviously, NORTHCOM is always going to have a list of MILCON projects because we are working on the NDAA and that will be in it. You will always have a list. But have you been asked specifically in connection with this proposal to take \$3.5 billion out of MILCON, give us your recommendations as the NORTHCOM Commander about projects that should be reduced, eliminated, or delayed?

General O'SHAUGHNESSY. Again, Senator, I believe that is the process that is actually ongoing this very week, and that is why I was really pleased that the Acting Secretary of Defense took the time to go down, see firsthand, and then have a personal insight as he works through those very difficult challenges and decisions that he will make as he ultimately responds to the direction of the President.

Senator KAINE. Have you made recommendations or not? Has NORTHCOM made recommendations about MILCON projects that should be reduced, eliminated, or delayed?

General O'SHAUGHNESSY. We have not specifically to this particular effort as of yet, but it is still premature and pre-decisional at this point.

Senator KAINE. Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Kaine.

Senator Blackburn?

Senator BLACKBURN. Thank you, Mr. Chairman.

Thank you all for being here.

I know that the hypersonics have been discussed. General Hyten, I wanted to come back to that issue. It is important to us in Tennessee because of Arnold Air Force and the work that has been done there. They have been really a key contributor, if you will, to our Nation's aerospace program. They are very important to us in Tennessee, and we are pleased that they are there. You have discussed some of the program and the advances there, the operational capabilities.

But I want to come back to one thing that they have mentioned a couple of times, and it is having both the talent and the numbers of individuals to really push forward into the hypersonics and into that capacity and, General O'Shaughnessy, as you said, 21st century warfare and having what is there. Let us take just a minute and focus on the talent and the numbers to deliver on that mission.

General HYTEN. Senator, Arnold Air Force Station is a treasure to this country. The wind tunnel capabilities that they have there are unique, and they allow us to do things that we really cannot do anywhere else.

We have a challenge at Arnold and a challenge across our DOD labs and across our Department of Energy labs in attracting, recruiting, and retaining the kind of engineering talent that is required to move these kind of programs forward.

What I have learned, though, is when you can explain to the youth of America the kind of work that you can do by coming to places like Arnold, they will come. They will come because they love to do that kind of fascinating work. That is the same with Los Alamos or Livermore or Sandia or Rome Labs or any of our national labs. The key is then to be able to retain them because they will be trained and they will learn unique skills and they can go out and do anything. We have to make sure that we have the compensation that matches their talent, that we compete with the civilian sector in doing that. But the most important thing is we can provide them fascinating work.

The one challenge I would say that we have to work at together—and the Department of Defense is looking at this; Congress is looking at this—is the time it takes some of these employees to get their clearances has been very de-motivational for new employees and it is causing some of them to leave because it takes years in some cases for them to get the high level security clearances to work those issues. Now, the Secretary, Secretary Mattis, now Secretary Shanahan, have looked at this issue directly, and they are working it directly with the broader government. But that is an issue that we want to continue to take on.

Senator BLACKBURN. Kind of in the same vein, let us talk about USSPACECOM and that capacity, that mission, the transition of that mission. How are you approaching this so that going from STRATCOM to SPACECOM that is a seamless transition, and that we keep our focus on those threats that are coming to us that we are going to need to—the adversary threats we will need to address?

General HYTEN. Two pieces of the answer to that question, Senator, is that, number one, I am still the senior military person in space still serving Active Duty. So I care desperately about space.

But as the Commander of Strategic Command, space will never be my number one priority. In fact, right now it is about number three. The nuclear modernization and operations is number one. Nuclear command and control is number two. Space is my third priority. With the importance of space in today's day and age, that is not good to have that priority. We need a command that focuses on that and the commander of that command, whoever that person is, he or she must have a focus on space 24 hours a day, 7 days a week. That is why we are standing up a Space Command.

One of the ways we are going to make sure we do that because I was around when we transitioned the old U.S. Space Command to U.S. Strategic Command in 2002—now we are kind of going back the other way. I watched us almost break the space mission when we did that because we just haphazardly slapped billets and said these 500-plus billets are going to move from Colorado to Omaha, and I will just say the people did not come with them automatically.

We are going to continue to perform a lot of the mission for Space Command in the STRATCOM headquarters. It will be Space Command East. Omaha is east in this case if it is in Colorado. If it is in Florida, it will be Space Command West. If it is in Alabama, it will be Space Command West. Wherever it ends up, we are going to continue to support that because we do not know the final destination of where that is going to be. We cannot break the mission because we have threats to deal with today. So we will make sure we cover both of those issues in dealing with the standup of Space Command.

Senator BLACKBURN. My time has expired. I am going to submit for the record a QFR [Questions for the Record] for you on supply chain integrity dealing with the space systems. I thank you each for your service and for being here today.

General HYTEN. Thank you, ma'am.

Chairman INHOFE. Without objection, it will be part of the record. Thank you.

Chairman INHOFE. Senator Warren?

Senator WARREN. Thank you, Mr. Chairman.

Thank you both for being here today.

Senator Heinrich asked about New START, and I just want to go back and dig a little deeper, if I can, on that.

General Hyten, in March 2017, you testified in front of the House Armed Services Committee, and you said "I have stated for the record in the past and I will state again that I am a big supporter of the New START agreement." Is that still your view?

General HYTEN. It is still my view. I have said it multiple times. I am a big supporter of the New START agreement. I want ideally in my view all nuclear weapons to be part of the next phase of New START and not just the identified weapons that are in the New START treaty now.

Senator WARREN. I understand you would like to see an expanded New START. Can you just say a word about why you think New START is so important?

General HYTEN. It gives me two things at STRATCOM. Number one, it gives a cap on their strategic baseline nuclear weapons and their ballistic missiles, both submarine and ICBM, as well as their

bombers so I understand what that is. Also, just as important, it gives me insight through the verification regime to their real capabilities. The INF Treaty, for example, does not have a verification regime anymore. The New START treaty does, which gives me insight into the Russian capabilities. Those are hugely beneficial to me. They just have to be balanced against all the other things Russia is doing outside of the treaty.

Senator WARREN. Right.

Actually can you just say a word more about that, about the inspection process and what benefit that gives to the United States?

General HYTEN. Both Russia and the United States, as party to that treaty, have the ability to declare a New START inspection. The Russians can land in our country, and I get a notification that they landed at a port of entry somewhere. San Francisco is one that they land at frequently. Once they land there, they can declare wherever they want to go in this country to look at our nuclear force. We have the same ability in Russia to land at a port of entry in Russia and then go wherever we want to look at their capabilities. They open it up to verify that the right number of weapons are there, the right kind of weapons are there. That gives us insight into those capabilities, gives them insight into our capabilities and improves our overall strategic stability.

Senator WARREN. I presume, based on what you have said, that if we either lost that capacity or the capacity was greatly diminished, that you would like to try to find another way to be able to conduct that same kind of inspection and know what is going on.

In this setting, how confident are you that we could replace those inspections, the data exchanges, and the notifications that are now in New START with other verification tools in a timely and cost effective manner?

General HYTEN. We have very good intelligence capabilities, but there is really nothing that can replace the eyes-on/hands-on ability to look at something. We have to do that. But there are elements that they have that are not elements of the New START treaty that we do not have this insight into.

Senator WARREN. I understand that you want to see this expanded. I am just trying to hang onto what we have got and then talk a little bit about the expansion.

Let me just ask, in your view would it be easier or harder to provide an effective deterrent without a verifiable arms control agreement such as New START in place?

General HYTEN. I believe in any situation I can foresee in the next 10 years I can provide an effective defense as long as I have a capable triad with the weapons that we have defined. I get concerned 10 years and beyond that with torpedoes, with cruise missiles, with hypersonics that they could go a completely other direction that we would have difficulty. But I do not have any problem standing here and saying I can defend this nation today and I think the commander after me can, but I worry about the commander after the commander after the next.

Senator WARREN. The question I am trying to ask, though, is it easier or harder when you have got the tools available to you in New START.

General HYTEN. Today it is absolutely easier.

Senator WARREN. That is the part I am going for. This is a part of what you are able to accomplish.

Do you support the extension of New START?

General HYTEN. I have stated for the record in the past—I have not changed my opinion—I support New START, but you have to have a partner that wants to participate in New START.

Senator WARREN. I know.

General HYTEN. It is going to be like INF. We have to have a partner that can participate. It is a two-party treaty. If the Russians continued to build the capabilities outside the New START treaty that are not accountable and will not come to the table under the treaty—there is an element of the treaty that says if there is a new strategic arm that appears, they should bring that to the table and discuss it. If they will not do that, then that causes me to have concerns.

Senator WARREN. I appreciate that. I think you are exactly right when you identify who is going to come to the table. As you know, New START expires in just 2 years. The administration has already ripped up another nuclear arms treaty with Russia, the INF Treaty, and it appears to be running out the clock on the New START without any plans for a follow-up agreement. If this happens, this is going to be the first time since 1972 that there are no arms control agreements between the United States and Russia.

My view is we have a moral and strategic responsibility to do everything in our power to prevent a new nuclear arms race, and at a minimum I think that means working with Russia to try to get back to the negotiating table, try to get them back into compliance with the INF Treaty and working on a New START treaty. This just seems to me to be common sense arms control and to make America safe.

General HYTEN. I pay close attention to what the State Department is doing, and they are reaching out to the Russians and the Russians are not answering favorably.

Senator WARREN. Well, I hope we can get them to the table, and I am glad to hear that you are in favor of that. Thank you.

Chairman INHOFE. Thank you, Senator Warren.

Senator Cramer?

Senator CRAMER. Thank you, Mr. Chairman.

Thank you, Generals, both of you, for your service and for your testimony today.

Since we talked a couple of weeks ago, General Hyten, I have completed my tour of bases in North Dakota. I went to all of them. I want you to know that while Minot and Grand Forks were grateful, the Cavalier was especially grateful that you asked specifically about them, and it was very encouraging I will tell you. I am new to this Committee, as you know, and I have sat through enough briefings that have made me adequately frightened, but I feel much better having gone to the bases, including our National Guard ISR [Intelligence, Surveillance, and Reconnaissance] and Global Hawk bases. It is fantastic.

With regard to modernization, General Hyten, I agree with you, that one of the things that concerns me is not so much a capability of modernizing, but the speed with which we are able to do it. When we think about the history of 60 years ago being able to

build in 5 years, not just develop but create, produce hundreds of ICBMs, I do not even know if we could do that today. The timeline scares me.

Do you have any specific thoughts on the bureaucracy itself and how we can improve the bureaucracy and then, as I always like to say, what we as policymakers can do to help either knock down the hurdles or send the right signals so that we can meet the timeline that is facing us?

General HYTEN. Senator, thanks for going to Minot, Cav, and Grand Forks. They are pretty special places. When you see the people, you should feel very, very good about this country. They are amazing people.

But when you look at the challenges that we face in the future, I think Senator Peters asked General O'Shaughnessy what kept him awake at night, and General O'Shaughnessy answered Russia. What keeps me awake at night mostly is actually ourselves because somehow we have lost the ability to go fast. I do not know where we lost that, but somewhere we lost the ability to go fast, and we better regain that because right now we are dominant. I can guarantee you today that STRATCOM can keep this nation secure, but we have to make sure that is the case. We have to figure out how to go fast again. I can give you a lot of recommendations. I will be glad to do it offline, but I will give you one here.

The one recommendation I have is that we have to, once again, empower the people that actually build stuff. We have to empower in the military the O6 program directors. That is colonels and Navy captains that actually build things. Over the last 25 years, we have taken all the authorities away from them, and in many cases, they are not even staying in the military anymore. They go out to do other things in industry. But those engineers that want to go build things—that is what built this amazing force that I get to command today. We have to go back again and do everything we can to empower the people down at that level to make the decisions, how to spend the money, how to deliver the capability, how to test the capability, all those kind of issues because they will do it more efficiently than when they have to go through 18 layers of bureaucracy above them.

Oh, by the way, if they do fail, we will fire them and find somebody else. That is the other thing that is beneficial about having the authority in the right place. Now you know who is responsible. Right now, it is almost impossible to tell who is even responsible because there are so many layers of bureaucracy.

Senator CRAMER. Can Congress do something about that or is this—

General HYTEN. Congress has started down that path. Your Committee, as well as the House Armed Services Committee, in the last 2 years have made significant improvements in moving things from the Office of the Secretary of Defense back down to the services. I have now watched the services both on the Air Force and the Navy side, which are mostly in my command—I do not watch the Army as close—move things back out again to the 2006's. Continuing that process, continuing to look at that through this Committee and to push those authorities back down—I think that is the biggest thing that would help.

Senator CRAMER. General O'Shaughnessy, could you comment on, I guess, the same basic principles within the context of your command because, again, having been in Grand Forks and Cavalier and even Fargo, frankly, with the Happy Hooligans and their ISR work, I find some of the greatest innovators in the world, and I just want them to be empowered.

General O'SHAUGHNESSY. I absolutely agree with everything General Hyten said. As you alluded to, I think we have to change the way that we are thinking about advancing our capabilities, and we cannot go about it the way that we have in the past if we are going to keep pace with our adversaries.

Senator CRAMER. Maybe in the remaining seconds, General O'Shaughnessy, I would ask for one clarification with regard to the debate about the southern border and your role in advising or in providing consultation to the President. Do you feel like you and the others, but you specifically, have been adequately listened to and that the information and intelligence and insights that you provided to the President and the others around him have been appropriately taken in and considered before making this whole-of-government decision?

General O'SHAUGHNESSY. Thank you for asking that, Senator. Yes, I do I believe for a variety of forums, whether it be directly with the President or whether it be through the Secretary of Defense with the Chairman, whether it be actually going hands-on and actually seeing what is going on there. I feel very comfortable that the best military advice from USNORTHCOM has been put forward and has been in the proper forums.

Senator CRAMER. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Cramer.

Senator Duckworth?

Senator DUCKWORTH. Thank you, Mr. Chairman.

Gentlemen, thank you so much for your time today and your testimony and your willingness to answer extensive questions.

General Hyten, in your testimony, you discuss the effectiveness of our legacy nuclear command, control, and communication systems and the need to pursue updates to meet evolving needs.

Can you discuss the implications of building a new system in light of the rapidly changing technologies like AI, quantum computing, and machine learning? Could you elaborate, to the extent that you are able to in an open setting? Are we building an adaptable architecture with the workarounds necessary to adapt a future tech and modernization?

General HYTEN. Senator, over the last 6 months, I have dug into that very deeply, much deeper than I would ever expect a combatant commander to have to do that. That is because on the 3rd of October, the Secretary of Defense put me in charge of the nuclear command and control enterprise. I am responsible for operations requirements and system engineering of that enterprise now. I felt the need to go out and look at how we are doing today, and I understand that pretty well. But then I have to define now how we are going to do it in the future in this very challenging cyber threat environment that we are walking into.

I have some ideas. I have formed those ideas as I have gone through. Basically the broad-based structure of that idea is to develop a number of pathways for a message to get through that is nearly infinite that nobody can ever figure out exactly where it is or deny the ability for that message to get through. That is the way to do things in the future, and I think we will have the means to do that. We would have to talk about it on a much more classified level to get into the details.

I have gone out to industry. I have gone out to the federally funded research and development corporations, and I have asked them to come in with ideas. Just last week, they delivered those ideas to me. We are going to now evaluate those ideas and come up with a broad-based set of mission needs that we need to explore, and then I will work back with industry to figure out how to do that. Then the services, the Army and the Navy in this case, will actually build them.

Senator DUCKWORTH. Have you thought about also going out to some of our national laboratories? I know they fall under the DOE, but in Illinois, we have both Fermi Lab and Argonne with quantum computing capabilities, currently pretty high up on the spectrum of quantum computing capabilities. But without major investments, we are going to fall behind in that.

General HYTEN. You bet, and I have gone to the national labs. I went to the national labs, the federally funded research and development corporations, the university affiliated research corporations, all those elements looking for best ideas. I did that individually because I found when I brought everybody together in a room, the answer ended up looking like it used to, and when I kept everybody separately everybody had very, very innovative answers. So now we are going to have to figure out how to capture this innovation and move forward effectively. But I had reached out to the DOE labs, as well as the UARCs [University Affiliated Research Centers] and FFRDCs [Federally Funded Research and Development Centers].

Senator DUCKWORTH. Thank you.

I also want to delve a little deeper with both of you into something General O'Shaughnessy mentioned in his written testimony. General, when discussing the potential cumulative effects of Chinese and Russian advanced technologies such as hypersonics and cyber efforts—and you have mentioned them here—you said “collectively these advanced technologies could be capable of creating strategic effects with non-nuclear weapons potentially affecting national decision-making and limiting response options in both peacetime and crisis.”

Now, we are very focused and we have had quite a discussion today on nuclear strategic deterrence at the moment which, to be clear, I do not have a problem with that. I, in fact, do think we need to modernize our nuclear arsenal. But my concern and question for you both is around our own non-nuclear strategic deterrence.

Would you increase investments on our end whether in hypersonics, cyber, conventional prop, global strike weapons, other new technologies in an effort to reach a level providing a credible deterrent against Chinese and Russian nuclear activities as we



suggest they may be attempting with us? How do we balance that with the real need to continue our investments in the nuclear realm?

General O'SHAUGHNESSY. One, thanks for the opportunity to respond to that question because I think it is right in line with the NDS, and as the NDS has articulated, the changing security environment—one of the things that has really fundamentally changed is the strategic deterrence as it applies to the conventional aspect. As we look at that, as General Hyten mentioned, the cost imposition—in other words, we have to be able to impose a cost if we are going to be able to deter. But also especially on the conventional side, you have to be able to actually deny them their objectives. It is a combination of both of those together, imposing costs, denying their objectives, and then be able to credibly communicate that to them so they understand from a deterrence standpoint that it absolutely is not even worth going down that path.

In order to do that, though, it is going to take an investment in just the areas that you mentioned. We have to have our own hypersonic capability and we also have to have the ability to defend against those advanced threats.

Senator DUCKWORTH. We are able to reach those capabilities if we make these investments?

General O'SHAUGHNESSY. If we make those investments is the key part of your statement. Yes, ma'am.

Senator DUCKWORTH. General Hyten?

General HYTEN. I agree with General O'Shaughnessy.

I think one of the most important things you said, though, is that you recognize that strategic deterrence in the 21st century is wholly different than it was in the 20th Century. It is not just about nuclear weapons. It is multi-polar now. It is not just the Soviet Union. It is Russia, China, North Korea. You have to worry about all the domains. You have to worry about nuclear, space, cyber, and conventional. You have to figure out how to integrate all those together.

At STRATCOM, we formed an academic alliance with 35 different universities to try to get them to start thinking about what is really needed in order to do this, not just on the technology side, but a policy and a strategy side as well.

Senator DUCKWORTH. Thank you, General.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Duckworth.

Senator Perdue?

Senator PERDUE. Thank you, Mr. Chair.

Thank you, gentlemen, for being with us today.

General Hyten, I love the way you summarize this. Every time you come before us, you just get right down—you do what my wife asked us to do when we were raising kids: major on the majors. Thank you for that. But recap triad, command and control, Space Command are your top three priorities. I want to focus on the first one.

You are facing five threats across five domains. I could not agree more that it is an integrated effort now. It is not just about the nuclear capability. Given that, though, the most salient comment I have heard today is we have lost our ability to go fast. I lived in

Asia. I worked in China a good bit in my career. I can tell you they can beat us to the core on every single development with our technology, with their technology. It does not matter.

I want to focus on one part of our nuclear triad. I want to get to a second question very quickly. The *Ohio*-class has served us well for decades, 4 or 5 decades in many cases, but it is aging. I know we have got the *Columbia*-class coming. Secretary of Navy Spencer said recently the *Columbia*-class submarine is the most important acquisition program the Navy has today. Do you agree with that, sir?

General HYTEN. I do. I cannot tell you how thankful I am for Secretary Spencer and CNO [Chief Naval Officer] Richardson both making that statement and putting that as a priority.

Senator PERDUE. We are going to procure, as I understand the schedule, the first *Columbia*-class in fiscal year 2021, and it will take us to fiscal year 2031 before that first delivery will be taken in the first, I guess, trial will be done on that boat. Is that right?

General HYTEN. Operational capability by then.

Senator PERDUE. How long does it take China to do the same thing?

General HYTEN. Actually on the submarine side, it has been taking about just as long.

Senator PERDUE. But that is going to change between that and 2031.

General HYTEN. That will change because you understand that we are experienced in submarines and China is still fairly new in developing those capabilities.

Senator PERDUE. Can you give us an update on the development of that *Columbia*-class effort, and is 2031 still an appropriate date to expect on that?

General HYTEN. I have done a deep dive look into every element of the triad, again kind of an odd thing for a combatant commander to do, but it is because I am so concerned about it I wanted to look in depth into that issue. I have gone with Admiral Caldwell, the head of Navy nuclear reactors, up to the shipyard at Electric Boat and done a deep dive.

When I went through that—I have to be honest, Senator—I was very concerned because there was so little margin in the overall schedule. Then over the last year, as the Navy has informed you guys, we have had some issues with welding—

Senator PERDUE. The missile silo in particular.

General HYTEN. It is the missile tubes, absolutely. Because of that, a lot of that margin that was not too much before is even less now. It is still on the positive side, but if you are 10 years away and you are eating margin and not putting margin in, that causes me concern.

Senator PERDUE. Can you take a question away for the record to help us understand what we could do to shorten that gestation period?

General HYTEN. You bet. I would be glad to come and talk to you or take it for the record, either one.

Senator PERDUE. I would like an update on the Hong 20. This is the new long-range nuclear bomber which is effectively—we will

go to China now—their first true triad capability, if I understand that correct.

General HYTEN. Absolutely. That discussion is better to have in a classified setting.

Senator PERDUE. I appreciate that and I look forward to that.

General O'Shaughnessy, I was just at the southern border. I agree with everything you just said. I know you were just there. I personally believe that we have got a human tragedy going on on the border with people coming from all parts of the world, not just Central America. But the bigger crisis is the drug traffic that is coming through there.

The first thing I want to get on the record, though, there have been three places where a wall has been built: California, Arizona, and Texas. In those areas, the numbers I see is that human traffic across those borders where that barrier is in place dropped 95 percent. Do you agree with that?

General O'SHAUGHNESSY. Senator, I do. I will just add again within the last week, I have been twice to El Paso meeting with the Secretary Chief, meeting with the individual Border Patrol agents, and they confirm exactly that. When a barrier is in place, as long as it has cover—in other words, you are actually having some sensing of it—and you have the ability to respond to it, it totally changes the flow and they can funnel it into the areas that they want to. CBP personnel to a person talked about the effectiveness that is part of their family of systems.

Senator PERDUE. Sir, thank you for your troops' help down there. I saw some of those troops and the support that they are giving CBP is really remarkable.

I was in the McAllen sector in Texas. It is the most active sector we have now. What we are doing is put barriers up. We pushed the activity to other sectors. I went to what I think is the most active sector. They were telling me that an individual coming across—the two cartels in Mexico that are at war controlling that particular sector are very powerful. They pay \$8,000 per person to the cartel to come through. The people that were arrested the night I was there—on patrol were the CBP—had no money in their pocket, not a dime. They each had a burner phone with one number in it, and it was for a support person in the United States that was part of the infrastructure here.

My question for you is, can the U.S. military on the drug side of this—if it is a \$2 billion business with regard to human traffic, it is more than \$30 billion just in that sector for drugs coming through. There was more fentanyl coming through that sector last year, enough to kill every man, woman, and child in America.

My question, sir, is what can the U.S. military do there that is within the realm of your responsibility as protectors of our country?

General O'SHAUGHNESSY. Sir, thank you for the question and to allow us to highlight some of the efforts that are ongoing and will continue.

Our JTF-North is actually about 190 individuals that are focused just exactly 100 percent on this. Some of the things we are able to provide are—especially important is the intel aspect, understanding the networks. We understand networks. We have been doing this for decades overseas. We understand how to get to the

networks and then partner with our law enforcement agency partners to be able to actually get after those networks in ways that they may not have worked their way through. It has been very powerful having our intel folks as part of this.

We also bring unique military capability that we are applying, whether it is the use of our Fort Huachuca unmanned aerial systems or whether it is our ground sensor platoons that deploy in there for training. Those are all additive to the capability to partner with our law enforcement agencies that have proven to be quite effective and really from the dollar perspective of what we spend and what we get out of them, a very effective use while getting training. Our ground sensor platoon that deploy there—they are doing exactly what they are going to be asked to do if they deploy over to the Middle East, et cetera, and they are doing it in an environment with a thinking adversary that really allows them to get ready and increase their readiness in the way that we are currently applying them.

Senator PERDUE. But with all of that activity, CBP and the military, all of our U.S. activity, with all our technology and everything else, we are only interdicting about 10 percent of the drugs coming in. Is that correct, sir?

General O'SHAUGHNESSY. That is roughly correct, and it obviously depends exactly what you are talking about. Broadly that is a correct number, sir.

Senator PERDUE. Thank you, sir.

Thanks, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Perdue.

Senator Jones?

Senator JONES. Thank you, Mr. Chairman.

Thank you for being here today and for your service and for all of those behind you for their service.

I apologize for not being here as much, but we have several hearings going on today.

General Hyten, I know there has been a lot of questions and answers about the INF Treaty and the pullout of the INF Treaty. I will not kind of rehash all of that.

What I would ask, though, have we done everything that you would advise in order to bring Russia to the table on the INF Treaty?

General HYTEN. I think that is a very difficult question for me to ask because I do not have the whole picture. I do not know everything the State Department has done. I understand my discussions with the President. I understand that the State Department has worked that issue. As far as I know, we have done everything humanly possible to try to bring Russia back into that. Every time I talk to the President about it, I want Russia in that treaty, but if they will not comply, then you do not really have a treaty.

From my perspective, I think we have done everything humanly possible, but I would say that there is still time that Russia could come to the table and still participate in that treaty. I would hope that that would happen, but I do not think that is very likely right now.

Senator JONES. Do you have any specifics that you would recommend that have not been tried already?

General HYTEN. I was thinking about that as you went through the question, Senator, and I think you just have to ask again and again. I think we have shown the intelligence to our NATO [North Atlantic Treaty Organization] allies. You have seen the NATO allies come out and understand that that system is in violation of the treaty. I think all our NATO allies agree with that. For whatever reason, Russia does not want to play in that situation, and if they do not want to come to the table, they are not going to come to the table.

Senator JONES. Thank you for that.

General O'Shaughnessy, obviously there has also been a lot of questions and answers about the border and the national emergency. I think you testified earlier that whenever there is something coming from the President—I think your testimony was when you get a legal order from the President, you act. My question is, with regard to the national emergency declaration, did you or anyone on the staff that you know of evaluate the legality of the order regarding the national emergency on the southern border?

General O'SHAUGHNESSY. Sir, that is beyond the purview of NORTHCOM I would say.

Just for clarity, though, since the actual declaration of a national emergency, there has been no specific tasking that has come down to NORTHCOM post that declaration. What we have is we are actually executing those orders and direction that we were given prior to that declaration that those troops are now showing up on the border, but that order was given and the request for assistance was given from the Department of Homeland Security to the Department of Defense prior to that declaration.

Senator JONES. All right. Thank you.

Mr. Chairman, I think that is all I have. Thank you very much. Thank you, gentlemen.

Chairman INHOFE. Thank you, Senator Jones.

Well, first of all, thank you very much, both of you, for the very concise way in which you answered some pretty difficult questions, and I appreciate that very much.

Was there anything else that you would like to bring up that you did not have the opportunity to do for clarification? Either one of you.

General HYTEN. Senator, you mentioned a few things at the beginning that you wanted to make sure we address today. I went down the list just a minute ago. We have talked about everything on your list except the space force, and I would just like to make a few comments on that.

Chairman INHOFE. Okay. I do appreciate that. In fact, both of you may want to do that because my question was there is confusion out there when we are talking the space force, where that fits in all of this. The two of you would be the logical ones to ask. Thank you very much.

General HYTEN. Senator, the space force is structured to be the organize, train, and equip element for our space capabilities. Right now, the space capabilities are broadly in the Air Force, but they are also across the Army, the Navy, and other defense agencies as well. When we look at the problem, there are really two issues.

After Goldwater-Nichols, the military services are now responsible for organizing, training, equipping forces but not fighting. The fighting is done in the combatant commands. General O'Shaughnessy and I represent the combatant commands. We are responsible for fighting. That is why, in response to the questions earlier, the need to stand up a U.S. Space Command focused on the warfighting problem in space is what that command is doing, which leads to the question, are we properly organized to do the organize, train, and equip mission for the space mission? The President has said because of the importance of that warfighting domain, we are not. We should consolidate all of those capabilities from across the Department into a single space force.

I give the President and the Vice President big credit for not creating a department of the space force at this time, but putting that capability in the Air Force because I was very concerned about creating excess bureaucracy. So was the President. So was the Vice President. By creating a department of the space force, it is just not sized right now in order to do that. It will be some day, but it has just not reached that point right now.

But the legislative proposal should come to you shortly. There will be some issues we will have to work out with you, and we will work those together. But I just want you to know that I support the concept of the space force inside the Air Force that the President is now pushing.

Chairman INHOFE. Yes, you are right. I had brought that up both in my opening statement, as well as initial questions. My concern was that we wanted two things answered before you actually get into a new bureaucracy. One is what the costs are going to be. One would it be more efficient. I think you have answered both of those. I appreciate that very much.

Senator Cotton?

Senator COTTON. Thank you, Mr. Chairman.

Thank you, gentlemen.

I apologize for my tardiness. It has been a fun-filled morning of committee hearings all across the Senate.

General Hyten, each leg of our nuclear triad has its own value. Is it fair to say that our ballistic missiles have strength in numbers?

General HYTEN. That is one of the big values of our ballistic missiles. Four hundred ballistic missiles create a huge targeting problem for the adversary. The only way to get after 400 hardened nuclear missiles is with a whole bunch of incoming weapons, and if you decide to attack those, then you pretty much are guaranteeing that we will attack back. That is deterrent in a nutshell, and that creates a huge element of our deterrent process.

Senator COTTON. Sometimes referred to as a missile sink for the enemy?

General HYTEN. It would be a missile sink. It would be a weapons sink. It would be a very, very difficult target to impact.

Senator COTTON. I have heard proposals from some in Congress and Washington suggesting that we ought to eliminate our Minuteman 3 fleet and cancel the replacement for that fleet. If we were to take that step to unilaterally cut over 400 ballistic missiles and command centers, would it not be like giving the Russians and the

Chinese 400 free warheads to target something else in the United States or around the world?

General HYTEN. I do not understand how, with the threats that we face today, which are growing, not shrinking, we would make a decision today as a nation to lessen our overall strategic deterrent. That makes no sense to me, and my best military advice is that we do not do that.

Senator COTTON. One common argument I hear in defense of that position is why do we spend so much money on weapons we never use. It is not that much money. It is only 3 to 6 percent of the defense budget, depending on where we are in the cycle. Would you not say, though, that we have been using our nuclear weapons every single day for 74 years?

General HYTEN. We use them every day. Senator, the people that say that—I actually find that a little bit insulting because the men and women who go to work every day underneath the water, underneath the ground, in the air that provide that strategic deterrent—they are doing the mission every day. It is the most active mission. Strategic deterrence is not a passive mission. Deterrence does not exist just because you have 1,550 deployable nuclear weapons under the New START treaty. You have to do that mission every day, and that is what the men and women of my command do. They are proud to do it. It is an active mission, one of the most active missions that we have. When you send a nuclear submarine out with 160 sailors on board, do you think they are thinking to themselves this is a passive functional mission? No. They are an active warfighting mission.

Senator COTTON. The whole point of our nuclear deterrence, of the way we use that force is not to launch and detonate those missiles, but to stop our adversaries from launching and detonating theirs to begin with.

General HYTEN. Secretary Mattis asked me what is the use of nuclear weapons. Why do we have nuclear weapons? The answer is to prevent others from using nuclear weapons on us. But in order to do that, you have to be ready. It is the Washington analogy. The best way to avoid war is to be prepared for war. If you are not prepared, you run the risk of an attack.

Senator COTTON. If Russia or China or perhaps Russia and China combined had clear, demonstrable nuclear overmatch against the United States, there is no doubt who would win if there were, in fact, a nuclear exchange. What impact would that have on the conventional forces and the strategic thinking of those nations as against the United States and our allies?

General HYTEN. You know, in my opening statement for the record, I said that nuclear war cannot be won. Therefore, it must never be fought. Therefore, we must be ready to fight it every day. That is the way I look at it. That is a complicated thing for some people to understand, but if you are not ready, somebody could take a step over the line. If there is an overmatch, somebody could think they could get away with it, and that could create the worst day in the history of the world, the worst day in the history of our country. We never want that to happen. In order to do that, I believe in peace through strength, not peace through unilateral disarmament.

Senator COTTON. If you were sitting in your position or in the head of state position in a country like Japan or South Korea that depends on the extended deterrence of the United States and the United States weakened its nuclear triad or even eliminated one of their legs, what kind of influence would that have on your thinking?

General HYTEN. What I would be concerned about from a U.S. perspective is that would cause some of our allies to decide they need their own nuclear deterrent. One of the goals we have as a country is to eliminate the proliferation of nuclear weapons, not just in our adversaries, but around the world. A world with fewer nuclear weapons is a better world. But we have to be able to defend ourselves. We want our allies to understand that we can defend them too. That is what extended deterrence is all about, and that means you have to be ready to support their contingencies as well.

Senator COTTON. Thank you, General.

I understand that some opponents of our nuclear force or critics of it say that we should not start a new arms race or be engaged in an arms race. I will simply observe, based on what you have said here today, that it is much cheaper to win an arms race than it is to lose a war.

General HYTEN. Yes, sir.

Chairman INHOFE. Thank you, Senator Cotton.

I thank both of you. I will repeat what I said earlier. This has been a really enlightening session, and you have been the right ones to be here. Thank you very much.

We are adjourned.

[Whereupon, at 11:35 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR JAMES M. INHOFE

##### VALUE OF THAAD [TERMINAL HIGH ALTITUDE AREA DEFENSE] FOR ADDRESSING THREATS FROM CHINA AND RUSSIA

1. Senator INHOFE. General O'Shaughnessy, the National Defense Strategy [NDS] states, "the central challenge to United States prosperity and security is the reemergence of long-term strategic competition by ... revisionist powers," namely China and Russia. Can you please tell the Committee what you perceive as the most pressing threat and how NORAD [North American Aerospace Defense Command] and NORTHCOM [United States Northern Command] have adjusted their focus to counter China and Russia?

General O'SHAUGHNESSY. In the near term, Russia's development of a preemptive "active defense" strategy is the most pressing threat to the Homeland. This strategy relies on indirect action, cyber, and advanced, precision-guided conventional air- and sea-launched cruise missile strikes—each of which is currently capable of reaching targets in the United States and Canada. Russia's efforts pose significant detection, warning, intercept, and infrastructure defense challenges to North American Aerospace Defense Command (NORAD) and United States Northern Command (USNORTHCOM).

Both Russia and China are actively developing and testing intercontinental-range hypersonic glide vehicles. Russian statements indicate the country's new AVANGARD HGV could begin deployment as early as this year. If either country successfully fields an ICBM with an HGV payload, it will pose unique challenges both to NORAD's Integrated Tactical Warning and Attack Assessment (ITW/AA) mission as well as USNORTHCOM's ballistic missile defense mission.

While China does not yet have a conventional capability to strike Alaska or the continental United States comparable to Russia's, China's leaders are determined to demonstrate capabilities that could dissuade or prevent the United States from in-



tervening in any conflict along China's periphery. Currently, China could employ its world-class cyber forces to attack our critical infrastructure during a crisis. In the longer-term, China is likely to develop long-range conventional cruise missiles and associated platforms that will threaten the Homeland.

In response, NORAD and USNORTHCOM have honed the focus of both commands to ensure Homeland defense is our absolute priority. Our mission to deter our adversaries and defend the Homeland in the current strategic environment requires the commands to maintain a strong warfighter mindset. Specifically, we are taking active measures to improve our missile defenses, expand our ability to operate in the Arctic, improve domain awareness and communications in the far north, and build a more comprehensive and globally integrated defense architecture with fellow combatant commands, allies, and interagency partners.

To ensure our ability to defend the Homeland against threats in all domains, we continuously advocate for NORAD and USNORTHCOM requirements to the Services and Missile Defense Agency and push the Services, the Office of the Secretary of Defense, and the Joint Staff to reduce or eliminate capability gaps.

2. Senator INHOFE. General O'Shaughnessy, would an additional THAAD benefit the Homeland defense mission?

General O'SHAUGHNESSY. The Terminal High Altitude Area Defense (THAAD) program has not been tested against an intercontinental ballistic missile threat, but could potentially add to our capacity and capability to defend the Homeland in the future. THAAD provides a significant capability, and we are working with the Missile Defense Agency to explore THAAD's utility for our Homeland defense mission.

---

#### QUESTIONS SUBMITTED BY SENATOR DEB FISCHER

##### NO FIRST USE

3. Senator FISCHER. General Hyten, do you believe a "no first use" policy improves our ability to deter conflict and would it be your best military advice to adopt such a policy? If you believe it is important to maintain the current policy, please explain why.

General HYTEN. No, a no first use policy works against the basic tenets of deterrence, increases the risk of nuclear war by changing how adversaries and allies view the credibility of the U.S. nuclear deterrent and our resolve to use it when threatened.

Adopting a no first use policy could undermine the U.S. nuclear umbrella we extend to our allies and signals to potential adversaries the U.S. may not defend our allies and vital interests with every means at our disposal. The current policy provides great strategic value by retaining ambiguity regarding the precise circumstance that might lead to a U.S. nuclear response. The lack of precision on exactly where the nuclear threshold is gives adversaries pause and strengthens our overall deterrent.

##### LOW YIELD BALLISTIC MISSILE WARHEAD

4. Senator FISCHER. General Hyten, what is your assessment of the consequences if the Navy is unable to deploy the low-yield submarine-launched ballistic missile recommended by the NPR [Nuclear Posture Review]?

General HYTEN. There is no technical or operational barrier to deploying a low yield ballistic missile in our SSBN force. Therefore, any impediment imposed on the Navy to deploy a low yield warhead would lessen our ability to most effectively address the strategic threats identified in the NPR.

##### NUCLEAR MODERNIZATION

5. Senator FISCHER. General Hyten, what is your assessment of the consequences if the Air Force is denied full funding for the replacement of the Minuteman III?

General HYTEN. Any funding reductions to the GBSD program will result in a schedule slip. GBSD is a just-in-time replacement for the Minuteman III, and it must begin deploying in 2028 to avoid a nuclear deterrence operational capability gap.

6. Senator FISCHER. General Hyten, do you believe the air-leg of the triad would continue to be viable without an air-launched cruise missile capability?

General HYTEN. No. The continued viability of the air-leg is dependent upon both a long range air-launched cruise missile and a penetrating bomber capability to cover operational requirements.

## NC3

7. Senator FISCHER. General Hyten, what will your relationship be with the Under Secretary for Acquisition and Sustainment, as relates to NC3 [Nuclear Command, Control, and Communications] programs, under the new governance structure for NC3 approved in October, 2018?

General HYTEN. USD(A&S) serves as the NC3 Capability Portfolio Manager with increased responsibilities for resources and acquisition. In this capacity USD(A&S) functions in a supporting role to the NC3 Enterprise Lead (USSTRATCOM) by executing the day-to-day oversight of the NC3 Portfolio and advising on risk, mitigation options, and prioritization.

8. Senator FISCHER. General Hyten, do you currently have the funding and personnel necessary to effectively execute your responsibilities as the NC3 Enterprise Lead?

General HYTEN. The President's Budget request contains the resources necessary to carry out my responsibilities.

## DEFENSE OF THE HOMELAND

9. Senator FISCHER. General O'Shaughnessy, the Missile Defense Review [MDR] states that the United States will continue to rely on nuclear deterrence to protect the Homeland from large-scale or sophisticated ballistic missile attack. If the United States did not replace the aging Minuteman III force with a new ICBM [Intercontinental Ballistic Missile], do you believe the U.S. Homeland would be as safe as it is today?

General O'SHAUGHNESSY. No, it would not be as safe as it is today. I absolutely support the nuclear triad as critical to Homeland defense and I support the findings in the 2018 Nuclear Posture Review. I defer to United States Strategic Command Commander, General Hyten, for specifics on nuclear deterrence capabilities.

## SUBSTITUTION FOR NUCLEAR CAPABILITIES

10. Senator FISCHER. General Hyten, those who favor reducing the size of our nuclear forces often argue that non-nuclear capabilities can be substituted for nuclear weapons without diminishing our ability to credibly hold targets at risk, deter adversaries, and assure allies. A report released last September by the Global Zero group repeatedly argues that "cyberweapons"—in particular—can be substituted for nuclear weapons. Do you think cyber capabilities, their effects, and their ability to deter hostile activity is comparable to nuclear capabilities to a sufficient degree that one can be directly substituted for the other?

General HYTEN. No other weapon system contains the capabilities or deterrence effect of a nuclear weapon. Nuclear weapons are the foundation of strategic deterrence due to these unique characteristics. It is important to note that other countries are not only modernizing their existing stockpiles, but also increasing the numbers and diversity of nuclear weapons.

## QUESTIONS SUBMITTED BY SENATOR TOM COTTON

## THIRD GBI [GROUND-BASED INTERCEPTORS] SITE AND SHOOT-ASSESS-SHOOT CAPABILITY

11. Senator COTTON. General Hyten and General O'Shaughnessy, what specific additional capability would a third GBI site provide against a future ICBM threat?

General HYTEN. A new continental United States Ground-Based Interceptor (GBI) site provides an option for added Homeland defense against potential future Iranian ICBM capability. In addition, a third interceptor site would increase our capacity to negate larger raids, expand engagement windows, and improve survivability of Ballistic Missile Defense System (BMDS) assets through dispersal. However, to be clear, my first priority is to develop a space-based sensor architecture in order to detect, track and discriminate advanced missile threats.

General O'SHAUGHNESSY. A third ground-based interceptor site based in the continental United States, combined with future technologies, would increase available interceptor launch window "battlespace" for engagements. It could also provide the opportunity to utilize a shoot-assess-shoot strategy for future intercontinental ballistic missile threats from both North Korea and Iran, which could provide us time

to evaluate an engagement and reengage if a threat reentry vehicle survived our initial salvo.

12. Senator COTTON. General Hyten and General O'Shaughnessy, does the United States currently have a shoot-assess-shoot capability if an ICBM were to be launched from the Middle East toward our east coast?

General HYTEN. USSTRATCOM supports USNORTHCOM in the execution of the Homeland defense mission, but day-to-day operational decisions are within the purview of USNORTHCOM. As such I would defer to General O'Shaughnessy for operational details.

General O'SHAUGHNESSY. Currently we do not possess this capability.

13. Senator COTTON. General Hyten and General O'Shaughnessy, would a third GBI site in New York, Michigan, or Ohio provide that shoot-assess-shoot capability?

General HYTEN. I defer to General O'Shaughnessy for discussion of operational issues.

General O'SHAUGHNESSY. A third ground-based interceptor site in New York, Michigan, or Ohio, combined with future technologies, could provide a shoot-assess-shoot capability.

14. Senator COTTON. General O'Shaughnessy, how long would it take to stand-up a third GBI site?

General O'SHAUGHNESSY. I defer to the Missile Defense Agency for specifics on timeline estimates to stand up an additional ground-based interceptor site.

---

#### QUESTIONS SUBMITTED BY SENATOR DAN SULLIVAN

##### NORAD MISSIONS LIMFACS [LIMITING FACTORS]

15. Senator SULLIVAN. General O'Shaughnessy, are our aerospace warning and missile defense radars along the Alaskan and Canadian coastlines sufficient for the current threats associated with great power competition against Russia and if so, in your personal opinion, if not already, when will these radars become severely limited and what are their primary limiting factors?

General O'SHAUGHNESSY. These radars represent 1985 technology and are no longer sufficient due to capability limitations. We need to modernize the systems that provide surveillance of our northern approaches in order to defend North America against Russian long-range bombers, advanced cruise missiles, and hypersonic glide vehicle threats. In August 2018, NORAD conducted an operational assessment of the North Warning System, and the data collected in that test will inform the design for the air domain defense of the United States and Canada. In addition, the United States and Canada are evaluating alternative options to replace the North Warning System. This new system will be designed to enhance the capability to maintain effective air surveillance of threats approaching North America.

16. Senator SULLIVAN. General O'Shaughnessy, given the rapidly evolved Russian threat, how critical is it that we upgrade NORAD terrestrial radars to address long-range missile threats and hypersonic threats?

General O'SHAUGHNESSY. One of our most urgent requirements is to upgrade these radars against advanced cruise missile and hypersonic threats. Simply put, we cannot deter what we cannot defeat, and we cannot defeat what we cannot detect. Our ability to detect threats and defend North America is challenged by rapidly advancing adversary capabilities that present significant challenges to our current sensor architecture. To expand our early detection and identification capabilities against these threats, the best solution should include a combination of multi-domain sensors, including terrestrial radars and space-based assets. We also continue to support ongoing efforts within the Department of Defense, such as the bi-national Northern Approaches Surveillance Analysis of Alternatives, to evaluate potential solutions for modernizing sensor coverage in the northernmost regions of North America.

17. Senator SULLIVAN. General O'Shaughnessy, given the increased capability of Russian long-range cruise and hypersonic missiles—both nuclear and conventional—how have Russian Tactics Techniques and Procedures (TTPs) evolved along with their technology? What risks does this pose for our forces in Alaska and in CONUS [Continental United States]?

General O'SHAUGHNESSY. The Arctic provides the shortest path between Russia and the United States. Russia is developing and practicing the tactics needed to employ the variety of conventionally armed precision strike weapons they are currently deploying. These include a long-range ground-launched cruise missile and a very long-range, stand-off air-launched cruise missile.

Russian heavy bombers frequently conduct air patrols along the coastlines the United States and Canada, particularly in the Arctic, to underscore Russia's capabilities. According to their own words, these patrols are to demonstrate to the United States the continued viability of Russia's nuclear and more recently, their non-nuclear deterrent.

Since 2015, Russia has employed its new generation of very long-range, stand-off air-launched cruise missiles against anti-regime targets in Syria, providing real-world training for Russian crews and demonstrating its growing precision-strike capabilities to the West.

Moscow continues to bolster its military defenses in the Arctic with the delivery of coastal defense cruise missiles, modern air defense sensors and weapons and by constructing airfields on Russian Islands deep in the Arctic. These weapons are intended to ensure Russian control of Arctic waters and air space from their northern coast to the Pole and thereby eliminate threats to egressing Russian bombers. Once safely away from Russian air space, these bombers are capable of launching their weapons and striking the Homeland well outside detection range of current NORAD sensors. We must advance our capability to detect these threats in order to defend the Homeland; if we do not, our forces in Alaska and the continental United States will be held at risk.

18. Senator SULLIVAN. General O'Shaughnessy, can you clarify what exactly you mean when you state in your testimony: "... air- and sea-launched cruise missiles feature significantly greater standoff ranges and accuracy than their predecessors, allowing them to strike North America from well outside NORAD radar coverage" and, specifically, how is this a risk to the U.S. Military in Alaska and in CONUS?

General O'SHAUGHNESSY. [Deleted.]

#### SPACE-BASED SENSORS

19. Senator COTTON. General Hyten and General O'Shaughnessy, how critical is the rapid deployment of space-based sensors to addressing the long-range cruise and hypersonic missile threats from Russia and China?

General HYTEN. It is essential. We need to move sensors to a space-based architecture in order to detect, track and discriminate advanced missile threats, to include hypersonic glide vehicles (HGVs) and cruise missiles.

In addition, space-based sensors enjoy a measure of flexibility of movement unimpeded by the constraints geographic limitations impose on terrestrial sensors and can provide birth-to-death tracking that is extremely advantageous. Space sensors are also more survivable than individual, fixed ground sites that can be targeted.

General O'SHAUGHNESSY. Advanced space-based sensors are a critical step toward providing a more comprehensive capability to detect and track evolving complex threats, such as long-range cruise and hypersonic missile threats. Improving our network of missile defense and early warning terrestrial sensors, coupled with a space-based sensor layer, would allow us to keep pace with these advancing threats.

20. Senator COTTON. General Hyten and General O'Shaughnessy, in the best case scenario, what is a realistic timeline for MDA [Missile Defense Agency] to begin deploying space-based sensors?

General HYTEN. My best understanding is we could have a capability by the mid-2020s, but funding is not yet defined or appropriated. However, the Space Development Agency (SDA) is charged with leading development of space-based sensors and I defer details on this question to them.

General O'SHAUGHNESSY. I defer to the Missile Defense Agency for specifics on timeline estimates for deploying space-based sensors; however, it is of the highest urgency to me that we gain space-based sensing capability as soon as possible to give us the ability to track advanced complex threats from 'birth to defeat.'

21. Senator COTTON. General Hyten and General O'Shaughnessy, what would be your preferred timeline and would this pose an acceptable level of risk given the threat?

General HYTEN. Deployment of a complete space-based sensor architecture is already late-to-need. We are increasingly disadvantaged to find, fix, and track missile

threats that risk outpacing our sensor capabilities, diminishing our missile warning and sub-optimizing the effectiveness of our missile defense assets.

General O'SHAUGHNESSY. We need space-based sensors to provide a more comprehensive capability as soon as possible. Until that happens, we must also balance the move to space with more technologically mature solutions, such as improving our terrestrial-based radars.

22. Senator COTTON. General Hyten and General O'Shaughnessy, in your personal opinion, what type of space-based sensor system would you prefer 1. A smaller number of more capable and more expensive set of satellites in GEO; 2. A larger number of slightly less capable but less expensive satellites in LEO and MEO; 3. A combination of the two?

General HYTEN. As a combatant commander, I am orbit agnostic, but I see potential advantages in a mixed constellation.

General O'SHAUGHNESSY. I place high priority on fielding space-based sensing capabilities. A combination of space-based platforms in multiple orbits would provide the most robust tracking capability.

23. Senator COTTON. General Hyten and General O'Shaughnessy, which of these space-based sensor solutions do you think we might be able to build and deploy sooner and how much of a priority factor should there be in acquiring them?

General HYTEN. I don't have enough information today to answer this question or related questions; which architecture meets my requirements, maximizes resiliency, does so at an affordable cost, and at the speed of relevance. Ongoing analysis is working towards answering these questions.

General O'SHAUGHNESSY. I defer to the Missile Defense Agency for specifics on timeline estimates. But to reinforce my thoughts on this issue, I support development of space-based sensors as soon as possible to provide a more comprehensive future capability. In the meantime, I prioritize addressing urgent operational risks with more mature technologies for ground-based capabilities that can be deployed in the near term.

#### MISSILE DEFENSE PRIORITIES AND THE MDR

24. Senator COTTON. General Hyten and General O'Shaughnessy, in your personal opinion, did the Missile Defense Review miss any key priorities and if so, what are they?

General HYTEN. No. USSTRATCOM fully participated in the Missile Defense Review, and I am pleased with the results.

General O'SHAUGHNESSY. The Missile Defense Review reflects my warfighter views and priorities across the spectrum of threats. I especially appreciate the much-needed addition of cruise missile defense (CMD) into the discussion, although I would have liked to see more emphasis on CMD due to significant advancements in cruise missile technology by Russia and China.

25. Senator COTTON. General Hyten and General O'Shaughnessy, can you discuss the importance of continuing to invest so that we field the Redesignated Kill Vehicle?

General HYTEN. I fully support MDA's efforts to develop the Redesignated Kill Vehicle (RKV). The RKV is a key component to improving the effectiveness of the Ground Based Interceptor.

General O'SHAUGHNESSY. The Redesignated Kill Vehicle (RKV) is our next-generation kill vehicle. It will increase capacity by adding to our overall interceptor count and also bring added capabilities that will significantly improve engagement performance and lethality. The RKV will eventually phase out the older, less capable, Exo-atmospheric Kill Vehicles, increasing overall reliability of the entire interceptor fleet. Fielding an additional 20 GBIs in Alaska with RKVs is critical to keeping pace with the threat.

26. Senator COTTON. General Hyten and General O'Shaughnessy, can you discuss the importance of new technologies like Multi-Object Kill Vehicle (MOKV), directed energy, new boosters, and space-based sensors?

General HYTEN. My first priority is to develop sensors in a space-based architecture in order to detect, track and discriminate advanced missile threats.

Providing a cost-effective missile defense with sufficient magazine depth also requires pursuit of next-generation capabilities such as directed energy, MOKV, boost phase intercept, and non-kinetic capabilities.

General O'SHAUGHNESSY. Future technologies are critical to outpacing the ever advancing threat. These technologies, while not yet mature, will potentially allow

for updated tactics, techniques, and procedures for how we employ interceptors, resulting in greater capacity to defend the Homeland against advanced threats.

27. Senator COTTON. General Hyten and General O'Shaughnessy, why are terrestrial radars like the Long-Range Discriminating Radar (LRDR), Homeland Defense Radar-Hawaii, and Pacific Radar, important as a compliment to future space-based sensors?

General HYTEN. Terrestrial sensors remain the best viable near-term solution. Terrestrial sensors have higher power levels and multiple sophisticated waveforms can exploit different phenomenology enabling persistent, long-range mid-course tracking, discrimination, and hit assessment capability against current threats. Terrestrial sensors will complement future space-based sensors designed to globally detect, track, and discriminate ballistic missile threats and HGVs.

General O'SHAUGHNESSY. These terrestrial radars are an important complement to a future space-based sensor layer because they will provide resiliency and redundancy for in-depth sensor coverage and persistent discrimination capability against evolving missile threats. Terrestrial radars, coupled with a space-based sensor layer, will provide track and discrimination data from multiple phenomenologies to the Ballistic Missile Defense System, enhancing our ability to defend the Homeland.

28. Senator COTTON. General Hyten and General O'Shaughnessy, are United States missile defense testing timelines progressing fast enough to stay ahead of the threats from Russia, China and rogue nations?

General HYTEN. As stated in the Missile Defense Review, the United States relies on strategic deterrence to protect against large and technically sophisticated Russian and Chinese intercontinental ballistic missile threats to the United States Homeland.

Although I would like to go faster for many reasons, I am satisfied the speed of testing is sufficient to pace the threat from rogue nations such as North Korea and Iran.

General O'SHAUGHNESSY. Our defensive Ground-based Midcourse Defense systems were designed and deployed against North Korea and potential Iranian ballistic missile threats, not Russian or Chinese ballistic missile threats. I support the Missile Defense Agency's efforts to maintain a regular ground-based interceptor flight test cadence. Flight testing that is conducted at a regular cadence and combined with ground testing gives me confidence in the system and how we employ it.

#### POLAR SILK ROAD

29. Senator COTTON. General O'Shaughnessy, in your personal opinion given what China has done in the South China Sea, their Belt and Road Initiative, and their pressing need for resources, how would you characterize China's interest in the Arctic region?

General O'SHAUGHNESSY. I would characterize China's interest in the Arctic region as focused and committed. Chinese leaders believe the Arctic has great reserves of oil, natural gas, and precious metals and has extended part of their One Belt One Road initiative to Murmansk in northwestern Russia. China recently declared itself a "near-Arctic nation" which, while having no legal status, clearly indicates its intent to have Chinese national interests considered in discussions concerning the future of the Arctic. Last summer, China's icebreaking research vessel, Xue Long ("Snow Dragon") completed its ninth expedition to the Arctic, operating in the Bering and Chukchi Seas and the Canada Basin. Xue Long's expeditions are indicative of China's increasing interest in the Arctic, and they have enabled China to gain familiarity and experience operating in the Arctic environment. China is also building its first open ocean-class icebreaker, which will enable it to operate surface ships in the Arctic.

30. Senator COTTON. General O'Shaughnessy, in your personal opinion, what is China's long-term strategic objective in the Arctic and does that objective line up with United States/Western objectives?

General O'SHAUGHNESSY. China understands the vast economic value of the Arctic due to the potential for exploitation of natural resources and the shorter shipping distances to world markets. China's activities and objectives in the Arctic conflict with many United States objectives. For example, China's hydrographic research vessel, Xue Long, has made nine research expeditions to the Arctic in recent years, and several of these expeditions have focused primarily on mapping the ocean's bottom in and around the Bering Sea. The hydrographic surveys performed by Xue Long are more consistent with preparation for submarine operations in the high

north than scientific monitoring and environmental research. To be clear, a Chinese military presence in the Bering Sea would be inconsistent with United States security needs.

On the economic front, China has also extended its One Belt and One Road initiative into the Arctic, including investments in the Russian city of Murmansk as part of an ongoing effort to claim that China is now an interested power in the Arctic. China has also sent merchant ships from the Pacific Ocean to the Atlantic Ocean through the Arctic during the summer melt. China has made significant investment in Greenland's mining industry, and in 2016, China attempted to purchase a defunct Danish Naval Base at on the southwest tip of Greenland. Although the government of Denmark blocked the acquisition, China maintains significant influence as one of the top investors in Greenland.

Based on recent Chinese behavior and coercive economic practices employed in other regions, I am concerned that China will continue to leverage influence and debt trap economic practices in an effort to gain a strategic presence in the Arctic as competition over resources increases in the coming years—an effort that risks destabilizing a region long known for cooperation and adherence to international agreements.

31. Senator COTTON. General O'Shaughnessy, what is China specifically doing—in terms of building capability and using monetary soft power—to assert itself in the Arctic and does this concern you?

General O'SHAUGHNESSY. China has already conducted nine Arctic expeditions with its research vessel Xue Long and is starting to build its first open ocean-capable ice breaker. The Chinese are gaining experience with operating in the Arctic environment, and the construction of their new ice breaker certainly suggests they intend to operate there. China is also investing in various projects in most of the Arctic Council nations in an attempt to build goodwill and thus influence countries with the most impact over the future of the Arctic.

While China is currently limiting its actions to peaceable economic competition, I am still concerned from a Homeland defense perspective. My job is to assume military intent, and therefore United States Northern Command and North American Aerospace Defense Command continue to remain extremely vigilant for any indications that China is engaging in military activities in the Arctic.

#### GREAT POWER RIVALRY WITH RUSSIA AND CHINA

32. Senator COTTON. General O'Shaughnessy, Russia poses a continually increasing threat to the United States from its operations in the Arctic, and China has expressed, in actions and writing, its interest in being a “near-Arctic” power. What specific capabilities are most critical for us to field in order to counter both of these threats from our near-peer competitors in terms of protecting the Homeland and are there any areas of overlap on which we should especially focus?

General O'SHAUGHNESSY. To outpace adversaries in the Arctic today and in the future, we need improved multi-spectrum sensor and domain awareness capabilities, the ability to effectively communicate in the northern latitudes, and a visible maritime presence capable of detecting and defeating multi-domain threats operating in and through the Arctic. Our ability to defend the Homeland against Russia or China will require our land, sea, and air components to operate routinely and effectively in the Arctic. It is essential that they are trained and equipped to do so.

#### U.S. ARCTIC NAVAL CAPABILITY

33. Senator COTTON. General O'Shaughnessy, do you agree with Secretary Spencer that we need to execute a Freedom of Navigation Operation in the Arctic, or at least have the ability to?

General O'SHAUGHNESSY. Yes. It is long-standing policy of the United States to challenge the excessive maritime claims of other nations.

#### ARCTIC SAR [SEARCH AND RESCUE]

34. Senator COTTON. General O'Shaughnessy, does 11th Air Force have the Search and Rescue forces it requires to meet all of its missions today, including its NORAD alert responsibilities, the daily F-22 training missions, and rescue triad's tactical training requirements?

General O'SHAUGHNESSY. No. As we expand our Arctic operations to meet our adversaries' increased Arctic capabilities and presence, the current search and rescue capabilities will no longer be able to match our enlarged Arctic footprint.

35. Senator COTTON. General O'Shaughnessy, what about once two combat-code squadrons of F-35s arrive beginning in 2020?

General O'SHAUGHNESSY. As the F-35 arrives in Alaska, the increased footprint will drive a requirement for additional search and rescue (SAR) capability to support both increased training and exercises. Additionally, as we start to push fighter aircraft further out in support of longer-range NORAD intercepts, we will require the ability to provide a rapid SAR response over a greater area than our current SAR forces can provide.

#### STRATEGIC ARCTIC PORT

36. Senator COTTON. General O'Shaughnessy, Secretary of the Navy Richard Spencer has talked about the importance of strategic ports. Right now, the closest strategic port to the Arctic is in Anchorage. That's the equivalent of the closest port to Maine being in Florida. In your personal opinion, is it in U.S. strategic interest for the Arctic's closest strategic port to be essentially the length of the Eastern seaboard away from the Arctic and what is USNORTHCOM doing to rectify this gap?

General O'SHAUGHNESSY. United States Northern Command (USNORTHCOM) has an articulated requirement for fuel north of Dutch Harbor, Alaska. A deep draft port in the Arctic would contribute to our maritime Homeland defense mission by providing all-weather, always-available fuel for naval vessels operating in the North American Arctic. I am aware that the U.S. Army Corps of Engineers (USACE) is currently studying the feasibility of improving the Port of Nome and will publish their draft report in May 2019.

As you know, the Water Resources Development Act of 2016 expanded the feasibility justification for a potential Arctic deep draft harbor to include benefits associated with national security and the protection of the Homeland. In April 2019, I wrote to the Assistant Secretary of the Army for Civil Works to outline USNORTHCOM's operational requirements in the Arctic and the benefits to our Homeland defense mission that would result from the development of a deep-draft port north of Dutch Harbor. In addition, USNORTHCOM staff has been working closely with USACE to provide detailed information regarding our mission requirements in the region.

#### F-35

37. Senator COTTON. General O'Shaughnessy, last May, Chairman of the Joint Chiefs of Staff, General Dunford, testified that "... the F-35 and the Guard will contribute to Homeland security by flying what we call combat air patrols over the United States to preclude a threat in any kind of circumstance. So it is very important." What do you believe to be the best fighter to protect and defend the Homeland and, specifically, what role do you believe the F-35 should have in the protection of the Homeland?

General O'SHAUGHNESSY. I consider the F-35 critical to defend the Homeland against the most-advanced and emerging threats to North America. The F-35 offers unmatched fifth-generation advantages against the latest weapons fielded by our adversaries and includes improved detection capabilities and increased levels of situation awareness enabled by advanced data fusion. The F-35 will provide us with our most crucial capabilities and form the cornerstone of our ability to defend the Homeland well into the 21st century.

#### QUESTIONS SUBMITTED BY SENATOR DAVID PERDUE

##### COLUMBIA-CLASS

38. Senator PERDUE. General Hyten, as presented in hearing testimony, issues with the welding of missile tubes during the development of the *Columbia*-class program have led to very little margin for error remaining for on-time delivery. It is concerning to have margin for error originally built into this critical program reduced to such a small level at the front-end of a 10 year project. What actions can be taken, including by Congress, to ensure the *Columbia*-class program remains on schedule for delivery in 2028, and is operational by 2031?

General HYTEN. The Navy is actively pursuing means, to include advanced procurement, to increase schedule margin and ensure *Columbia* is ready for its first strategic deterrent patrol in fiscal year 2031. I defer to the Navy for any specifics on these measures.

Continued Congressional support of the *Columbia* program is also essential, to include full funding and on-time appropriations.



39. Senator PERDUE. General Hyten, as discussed in the February 26, 2019, Senate Armed Services Strategic Command hearing, the Chinese are speeding up their delivery time of submarine technology. Is there a way to speed up the delivery of the *Columbia*-class program and is it necessary?

General HYTEN. I defer to the Navy for specific *Columbia*-class program questions.

40. Senator PERDUE. General Hyten, developing and maintaining a skilled workforce is essential to submarine production. Would the potential addition of a new *Virginia*-class submarine in 2022 and/or 2023 help develop the workforce needed for *Columbia*-class production or in some other way affect production?

General HYTEN. The shipyards are critical national assets to America. The skilled workforce is essential to building and overhauling all ships, particularly nuclear-powered ones like SSBNs, SSNs, and CVNs. It is all of our responsibility to ensure the workforce, a strategic asset, is supported across the board.

Regarding the addition of the new *Virginia*-class submarine in 2022 or 2023 and any effects on the workforce for *Columbia*, I respectfully refer you to the Navy for any program acquisition questions.

41. Senator PERDUE. General Hyten, because of shared submarine construction infrastructure, do other acquisition programs (*Virginia*-class) affect the *Columbia*'s on time delivery and if so, how?

General HYTEN. The Navy has stated that the *Columbia*-class SSBN program is their number one shipbuilding priority. I respectfully refer you to the Navy for any program acquisition questions.

---

#### QUESTIONS SUBMITTED BY SENATOR MARSHA BLACKBURN

##### SPACE

42. Senator BLACKBURN. General Hyten, do you believe U.S. space assets are most vulnerable to adversary jamming, kinetic attacks, cyberattacks, or directed energy attacks?

General HYTEN. Focusing on one or two avenues of attack is not prudent. The effectiveness of any attack vector is situation dependent and it is likely that multiple attack vectors will be employed.

The Administration and DOD are moving rapidly to address the significant adversary counter-space threat to our critical space assets through institutional changes (i.e., the standup of USSPACECOM, USSF) and significant PB space investment.

43. Senator BLACKBURN. General Hyten, I have concerns regarding the supply chain integrity supporting space systems. Do you see a path to resolution among the space defense industry and industrial base?

General HYTEN. Yes, but resolution will require a diligent focus on security and risk-mitigation actions like those recommended in the EO 13806 Report, "Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States," and in other best-practices designed to guarantee supply chain integrity.

This integrity is vital to establishment and preservation of a resilient space enterprise industrial base and will enable the increased capability development/fielding timelines necessary to outpace our adversaries.

---

#### QUESTIONS SUBMITTED BY SENATOR KIRSTEN E. GILLIBRAND

##### INF [INTERMEDIATE-RANGE NUCLEAR FORCES] TREATY

44. Senator GILLIBRAND. General Hyten, as you know, President Trump recently withdrew from the INF Treaty that Russia has been violating. I worry that the Trump administration is leaving this treaty in a reckless manner, gleefully inviting a costly and dangerous arms race while giving Putin the legal right to deploy an unlimited number of their previously banned missiles. I led a letter signed by 26 Democratic Senators calling for the Trump administration to do the hard, if sometimes boring and monotonous work, of finding a diplomatic solution to this problem. I further co-led a bill that would require this administration to actually do its homework before proceeding with any withdrawal. To this end, can the United States counter Russian violations with INF-compliant missiles, allowing us to simultaneously counter Russia militarily and punish them diplomatically as violators of a treaty?

General HYTEN. The supplemental capabilities announced in the 2018 Nuclear Posture Review would allow us to effectively respond to Russian violations of the INF Treaty. The Department is developing a small number of low-yield nuclear weapons and re-introducing a nuclear sea-launched cruise missile capability, which are both INF Treaty compliant.

In addition, the Department is pursuing treaty compliant R&D on a limited conventional Ground Launch Cruise Missile capability.

The strategy is intended to incentivize Russia's return to INF Treaty objectives while simultaneously enhancing our deterrent posture.

45. Senator GILLIBRAND. General Hyten, the basing of INF-type missiles will require buy-in from allies. I am worried that even if one NATO [North Atlantic Treaty Organization] nation agrees to host these missiles, it will be over the objections of other allies. This could act as a wedge in the NATO alliance. Has NATO, as a whole, agreed to actually host INF-type missiles and has a Pacific ally?

General HYTEN. The United States has made no request to deploy intermediate range missiles on the territory of an ally or partner and no NATO nor Pacific ally has made this request.

It is important to note the low-yield options the Department is pursuing are sea-based and do not require host-nation basing. Likewise, the Administration has not made any determination to move beyond the treaty-compliant Ground Launch Cruise Missile R&D activities.

#### NEW START

46. Senator GILLIBRAND. General Hyten, now that the administration has announced its withdrawal from INF Treaty, the New START [Strategic Arms Reduction Treaty] Treaty will soon be the only thing standing in the way of a world without limits on the United States and Russian nuclear arsenals for the first time since 1972. New START is due to expire in 2021, but can be extended for five years. Russia has been in verified compliance with the treaty and is interested in beginning talks on an extension. Alarming, this administration has been unwilling to begin these talks to continue the decades-long bipartisan tradition of nuclear arms control. General Hyten, if we were to lose the New START Treaty and the ability to inspect Russia's nuclear arsenal, what would that mean for the long-term planning of our nuclear force structure and how would this affect our current nuclear weapons modernization program, which is already slated to cost a staggering \$1.7 trillion over the next 30 years?

General HYTEN. The impacts from the failure to extend New START are unlikely to drive significant changes in U.S. Force structure, but are more geopolitical in nature. My overarching concerns are with the myriad of nuclear weapons and capabilities that Russia is already producing and deploying that are not accountable under New START.

Hopefully, we can ultimately conclude an agreement with Russia that addresses all nuclear weapons. Those details are best addressed by the Department of State.

However, the comprehensive deterrence strategy as defined in the NPR includes the force structure and stockpile to hedge against prospective and unanticipated risks. A fully modernized nuclear Triad, including requisite NC3 capabilities and low-yield nuclear weapons, provides the diversity and flexibility to tailor U.S. strategies for effective deterrence as the geopolitical landscape evolves.

#### SAUDI ARABIA

47. Senator GILLIBRAND. General Hyten, it has been revealed recently that actors in the Trump administration had attempted to circumvent established protocols to provide Saudi Arabia with nuclear technology, usurping Congressional authority and possibly risking a nuclear arms race in the Middle East. If the sale of nuclear technology were to enable Saudi Arabia to develop nuclear weapons, how would that undermine international non-proliferation efforts?

General HYTEN. Saudi Arabia is a non-nuclear-weapon state-party to the 1968 Nuclear Nonproliferation Treaty (NPT). As such they are legally prohibited from pursuing nuclear weapons development. Similarly, the NPT also prohibits nuclear weapon states from transferring nuclear technology that would lead to the development of a nuclear weapon. It is important to continue to preserve the tenets of NPT.

#### HOMELAND SECURITY

48. Senator GILLIBRAND. General O'Shaughnessy, the Eastern Air Defense Sector, based out of New York, is responsible for detecting, characterizing, and directing the alert forces that will respond to the next air attack on America east of the Mis-

Mississippi. This includes critical sites like New York City and Washington D.C. However, higher Air National Guard priorities have prevented the resourcing of 41 full-time Operations positions necessary to support a 24/7 Homeland defense mission. Can you commit that you will prioritize the full funding of the Eastern Air Defense Sector in order to assure our national security?

General O'SHAUGHNESSY. We have formally advocated for these positions, and I am committed to working with National Guard Bureau, U.S. Air Force, and Eastern Air Defense Sector (EADS) leadership to ensure the National Guard provides EADS with the necessary resources and funding to perform their critical mission.

---

QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

TROOPS AT THE BORDER

49. Senator BLUMENTHAL. General O'Shaughnessy, do you believe that the deployment of troops to the southern border—both Active Duty and National Guard—laid the foundation for a national emergency declaration?

General O'SHAUGHNESSY. The Department of Defense has a long history of supporting the Department of Homeland Security and Customs and Border Protection (CBP) in their mission to secure the U.S. border, spanning multiple presidential administrations. I believe the recent deployment of troops to the southern border continues to enhance CBP's ability to execute its border security mission.

50. Senator BLUMENTHAL. General O'Shaughnessy, I understand that many servicemembers were in the middle of important readiness and training exercises when they were deployed to the border. What exercises—and how many exercises—were interrupted and will these interruptions compromise readiness?

General O'SHAUGHNESSY. U.S. military personnel are supporting the Department of Homeland Security with the following missions: conducting contingency planning, assisting with the hardening or reinforcing ports of entry (POEs), operating Customs and Border Protection (CBP) mobile surveillance cameras, and placing wire obstacles between POEs. Military personnel are also providing force protection coverage to U.S. military and CBP personnel, as well as providing aviation support and medical assistance efforts to U.S. forces and CBP personnel.

As the Service Chiefs have stated previously, the military units executing the DOD support to the southern border mission are conducting operations that enhance their overall military readiness when employed in line with their military skill sets. I defer to the Service Chiefs on specific training exercises that may have been impacted by units conducting operations along the southern border.

51. Senator BLUMENTHAL. General O'Shaughnessy, engineering units have installed concertina wire along the southern border. How long will this c-wire remain installed?

General O'SHAUGHNESSY. U.S. Customs and Border Protection (CBP) has taken custody of the wire. I defer to CBP regarding their plans for its disposal.

52. Senator BLUMENTHAL. General O'Shaughnessy, when Active Duty troops eventually—hopefully—leave the border, what will become of the c-wire?

General O'SHAUGHNESSY. U.S. Customs and Border Protection (CBP) has taken custody of the wire. I defer to CBP regarding their plans for its disposal.

53. Senator BLUMENTHAL. General O'Shaughnessy, what are the environmental impacts of the troop deployments and base camps established along the border and how does DOD plan to assess the inevitable environmental degradation?

General O'SHAUGHNESSY. Potential environmental impacts of military operations are the same as for any human activity on the environment, including: soil disturbance, fuel spills, solid waste generation, human waste generation, wastewater generation, vehicle and generator emissions, increased storm water runoff, and light and noise pollution. Where operations are planned, the Department of Defense (DOD) conducts a baseline environmental survey to catalog existing conditions. During the operation, local commanders implement controls to prevent and mitigate environmental impacts. Upon completion, the DOD conducts an environmental survey to identify, document, and remediate any residual problems.

54. Senator BLUMENTHAL. General O'Shaughnessy, are you concerned about a potentially indefinite, domestic deployment of troops within your command?

General O'SHAUGHNESSY. The Department of Defense and United States Northern Command work to provide capability requested by the Department of Homeland Security that is approved by the Secretary of Defense. We will continue to do so as requested and approved by the Acting Secretary of Defense. We are fully prepared to do what is ordered in defense of the Homeland.

55. Senator BLUMENTHAL. General O'Shaughnessy, what is the basis for the extension of Active Duty deployments through September 2019?

General O'SHAUGHNESSY. In the Department of Homeland Security (DHS) Requests for Assistance to the Department of Defense, DHS states their extension requests are based on the current and evolving border security environment and lack of available support by other federal, state, and local partners, thereby projecting that the risk to Customs and Border Protection's ability to carry out its federal functions will exist through September 2019. The Acting Secretary of Defense has subsequently approved all requested extensions.

56. Senator BLUMENTHAL. General O'Shaughnessy, given the evolving role of the Active Duty troops deployed at the southern border, what is your understanding of the limitations of their mission based on Posse Comitatus?

General O'SHAUGHNESSY. The Posse Comitatus Act prohibits title 10 Armed Forces from providing direct support to civilian law enforcement, except in cases and under circumstances expressly authorized by the U.S. Constitution or an Act of Congress.

57. Senator BLUMENTHAL. General O'Shaughnessy, what actions or law enforcement activities would constitute a violation of Posse Comitatus?

General O'SHAUGHNESSY. In accordance with Enclosure 3 of DOD Instruction 3025.21, the Posse Comitatus Act prohibits title 10 DOD personnel from providing forms of direct civilian law enforcement assistance such as interdiction of a vehicle, vessel, aircraft, or other similar activity; search or seizure; arrest; evidence collection; and forensic investigations or other testing of evidence obtained from a suspect for use in a civilian law enforcement investigation.

#### NUCLEAR DETERRENCE

58. Senator BLUMENTHAL. General Hyten, in your testimony on the Nuclear Triad, you stated the need to "support our industrial partners" and prioritize funding for these partners throughout the life of the *Columbia*-class programs. Do you agree that workforce development is a vital component of this support?

General HYTEN. I defer to the Navy regarding specifics, however the shipyards, as well as the rest of the industrial base, are strategic assets, critical to the defense of the Nation. They are one of our strengths.

It is clear continued and focused support is essential to build the workforce required to execute construction of the *Columbia* and *Virginia* programs.

59. Senator BLUMENTHAL. General Hyten, you state in your testimony that we must field the *Columbia*-class on time to avoid a deterrent capability gap in the nuclear triad. What are the strategic consequences to a gap in our nuclear triad capabilities—particularly given that nuclear powered submarines are the most survivable leg of the triad?

General HYTEN. Any gap in Triad capability reduces options to the President in time of need and weakens our overall deterrent posture.

In the event a legacy system's availability is challenged due to unexpected age-related technical issues or we experience delays in replacement systems, we can intentionally leverage operational flexibility inherent in the Triad to mitigate short-term shortfalls.

The best way to manage future risk is to ensure current systems are adequately sustained and replacements fielded on time.

60. Senator BLUMENTHAL. General Hyten, as you note in your testimony, we currently have no margin for error in our *Columbia* program timeline as the *Ohio*-class rapidly approach retirement. What funding streams for the industrial base should Congress prioritize in this funding cycle to ensure the timely production and delivery of the *Columbia*-class?

General HYTEN. I defer to the Navy with respect to specific funding streams. However, full funding and on-time appropriations are critical to delivering *Columbia* on schedule.

## INTERMEDIATE RANGE NUCLEAR FORCES TREATY

61. Senator BLUMENTHAL. General Hyten, if you believe that Russia's material breach of the INF Treaty is a significant concern, are you concerned that scrapping the INF entirely will lead to an escalation of Russian development of its intermediate-range nuclear stockpiles?

General HYTEN. Russia has been in material breach of the INF Treaty for many years and has already fielded multiple battalions of a system in direct violation of its obligations. The strategy in the NPR is intended to bring Russia back into the INF Treaty, but if that fails, make sure we are able to develop capabilities needed to deter and respond effectively.

62. Senator BLUMENTHAL. General Hyten, the United States can reach both Asia and Europe with sea-based and air-delivered missiles, neither of which violate the INF Treaty. Do you believe ground-based missile systems are necessary to deter Chinese aggression in the South China Sea when the United States is already investing in the construction of *Virginia* and *Columbia*-class submarines?

General HYTEN. Regarding specifics with respect to the South China Sea, I would defer to Commander, United States Indo-Pacific Command.

From a strategic perspective, the United States is prepared to respond decisively to Chinese non-nuclear or nuclear aggression. The United States conducts exercises in the Asia-Pacific region that, among other things, demonstrate our capabilities and resolve which contributes to assuring our allies.

Likewise, being forward-deployable, survivable, penetrating, and responsive, *Virginia* and *Columbia*-class submarines will strengthen our posture and preparedness, and therefore our deterrence vis-à-vis China.

Finally, I support the need for other basing options (including ground) that can increase our overall capabilities.

63. Senator BLUMENTHAL. General Hyten, why not continue this investment in order to maintain our asymmetric advantage in undersea warfare?

General HYTEN. I don't view this as an "either/or" proposition. Investment in the research and development of ground-based missiles does not detract from planned investments in undersea capabilities. Diversity in capability and basing is, in fact, key to our strategy.

64. Senator BLUMENTHAL. General Hyten, many of our allies—including Japan—oppose withdrawal from the INF. Others, such as South Korea and Australia, do not want to host United States offensive missiles. NATO allies also oppose the treaty withdrawal. As STRATCOM [United States Strategic Command] Commander, how will you manage this opposition?

General HYTEN. In a February 1, 2019 statement, NATO Allies fully supported the U.S. suspension of its obligations under the INF Treaty and declaring United States intent to withdraw from the Treaty if Russia did not return to full and verifiable compliance. In the statement, the Allies agreed that Russia would bear sole responsibility for the end of the INF Treaty if Russia did not honor its obligations.

The U.S. is in close dialogue with all our allies, but I defer to the State Department and the geographic combatant commanders in managing relations with specific allies and partners.

From a USSTRATCOM perspective, we will continue holding at risk, under all conditions, any nation that can hold us at risk. This is the foundation of deterrence. Our strategy and posture will pose insurmountable difficulties to any Russian strategy of aggression against the United States, its allies, or partners.

65. Senator BLUMENTHAL. General Hyten, if regional allies will not support the deployment of ground-based missiles, how will the INF withdrawal impact strategic deterrence?

General HYTEN. NATO is continuing to assess the consequences of Russia's violation of the INF Treaty and fielding of multiple battalions of the SSC-8, and recognizes the need to provide a credible and effective deterrent.

Per the Nuclear Posture Review, the United States is modifying a small number of existing submarine-launched ballistic missile (SLBM) warheads to provide a low-yield option. Likewise, in the longer term, the U.S. will pursue a modern nuclear-armed sea-launched cruise missile.

These supplements will enhance our ability to tailor deterrence and assurance as well as expand the range of flexible and credible U.S. options for responding to nuclear or non-nuclear strategic attack.

---

QUESTIONS SUBMITTED BY SENATOR MAZIE HIRONO

MISSILE DEFENSE OF HAWAII

66. Senator HIRONO. General O'Shaughnessy, in your written statement you said that you are confident in the ability of the Ground-Based Midcourse Intercept (GBI) defense system to defend the United States against ICBMs from North Korea. Does that assessment include ICBMs targeted at Hawaii?

General O'SHAUGHNESSY. Yes, I am confident we can defend Hawaii with our ground-based interceptors.

HOMELAND DEFENSE RADAR-HAWAII

67. Senator HIRONO. General Hyten and General O'Shaughnessy, you both mentioned your support for the Homeland Defense Radar-Hawaii and the Pacific Radar in your written statements. What capability do these radars add to our current missile defense system?

General HYTEN. These sensors represent the near-term solution. These sensors have higher power levels and multiple sophisticated waveforms to exploit different phenomenology enabling persistent, long-range mid-course tracking, discrimination, and hit assessment capability against current threats. Terrestrial sensors will complement future space-based sensors designed to globally detect, track, and discriminate critical missile threats.

General O'SHAUGHNESSY. These two radars, along with the Long Range Discrimination Radar, will provide much desired 'birth-to-death' discrimination across the entire flight profile of threat missiles. The capabilities these radars will deliver when fully operational could potentially allow us to change our shot doctrine, which could increase capacity to engage threat missiles.

68. Senator HIRONO. General Hyten and General O'Shaughnessy, do these two new radars increase our ability to defend against missile threats from China and Russia, in addition to North Korea?

General HYTEN. These radars support the characterization of all threats detected in their field of view, but are specifically designed to counter ballistic missile threats emanating from North Korea. We have other radars designed to meet the requirements of high-end competition.

General O'SHAUGHNESSY. Our defensive Ground-based Midcourse Defense system was designed and deployed against North Korea and potential Iranian ballistic missile threats, not Russian or Chinese ballistic missile threats.

69. Senator HIRONO. General O'Shaughnessy, once operational, will the Homeland Defense Radar-Hawaii improve the likelihood of successfully intercepting an ICBM targeting Hawaii?

General O'SHAUGHNESSY. Yes. The Homeland Defense Radar-Hawaii will provide mid-to-late flight discrimination against intercontinental ballistic missile threats targeting Hawaii, allowing for more refined targeting of threat reentry vehicles and effective engagements.

FUTURE OF DETERRENCE

70. Senator HIRONO. General Hyten, you have repeatedly stated that strategic deterrence is your number one priority. In an era of cyber threats, misinformation campaigns, hypersonic weapons and space as a warfighting domain, how has the concept of deterrence evolved in the first part of the 21st century?

General HYTEN. The basic tenets of deterrence have not changed but the application is much more challenging today. What has changed is the threat. We face a more diverse threat and the challenge of a more uncertain, multipolar geopolitical environment. We must enhance our agility across the spectrum from strategy development to capability acquisition in order to address this ever more complex environment.

USSTRATCOM, in partnership with the combatant commands, is working to utilize current capabilities to meet the evolving threat while shaping strategies and fielding new capabilities for the future. Our nuclear forces remain the backbone of our deterrence strategy. However, deterrence must span the entire spectrum of conflict and be supported by credible U.S. capabilities in all domains.

71. Senator HIRONO. General Hyten, what additional tools does the United States need to develop further to meet an evolving concept of strategic deterrence?

General HYTEN. The U.S. must rediscover the ability to move with speed and agility across multiple domains in operationally-relevant timelines. This includes assessing the threat environment, developing strategy and policy, fielding capabilities and producing plans to ensure our strategic deterrent remains robust, credible, and relevant. Our nuclear forces are the backbone of our strategic deterrent, and we must complete the planned modernization of the force on time, to include fielding the low-yield capabilities discussed in the Nuclear Posture Review.

Additionally, we must continue the work of integrating our capabilities across the combatant commands, all domains, and every element of national power as well as with our allies and partners in order to deter potential adversaries.

#### NUCLEAR COMMAND, CONTROL AND COMMUNICATIONS (NC3) MODERNIZATION

72. Senator HIRONO. General Hyten, your written statement appropriately emphasizes the importance of modernizing our NC3 systems. It seems like there is some overlap between the mission requirements for nuclear operations and those for missile defense. Will a modernized NC3 system be equipped to support missile defense operations and decision making in addition to the nuclear mission?

General HYTEN. While both Nuclear and Missile Defense command and control systems leverage many of the same sensors, communication paths and data streams, the operational requirements and decision authority for each mission are different and distinct and drive mission-unique solutions.

#### QUESTIONS SUBMITTED BY SENATOR MARTIN HEINRICH

##### MISSILE DEFENSE REVIEW

73. Senator HEINRICH. General Hyten and General O'Shaughnessy, the 2019 Missile Defense Review acknowledged emerging threats like cruise missiles and hypersonic weapons, but the report did not propose any new creative solutions or investment efforts to address them. Do you believe we are acting with the right sense of urgency to counter these threats?

General HYTEN. The MDR recognizes we are on the wrong side of the cost curve and directs a comprehensive approach to prevent and defeat emerging threats, including better integration of offensive and defensive capabilities.

The President's Budget supports continued investment and development of game-changing technologies aimed at providing a more effective and affordable missile defense.

General O'SHAUGHNESSY. I view the cruise missile threat to the Homeland with an enormous sense of urgency. Simply put, we are behind and losing ground. Our ability to defend the Homeland against advanced cruise missiles is USNORTHCOM and NORAD's top capability gap, and I am equally concerned about the threat presented by our adversaries' emerging hypersonic capabilities. Our ability to track, defend, and defeat advanced missile threats is significantly challenged by these new weapons systems. We require significant, focused investment in cruise missile defense that incorporates existing and emergent technologies to counter both current and emerging threats, or we risk falling further behind.

74. Senator HEINRICH. General Hyten and General O'Shaughnessy, what technologies and systems should the Committee be investing in to address these threats?

General HYTEN. My first priority is to move missile warning/missile defense sensors to a space-based architecture in order to detect, track and discriminate advanced missile threats.

Providing a cost-effective missile defense with sufficient magazine depth also requires pursuit of next-generation capabilities such as directed energy, Multi-Object Kill Vehicle (MOKV), boost phase intercept, and non-kinetic capabilities.

General O'SHAUGHNESSY. I believe we need to take a holistic approach and fundamentally change our defense against cruise missiles and hypersonic threats by expanding capabilities and capacity across a layered defense architecture. This requires building upon our current capabilities as well as developing new capabilities to address these complex threats. The solution may include a layered architecture consisting of capabilities such as sensors, communications, command and control, airborne early warning, active electronically scanned array radars, munitions, ground-based air defenses, information operations, increased research, development,

test, and evaluation, Arctic operations, and logistical support. The bottom line is that our capability challenges cannot be solved by individual capabilities.

#### SPACE R&D [RESEARCH AND DEVELOPMENT]

75. Senator HEINRICH. General Hyten, the Space Rapid Capabilities Office is something I've focused on for a number of years. Today, it serves as the lynchpin of our responsive space strategy. I'm a firm believer that we have parts in place within the Space R&D enterprise that are working very well and they should be expanded upon. Moving pieces around is where we're going to run into trouble in terms of costs and inefficiencies. How important is it that we don't reinvent the wheel in areas like Space RCO [Rapid Capabilities Office] and other research and development entities during the current space reorganization?

General HYTEN. It is vitally important every effort be made to reduce costs and inefficiencies by linking Space RCO research and development activities with the Space Development Agency (SDA) and Space and Missile Systems Center (SMC) to eliminate duplication of effort, maximize outcomes, and enable a focus on experimentation, rapid prototyping and accelerated fielding of specific next-generation capabilities.

#### NUCLEAR COMMAND, CONTROL, AND COMMUNICATION

76. Senator HEINRICH. General Hyten, you've mentioned that "we're in good shape in the near term" when it comes to defending our space assets, but that we need to look to how we will defend those assets in the future. Can you describe the necessary upgrade to the nuclear command, control, and communication program and why it is so important to the STRATCOM mission?

General HYTEN. Sustaining a reliable, enduring, and survivable NC3 architecture is foundational to strategic deterrence.

To that end, the Department is moving towards fielding more resilient satellite architectures for protected communications, missile warning and responsive counter-space effects.

Understanding space is no longer a "sanctuary," the Department is also pursuing expanded capabilities in the aerial and terrestrial domains to provide NC3 resilience and reliability in the event of degraded or denied space capabilities.

77. Senator HEINRICH. General Hyten, are you still on track to produce a concept of operations for space by June?

General HYTEN. Yes. We produced a draft concept of operations and evaluated it during our Global Lightning 20 exercise. My space component is incorporating lessons learned and refining the document. We expect to finalize the document in June.

#### GROUND BASED STRATEGIC DETERRENT

78. Senator HEINRICH. General Hyten, our adversaries are modernizing and advancing their nuclear weapon systems. Understanding that stable requirements are essential to the success of nuclear modernization programs, are you providing input to the Air Force on how requirements need to be shaped for programs like Ground Based Strategic Deterrent to stay relevant to a constantly changing threat?

General HYTEN. USSTRATCOM has been an active partner with the Air Force to shape the requirements for the GBSD program from inception. Our requirements are being met, and I am confident the GBSD weapon system will be relevant in the face of future threats.

79. Senator HEINRICH. General Hyten, it is our understanding that the contract award for the Ground Based Strategic Deterrent program will occur in the fourth quarter of fiscal year 2020. Is it your understanding that is still the Air Force plan?

General HYTEN. I am confident the Air Force will complete Milestone B and contract award in the fourth quarter fiscal year 2020.

#### NEW START

80. Senator HEINRICH. General Hyten, to the best of your knowledge, including information you might have provided by the U.S. intelligence community, are the United States and Russia complying with the treaty?

General HYTEN. Yes, but it is important to note the New Start Treaty does not cover all Russian strategic and non-strategic nuclear weapons.



81. Senator HEINRICH. General Hyten, does New START provide for intrusive inspections by both parties, including United States boots on the ground in Russia inspecting specific Russian nuclear sites, so that the United States military has a good degree of confidence in Russian compliance with the treaty?

General HYTEN. Yes. The New START Treaty's verification regime (i.e., on-site inspections, database exchanges, notifications) provides transparency into Russian strategic offensive capabilities, contributing to our understanding of their nuclear force structure and pace of modernization.

The U.S. State Department is responsible for determining compliance with United States treaties, and I am confident in the State Department's and Intelligence Community's efforts to verify and monitor Russian compliance with the New START Treaty.

82. Senator HEINRICH. General Hyten, does New START include notifications about changes and movements in Russian strategic nuclear weapons systems, notifications that provide valuable information to the United States intelligence community and the military?

General HYTEN. Yes—this is done via Treaty-specific processes managed by the Department of State's Nuclear Reduction Center. Part Four of the New START Treaty Protocol stipulates each party shall notify the other about changes in data (status) pertaining to ICBMs, SLBMs, and heavy bombers. These notifications are required to be submitted within five days after the change in status. Again, many other types of nuclear weapons are not covered by these protocols.

83. Senator HEINRICH. General Hyten, are you aware of any estimate from the U.S. intelligence community or elsewhere that indicates what it would cost to attempt to replace the data provided under New START verification provisions, if the treaty did not provide them?

General HYTEN. I am not aware of any such estimate and would defer to the Director of National Intelligence for such information.

84. Senator HEINRICH. General Hyten, would it not be a very significant undertaking to try to replace that information?

General HYTEN. I would defer to the State Department and Director of National Intelligence for the scale and scope of replacing information provided through New START Treaty verification provisions through alternative means.

#### MICROSYSTEMS, ENGINEERING, SCIENCE, AND APPLICATIONS (MESA)

85. Senator HEINRICH. Gen. Hyten, your testimony notes the need to upgrade key nuclear facilities and infrastructure, including for production of non-nuclear components. Do you agree that strategic rad-hard microelectronics at the MESA [Microsystems Engineering, Science and Applications] Complex are among the key technologies needed to maintain the nuclear deterrent?

General HYTEN. Yes. The trustworthiness of the nuclear weapon supply chain providing specialized components must be sustained to protect against the potential for sabotage, malicious introduction of an unwanted function, or subversion of a function without detection.

NNSA's MESA facility at Sandia National Laboratories is currently 5 years beyond the intended 25-year design life and relies on tools and capabilities that are no longer supported by manufacturers. Ongoing investments in infrastructure and tools to support the MESA complex are required to provide key technologies to meet planned LEPs and evolving national security needs for strategic radiation-hardened microsystems beyond 2025. Without sustained investment and eventual large-scale recapitalization, the MESA complex will experience failures due to aging and will become obsolete.

#### INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE

86. Senator HEINRICH. General Hyten, this Committee, and our companion committee in the House, heard testimony from many of your colleagues about the gap between your needs for Intelligence, Surveillance, and Reconnaissance (ISR), and what you receive from various sources of ISR. Are your needs being met; and if not, are there alternative sources that you can turn to, such as U.S. commercial sources or allied partners for the collection of ISR data?

General HYTEN. No operational Commander is fully satisfied with the level of ISR support available to them given the overwhelming requirements to understand the threat and gain decision advantage in today's contested global multi-domain environment. That said, I am pleased with the support I get and agnostic as to the

sources of ISR information as long as they contribute to answering my information needs in a reliable, timely and secure manner.

#### ARTIFICIAL INTELLIGENCE

87. Senator HEINRICH. General Hyten, is the Department of Defense fully utilizing commercial artificial intelligence platforms and algorithms to refine and process the terabytes of ISR data being collected?

General HYTEN. Not fully. However, USSTRATCOM continues to implement various algorithm-based tools and programs in partnership with the IC and DOD. These tools use artificial intelligence and machine learning to help analysts triage large amounts of ISR data. For more details on DOD's utilization of these types of technologies I would defer to the USD (I).

88. Senator HEINRICH. General Hyten, what system or process does the Department of Defense have in place for commercial industry providers to pitch artificial intelligence products to military leaders to help them meet DOD requirements?

General HYTEN. Artificial Intelligence is one of DOD's modernization priorities, and the Department has created a Technical Director for Artificial Intelligence and Machine Learning to consolidate the Service and CCMD AI requirements.

In addition, the Defense Innovation Unit (DIU) website posts DOD hard problems that need industry involvement to solve, and the Defense Technical Information Center (DTIC) has the CCMD Priorities listed in the DTIC Classified reading room for industry to review and offer solutions to solve AI gaps.

Finally, industry providers are encouraged to submit potential solutions and brief their products via regularly scheduled technical interchange meetings and conferences.

---

#### QUESTIONS SUBMITTED BY SENATOR ELIZABETH WARREN

##### F-15C/D FLEET

89. Senator WARREN. General O'Shaughnessy, the Air Force is reportedly considering buying new F-15s to refresh the F-15C fleet, which is nearing the end of its service life. How would a revitalization of the F-15C/D fleet with advanced F-15s affect your ability to defend the Homeland in terms of the capacity and capabilities available to you as NORTHCOM Commander?

General O'SHAUGHNESSY. For our Homeland aerospace defense mission, we advocate for required capabilities rather than specific platforms. The Air Force is on record with its requirement to buy 72 new fighter aircraft per year to implement the National Defense Strategy, and we understand the Air Force remains fully committed to advanced 5th generation capabilities and the F-35. However, the decision to refresh 4th generation capability helps mitigate capacity risk while balancing near term readiness concerns, getting closer to the goal of 72 new fighter aircraft. Recapitalization of the Air Force fighter force, including the F-15 variant, will help give us the resources and flexibility necessary to defend the Homeland.

##### NEW START TREATY

90. Senator WARREN. General Hyten, if New START expires in February 2021 with nothing to replace it and there are no constraints on Russia's nuclear forces, would that increase or decrease the threat Russia poses to the United States?

General HYTEN. It's difficult to predict with any certainty, but I doubt Russia would realize any strategic value in increasing the size of its stockpile and following that course of action would significantly increase the burden on its economy and society. The more likely response would be to continue the path the Russians are already on, which is to increase the capability and diversity of their existing platforms and stockpile.

91. Senator WARREN. General Hyten, if we have less visibility into Russia's nuclear capabilities, their force structure, and their modernization plans, which would be the case without New START, what impact would that have on United States military planning and spending and what countermeasures would we need to consider and what would be the cost?

General HYTEN. The impacts from not extending the New START Treaty are unlikely to drive significant changes in United States force structure, but are more geopolitical in nature. My overarching concerns are with the myriad of nuclear weapons and capabilities that Russia is producing and deploying that are not accountable under New START—with or without an extension.

Hopefully, we can ultimately conclude an agreement with Russia that addresses all nuclear weapons. Those details are best addressed by the Department of State.

However, the comprehensive deterrence strategy as defined in the NPR includes the force structure and stockpile to hedge against prospective and unanticipated risks. A fully modernized nuclear Triad, including requisite NC3 capabilities and low-yield nuclear weapons, provides the diversity and flexibility to tailor U.S. strategies for effective deterrence as the geopolitical landscape evolves.

92. Senator WARREN. General Hyten, if we lose the New START data exchanges and onsite inspection rights, would the Pentagon and the intelligence community have to spend more on national technical means of verification to make up for this loss?

General HYTEN. I would defer to the State Department and Director of National Intelligence for the scale and scope of replacing information provided through New STRAT Treaty verification provisions through alternative means.

93. Senator WARREN. General Hyten, given the extensive United States experience in negotiating and pursuing arms control agreements with the Soviet Union during the Cold War, how do you recommend the United States pursue arms control agreements with Russia and China in the years ahead?

General HYTEN. My ideas are stated in the answer to Question 91 above. However I defer to the State Department as to the best means to approach arms control negotiations.

---

#### QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

##### NUCLEAR COMMAND, CONTROL AND COMMUNICATIONS (NC3)

94. Senator MANCHIN. General Hyten, the Nuclear Posture Review, your written testimony and your verbal testimony all highlight the critical requirement for Nuclear Command, Control and Communications modernization. Being given the sole responsibility for NC3 as commander of USSTRATCOM as well as the opening of the new USSTRATCOM headquarters this year mean a lot of modernization and change occurring rapidly within your command. Given the cyber warfare and cyber espionage challenges from adversaries like China, Russia, North Korea and Iran, what measures are you and your team taking to guard against an aggressive and persistent cyber threat?

General HYTEN. USSTRATCOM is engaged with key experts from across the Department to develop a comprehensive cyber defense plan for the current NC3 enterprise.

Teams regularly assess individual NC3 systems for vulnerabilities and build mitigations to address cyber threats to our aging systems.

In addition, the Department is considering and incorporating information security best practices in all new modernization programs at the onset of development to ensure fielded systems are capable of defending against future cyber threats.

95. Senator MANCHIN. General Hyten, you have two platforms in the E-4B and E-6B that are critical components of our ability to execute NC3 operations in both peacetime and war. The last major platform upgrades were 34 years ago (1985) for the E-4B model and 21 years ago (1998) for the E-6B model. We spend a lot of time discussing the aging B-52, ICBM inventory and submarine fleet, but little time discussing the E-4B and E-6B. Further, the Nuclear Posture Review cites these platforms as a strength while your written testimony highlights efforts to find replacements. How survivable and interoperable are these current platforms in a modern war and when do we need to seriously consider a replacement or major upgrade to these weapons systems?

General HYTEN. Both of these key command and control platforms are survivable in the most stressed environments and fully interoperable with all elements of the National Military Command System. The fundamental challenge facing these platforms is in fully meeting operational mission availability requirements.

The E-4B is projected to reach end of life in 2032. Operational availability is negatively impacted by a continuous cycle of maintenance, major overhauls, and system upgrades that are necessary to keep the fleet operationally capable.

Likewise the E-6B is challenged to meet operation mission availability requirements due to a combination of limited fleet size and increasing depot-level and routine field-level maintenance to address aging airframe issues.

The Air Force is leading a joint analysis of alternatives to explore options to recapitalize the E-4B, E-6B, and the VC-32 and is expected to complete in late fiscal year 2019. We will take this information and integrate it into our broader NC3 architecture work in order to define the best way ahead.

#### SPACE FORCE

96. Senator MANCHIN. General Hyten, in your testimony you praised the decision to keep the newly developing Space Force under the umbrella of the Department of the Air Force. With the development of the Space Force and a Unified Space Command, what steps are you taking to ensure USSTRATCOM, USNORTHCOM and the new U.S. Space Command are all resourced appropriately and have the appropriate authorities given the significant interests all three commands have in space capabilities?

General HYTEN. My staff is working with the Joint Staff, in concert with AFSPC and Joint Force Space Component Command (JFSCC) to identify the resources and authorities required to establish an effective USSPACECOM. In the interim, I am committed to ensuring there will be no operational degradation during the transition and have directed my staff to provide robust support until USSPACECOM reaches full operating capability.

97. Senator MANCHIN. General Hyten, are you concerned about shortfalls as the Air Force tries to fully support all of the commands?

General HYTEN. I fully recognize the challenges the Air Force faces supporting another combatant command, but the Air Force has been responsive to the changes directed by the Department. My staff carefully monitors competing interests to ensure USSTRATCOM and future USSPACECOM support is properly prioritized.

#### MISSILE DEFENSE

98. Senator MANCHIN. General O'Shaughnessy, a December GAO [Government Accountability Office] report reviewed the Air Force's position and analysis of the Cobra Dane radar on Shemya island. While the report did highlight an excellent mission capable rate, it also listed Air Force and Missile Defense Agency estimates of required investments of \$200 million in operations and maintenance funds and almost \$70 million in upgrade and sustainment costs over the next 5 years to keep the system running. Given existing and future capabilities such as the Long Range Discriminating Radar, the Space Fence, the Pacific Radar, the sea based X-band radar and radars in Japan, is the Cobra Dane still providing such a critical function to our missile defense that we need to continue to invest large sums of money into sustaining this aging system?

General O'SHAUGHNESSY. The Cobra Dane radar contributes significantly to Homeland defense and continues to be the "backbone" of the ground-based mid-course defense system. Due to its unique geographic location, the radar provides engagement quality mid-course tracking data of missiles threatening CONUS and Alaska. I work closely with the Missile Defense Agency and the Air Force to ensure Cobra Dane remains a critical operational element of the Ballistic Missile Defense System architecture until it can be replaced by assets that provide equal or better capabilities.

99. Senator MANCHIN. General O'Shaughnessy, we currently have 44 ground based interceptors in our inventory between Fort Greely, Alaska, and Vandenberg AFB [Air Force Base], California. You have previously stated that you do not consider this to be adequate for defense of the United States and North America as a whole. How many additional GBI do we need to be adequately prepared for a North Korean or Chinese ballistic missile threat?

General O'SHAUGHNESSY. Our defensive Ground-based Midcourse Defense system was designed and deployed against North Korea and potential Iranian ballistic missile threats, not Russian or Chinese ballistic missile threats. I am confident in our ability to defend against the current North Korean and Iranian ballistic missile threats.

I support the Department of Defense's initiative to field twenty additional interceptors at Ft Greely, AK that will carry the Redesignated Kill Vehicles. This effort will provide both capability and capacity improvements. We will continue to reassess the sufficiency of our interceptor fleet based on the estimated threat going forward.

100. Senator MANCHIN. General O'Shaughnessy, you have testified extensively in writing and verbally that the arctic is quickly becoming a vulnerable spot in our

defenses for North America. What are your requirements for defense of North America from a northern approach in the form of radars, interceptors, ships or investment in other infrastructure such as the Integrated Undersea Surveillance System (IUSS)?

General O'SHAUGHNESSY. The defense of North America requires modern sensor systems for aerospace surveillance and warning capable of detecting advanced threats at long ranges. These sensor systems must be able to detect, characterize, and attribute potential threats from airborne, surface, and subsurface launch platforms operating in and through the Arctic and the northern approaches to the Homeland.

United States Northern Command (USNORTHCOM) and North American Aerospace Defense Command (NORAD) currently have nine Arctic-related items on the commands' Integrated Priority List that address air and cruise missile defense, communications, maritime undersea surveillance, indications and warning, and Homeland defense. The commands have also articulated a requirement for ice-strengthened surface vessels capable of exercising and deploying, positioning, and conducting deterrence and decisive operations in the ice-diminished waters of the Arctic. Additionally, USNORTHCOM has a requirement to support those vessels with fuel north of Dutch Harbor, Alaska. Finally, USNORTHCOM and NORAD have stressed the urgency of Integrated Undersea Surveillance System recapitalization with the United States Navy, as Russia and China have fielded advanced submarines and missile systems that present significant threats to the Homeland.

#### COUNTER TERRORISM AND VIOLENT EXTREMIST ORGANIZATION

101. Senator MANCHIN. General O'Shaughnessy, you highlighted in your written testimony your significant concern over terrorist or violent extremist attacks on the United States to include another 9/11 style attack on the Homeland. What steps are you taking at USNORTHCOM either militarily, through interagency or multi-nationally to gather intelligence and conduct operations to combat the persistent terrorist threat?

General O'SHAUGHNESSY. United States Northern Command (USNORTHCOM) takes a comprehensive approach to countering threats to the Homeland. We maintain constant awareness of terrorist threats through routine, daily coordination with the U.S. intelligence community and utilization of a vast network of liaison officers and interagency partners, including the Federal Bureau of Investigation and the Department of Homeland Security. We have also built strong relationships with other combatant commands through which we share information and participate in multinational forums run by Special Operations Command that focus on countering violent extremist organizations. In addition, USNORTHCOM has developed robust counterterrorism plans which we exercise and rehearse frequently.

---

#### QUESTIONS SUBMITTED BY SENATOR DOUG JONES

##### SPACE FORCE AND SPACE COMMAND

102. Senator JONES. General Hyten, at the hearing, you emphasized the importance of "not breaking the mission" in separating Space from STRATCOM and re-establishing it as a separate combatant command. Please be more specific about the steps STRATCOM is taking to ensure a smooth transition and to avoid overlap, duplication, and inefficiency among the Space Force, Space Command, the Space Development Agency, the NRO [National Reconnaissance Office], and the Services.

General HYTEN. My chief concern and focus is ensuring there is no disruption in space operations or support to other commanders, the Joint Force and DOD/USG agencies.

To facilitate seamless transition, USSTRATCOM in association with the Joint Staff, Services, combatant commands, and the NRO developed both a transition Divestiture Plan and Implementation Plan.

These plans are continuously refined, socialized, and coordinated through exercises in advance of the transition. Additionally, a Memorandum of Agreement codifies how elements of the USSTRATCOM Staff will support Commander, USSPACECOM throughout the transfer.

USSPACECOM, at establishment, will be postured to issue orders, as well as command and control assigned and attached forces, but will not be fully mission capable.

To that end, I directed my staff to continue providing robust support to ensure mission success through USSPACECOM declaration of FOC.

## HOMELAND DEFENSE DESIGN

103. Senator JONES. General O'Shaughnessy, your written testimony briefly references the three-phase Homeland Defense Design. Please provide an update on that effort and how it's progressing.

General O'SHAUGHNESSY. Our cruise missile defense efforts for the first two phases of the Homeland Defense Design initiative started in the National Capital Region (NCR) and are just part of our overall initial effort encompassing the whole aerospace domain. We are utilizing lessons learned from point defense against cruise missile threats in the NCR and broadening our understanding of what is required to defend critical infrastructure throughout North America.

As we move to Phase III of Homeland Defense Design, it is clear there is much to be done. From a warfighter perspective, we need to be able to find, track, and defeat launch platforms and cruise missiles at greater ranges than we've previously planned for. This will require changes in our operational approach and investments in advanced sensors, and weapons, all of which we are addressing with the Department.

Expanding cruise missile defense beyond the NCR is significantly more complex. The Northern Approaches Surveillance Analysis of Alternatives (NAS AoA) and my Commander's Estimate on Homeland cruise missile defense are both currently underway, and these two key, overarching efforts will be crucial to identifying the best way to defend our Homeland against cruise missile threats.

These studies are critical to our efforts, but we must take action now to address the threat. As such, we have taken action to address immediate needs as we continue efforts to identify and implement short, mid-, and long-term solutions. The immediate includes achieving the best possible results with the capabilities and capacity available today. The short-term includes increasing capacity of the systems we already have and targeting investment in capabilities giving me the best flexible deterrent options for the available funding. Our mid-term and long-term efforts are heavily reliant on current and emergent science and technology and will require significant investment now to field solutions as soon as possible.

## COMBATTING ILLEGAL DRUG TRAFFICKING

104. Senator JONES. General O'Shaughnessy, in your testimony, you acknowledged that the majority of illegal drugs are coming through the ports, not across uncontrolled sections of the border. Could you give us your best military advice on whether NORTHCOM's forces have an appropriate role in combatting illegal drug trafficking and if so, explain what the most appropriate and effective use of NORTHCOM's forces is in that effort?

General O'SHAUGHNESSY. I believe United States Northern Command (USNORTHCOM) has an appropriate role in combatting illegal drug trafficking. USNORTHCOM routinely provides military-unique capabilities in support of federal civilian law enforcement and participates in training with both U.S. civilian law enforcement and foreign partners. As authorized by 10 USC § 124 and 10 USC § 284, USNORTHCOM contributes to counterdrug efforts by providing maintenance and repair of equipment, transportation support, engineering, training of law enforcement agencies, employment of detection and monitoring sensors, intelligence analysis, and aerial and ground reconnaissance. This support enables our law enforcement partners to more effectively interdict drugs and other illicitly trafficked commodities.

## EMERGENCY DECLARATION

105. Senator JONES. General O'Shaughnessy, you testified that you have not yet received any orders from the Commander in Chief pursuant to the Emergency Declaration of March 15, 2019. Please explain what process, if any, you undertake when you do receive an order from the Commander in Chief to determine the legality of that order and state whether that process will be followed if you receive an order pursuant to the March 15, 2019 Emergency Declaration.

General O'SHAUGHNESSY. Orders received by United States Northern Command (USNORTHCOM) from any source are reviewed by the our command staff judge advocate and legal staff to determine if there are any potential legal concerns associated with any given order. If there are legal concerns, in coordination with Chairman of the Joint Chief of Staff Legal Counsel and the Department of Defense Office of General Counsel, our legal team develops recommended courses of action that resolve or mitigate those concerns for my consideration. Based on this information, I select a course of action and issue appropriate orders to our headquarters staff and subordinate commanders. This is the process I have followed to date, and it is the

same process I will continue to follow for future orders I receive as Commander of USNORTHCOM.

NATIONAL GUARD

106. Senator JONES. General O'Shaughnessy, you testified about the importance of the National Guard to NORAD's missions. We have an Air Guard unit in Alabama that is scheduled to receive the new F-35 fighter jets in a couple of years. How will that unit and those capabilities contribute to the defense of the Homeland?

General O'SHAUGHNESSY. I am absolutely confident the Alabama Air National Guard, equipped with the new F-35 Lightning II, will be ideally suited to defend the United States against the most advanced and emerging threats to North America. The F-35 is unmatched in its ability to counter and defeat the latest 21st century advanced threats to the Homeland. In short, the F-35 and the Air National Guard provide critical combat capability and will be integral to the defense of North America.





**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**TUESDAY, MARCH 5, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**UNITED STATES EUROPEAN COMMAND AND UNITED  
STATES TRANSPORTATION COMMAND**

The Committee met, pursuant to notice, at 9:29 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee Members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, McSally, Scott, Blackburn, Hawley, Reed, Shaheen, Blumenthal, Hirono, Kaine, Warren, Peters, Manchin, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. Our meeting will come to order.

The Senate Armed Services Committee today meets to continue receiving the posture statements from our combatant commands. Testifying today are General Curtis Scaparrotti, Commander of the United States European Command [EUCOM], and General Stephen Lyons, Commander of the United States Transportation Command [TRANSCOM]. I welcome both of you here and thank you for your service.

The Senate Armed Services Committee's top priority is to ensure the effective implementation of the National Defense Strategy [NDS]. That is our blueprint. We pretty much agreed to that. It means that we need urgent change at a significant scale to address the challenges of strategic competition with Russia and China.

I just got back from Munich, Kosovo, Djibouti, Algeria, and these areas, and that is where Russia and China are. We need to be aware of the strength and what the competition is. Putin has demonstrated both the capability and the intent to use force to achieve his objective, most notably in Georgia, Ukraine, and Syria. Putin will not hesitate to use other tools in his arsenal as well, whether it is cyber attacks, election meddling, or assassinations with chemical weapons. Perceived weakness will only provoke further aggression from Putin.

That is why efforts such as full support for the European Deterrence Initiative that is made up of primarily the old Soviet Union countries provides the defensive lethal assistance to Ukraine and why they are so important.

Likewise, we need a defense budget that is of sufficient size and invests in key capabilities we need in Europe, areas like long-range fires, cruise missile defense, anti-submarine warfare, and the supporting infrastructure.

I was in Munich 2 weeks ago, and it was clear that we cannot be successful in the strategic competition with Russia without a strong, unified NATO [North Atlantic Treaty Organization] alliance. America is safer and stronger because of our NATO alliance. General Scaparrotti, I look forward to your thoughts along these issues.

General Lyons, you have had a long history with TRANSCOM serving as its Deputy Commander for 2 years before assuming your current role. I look forward to hearing your assessment of the services and the resources that you have there because I know that there is some discussion even of some privatization in that area. We will be anxious to hear your statements.

Before I turn to Senator Reed, I would like to remind all of our members that we will have a classified, closed, informal briefing, at 2:30 in the Visitors Center with both of our witnesses.

Senator Reed?

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Thank you very much, Mr. Chairman. Let me join you in welcoming our witnesses this morning.

General Scaparrotti is returning to testify before the Committee for the third time on the United States military posture and programs in Europe. He is dual-hatted as Commander of United States European Command and NATO Supreme Allied Commander, or the SACEUR [Supreme Allied Commander Europe]. Welcome, General Scaparrotti.

General Lyons, I want to welcome you to your first posture hearing before this Committee.

Let me thank both of you for your many decades of military service, and please extend our appreciation to the dedicated men and women serving under your commands. Thank them very much for us.

Over the last several years, the security challenges in the United States European Command have grown increasingly complex. Russia has reemerged as an aggressive opponent of the rules-based international order, which Russia views as a counter to its strategic interest in reclaiming great power status. The National Defense Strategy issued last year highlights the need to counter a revanchist Russia with a credible military deterrent that demonstrates that any military aggression against the sovereignty and integrity of NATO members or threat of such aggression will not succeed. General Scaparrotti, I am interested in your assessment of the progress of our force posture in Europe in meeting NDS requirements.

In addition to its military modernization and aggressive military posturing, Russia is conducting a campaign of hybrid warfare,

below the level of military conflict, using all tools of national power to advance its strategic interests. Our democracy was attacked in 2016, and we have been persistently under attack ever since, including during last year's midterm elections. I would be interested in hearing from General Scaparrotti whether EUCOM is getting the cyber resources and personnel it needs and whether we are investing in the right non-military tools of national power to counter this hybrid warfare.

An additional challenge is the unprecedented strain on alliance cohesion within NATO. Former Secretary of Defense Mattis stressed that the United States' strength is inextricably linked to our systems of alliances and partnerships. Yet, a recent report from the Harvard Belfer Center by Ambassador Doug Lute and Ambassador Nicholas Burns describes a crisis within NATO, which they attribute in large part to the absence of strong U.S. leadership. The Senate and Congress as a whole have repeatedly gone on record to reaffirm our strong commitment to NATO and the transatlantic relationship as a core element of U.S. national security. There should be no doubt among our allies or our adversaries regarding the United States' resolve to meet its NATO commitments to collective defense.

Turning to TRANSCOM, the men and women of TRANSCOM perform duties that sustain the whole Department of Defense effort in protecting our Nation's security. With the competitive edge in its ability to deploy and sustain America's armed forces, TRANSCOM provides DOD [United States Department of Defense] with unique capabilities that we have come to expect and perhaps too frequently take for granted. TRANSCOM forces are busy supporting all of the combatant commanders every day, and without them, the United States would be at a significant disadvantage almost everywhere in the world.

The Ready Reserve Force, or RRF, is a group of cargo ships held in readiness by the Maritime Administration, but it is aging and will need to be modernized over the next decade. Two years ago, the Committee authorized the Department to start a program to recapitalize the Ready Reserve Force by authorizing DOD to purchase up to two foreign-built vessels, while the Navy designed a family of auxiliary vessels for a number of uses, including recapitalizing the Ready Reserve Force. Then last year, Congress authorized the Department to buy five more foreign-built vessels as soon as the Department put forward a funded plan to build new ships for the RRF in U.S. shipyards. General Lyons, I am interested in the status and the next steps for RRF recapitalization in fiscal year 2020.

The Defense Department also needs to ensure that the Civil Reserve Air Fleet, or CRAF, program, which provides as much as 40 percent of wartime airlift needs, remains viable after operations in Iraq and Afghanistan and will be able to provide needed surge capacity in the future. General Lyons, I am interested in your view on the state of this fleet and if anything needs to be done to ensure these capabilities and their readiness.

Our global transportation capability, owned and managed by TRANSCOM, has been one of our asymmetric advantages for many years now. However, we cannot assume that potential adversaries

will allow us free rein in this area in the future. Last year, General McDew told the Committee that TRANSCOM has been conducting analyses to assess requirements for an environment where our mobility forces would be challenged, and his assessment was that additional investment in lift would be needed. However, when we received the report of that analysis in the Mobility Requirements Study earlier this year, the study's conclusions differed from General McDew's assessment. General Lyons, perhaps you could give us an update on why there was a change.

Finally, TRANSCOM also faces a unique set of cyber threats because of the command's extensive network with private sector entities in the transportation and shipping industries. General Lyons, I would like to get an update from you on progress in the cybersecurity efforts you have made since last year.

Once again, let me thank the witnesses for their service and for their testimony.

Chairman INHOFE. Thank you, Senator Reed.

You guys know the drill. First, you are going to have 5 minutes. Try not to exceed 5 minutes, but your entire statement will be made a part of the record. We will start with you, General Scaparrotti.

**STATEMENT OF GENERAL CURTIS M. SCAPARROTTI, USA,  
COMMANDER, UNITED STATES EUROPEAN COMMAND/  
NORTH ATLANTIC TREATY ORGANIZATION SUPREME AL-  
LIED COMMANDER EUROPE**

General SCAPARROTTI. Chairman Inhofe, Ranking Member Reed, distinguished Members of the Committee, good morning and thank you for the opportunity to appear before you today as the Commander at United States European Command. I am honored to be here today this morning with General Steve Lyons as well.

First and foremost, I want to thank you for Congress' support of the servicemembers, civilians, and families in Europe. These warriors demonstrate selfless service and dedication to Euro-Atlantic defense, a mission that is essential to our national security and to maintaining global peace and prosperity. We as a nation are blessed by their voluntary and exceptional service. Thank you again for your steadfast support of these patriots and their mission.

The threats facing United States interests in the EUCOM area of responsibility, which includes Israel, are real and growing. They are complex, trans-regional, all-domain, and multi-functional. This remains one of the most dynamic periods in recent history in my view. Russia has continued its reemergence as a strategic competitor and remains the primary threat to a stable Euro-Atlantic security environment.

While the United States maintains a global military superiority over Russia, evolving Russian capabilities threaten to erode our competitive military advantage, challenge our ability to operate uncontested in all domains, and diminish our ability to deter Russian aggression.

In light of Russia's modernizing and increasingly aggressive force posture, EUCOM recommends augmenting our assigned and rotational forces to enhance our deterrence posture. EUCOM also recommends further investments that enhance European logistical in-

infrastructure and capacity to support rapid deployment of multi-domain United States Forces in Europe.

In addition to the threat from Russia, the risk of terrorism in Europe remains high despite a decline in fatalities from terrorist attacks in 2018. Violent extremists present a clear and present threat to Europe's people and their infrastructure.

Thankfully, the United States is not alone in facing these other challenges across the Euro-Atlantic theater. As our National Defense Strategy states, the NATO alliance deters Russian adventurism, contributes to the defeat of terrorism, and addresses instability along NATO's periphery. Our allies and partners play a vital role in our collective security, and they have made significant progress in increasing cash contributions and capabilities that provide our common defense. For almost 70 years, NATO has been the cornerstone of Euro-Atlantic security. As NATO adapts to remain relevant and fit for purpose, we will find, as we always have, that every challenge is best addressed as an alliance.

Let me close by, again, thanking Congress and this Committee for your continued support, especially the sustained funding of the European Deterrence Initiative, EDI. EUCOM's future success in implementing our National Defense Strategy and fulfilling our mission is only possible with Congress' support. Thank you.

I look forward to your questions.

[The prepared statement of General Scaparrotti follows:]

#### PREPARED STATEMENT BY GENERAL CURTIS M. SCAPARROTTI

##### INTRODUCTION

Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Senate Armed Services Committee, it is my honor to testify today in what is likely my final year as Commander of the United States European Command (USEUCOM). I humbly represent over 68,000 brave and dedicated men and women who are forward-deployed or stationed in the European theater of operations. These warriors demonstrate selfless service and dedication to Euro-Atlantic defense, a mission that is essential to our national security and to maintaining global peace and prosperity. We as a Nation are blessed by their voluntary and exceptional service. Thank you for your steadfast support of these patriots and their mission.

Europe and the Trans-Atlantic NATO Alliance remain crucial to our national security, as clearly stated in the President's 2017 National Security Strategy (NSS), the 2018 National Defense Strategy (NDS), and the 2018 National Military Strategy (NMS). USEUCOM's operations, activities, and investments are aligned with the principles and guidance provided by these strategic documents. I cannot stress enough that USEUCOM's ongoing and future success in implementing and executing these strategies is only possible with Congress' support, especially the sustained funding of the European Deterrence Initiative (EDI).

##### *A Dynamic Security Environment*

The threats facing United States interests in the USEUCOM area of responsibility, which includes Israel, are real and growing. They are complex, trans-regional, all-domain, and multi-functional. They require the United States, together with our European allies and partners, to constantly adapt with forces and concepts that are able to out-pace the evolution of these threats. A revisionist Russia is the primary threat to a stable Euro-Atlantic security environment. Russia has invaded Ukraine, occupied Crimea, launched cyber-attacks against the Baltic States and Ukraine, interfered in United States and other Western elections, and attacked Ukrainian navy vessels attempting to transit the Kerch Strait to Ukrainian ports in the Sea of Azov. It is also overhauling its nuclear forces—including those that threaten European territory, such as the dual-capable, Intermediate-Range Nuclear Forces (INF)-violating SSC-8/9M729 ground-launched cruise missile. Given Moscow's demonstrated willingness to violate international law and legally-binding treaties, and

to exercise malign influence, Russia threatens the United States' vital national interests in preserving a Europe that is whole, free, and at peace.

We have already made significant strides in adapting our European force posture to meet these threats. As we continue to adapt, USEUCOM remains steadfastly committed to fielding a lethal, agile, and resilient force and to strengthening the NATO Alliance. With continued investment, innovative use of resources, and the strength of our Nation's resolve, I am confident that we will continue to meet the challenges of the dynamic security environment. This includes ensuring the continued credibility of the U.S. nuclear deterrent, which backstops all U.S. military and diplomatic operations across the globe and helps ensure that tensions with Russia—no matter where or how they arise—do not escalate into large-scale war.

#### RISKS AND CHALLENGES IN THE STRATEGIC ENVIRONMENT

##### *Russia*

Russia is a long-term, strategic competitor that wants to advance its own objectives at the expense of U.S. prosperity and security and that sees the United States and the NATO Alliance as the principal threat to its geopolitical ambitions. In pursuit of its objectives, Moscow seeks to assert its influence over nations along its periphery, undermine NATO solidarity, and fracture the rules-based international order. Russia actively pursues an aggressive foreign policy in violation of other nations' sovereignty, carrying out subversive and destabilizing activities in Europe and the United States and exploiting opportunities to increase its influence and expand its presence in Afghanistan, Syria, and Asia.

Russia employs a whole-of-society approach through a wide array of tools to include political provocateurs, information operations, economic intimidation, cyber operations, religious leverage, proxies, special operations, conventional military forces, and nuclear forces. Russia pursues its strategic objectives in Europe, while avoiding direct military conflict with the United States and NATO, by targeting countries through indirect action—backed up by the coercive threat of its conventional and nuclear forces. Such actions include questioning a government's legitimacy, threatening a country's economic interests, mobilizing fringe opposition groups, and utilizing proxies or armed civilians, such as private military contracting companies with opaque ties to the state.

Russia's military capability improvements are significant. Russia continues to prioritize high levels of defense spending to complete its broad-based upgrade of its nuclear forces and produce advanced weapons and capabilities specifically designed to counter United States military superiority. Russia's nuclear modernization program covers every leg of its strategic triad and includes advanced modern road-mobile and silo-based Intercontinental Ballistic Missiles (ICBMs), new Submarine Launched Ballistic Missiles (SLBMs), and Long Range Strategic Bombers. Russia is also developing and deploying new strategic nuclear delivery platforms, to include its nuclear-armed, nuclear-powered underwater unmanned vehicle, intercontinental-range cruise missile, and its air-launched ballistic missile, all of which Russia seeks to keep outside of existing arms control agreements. Additionally, they are pursuing nuclear-armed hypersonic weapons, which could provide them the capability to attack anywhere in the globe with little or no notice.

Russia is also building a large, diverse, and modern set of non-strategic, dual-capable weapons. It currently has an active stockpile of approximately 2,000 of these theater-range systems, which are not subject to the New START Treaty's limitations on deployed warheads. These systems include air-to-surface missiles, short-range ballistic-missiles, gravity bombs, depth charges, and Russia's INF-violating ground-launched cruise missile, among others.

Russia's non-strategic nuclear weapons stockpile is of concern because it facilitates Moscow's mistaken belief that limited nuclear first use, potentially including low-yield weapons, can provide Russia a coercive advantage in crises and at lower levels of conflict. The 2018 Nuclear Posture Review calls for adjustments to U.S. nuclear forces to close this perceived gap on the escalation ladder and reinforce deterrence against low-yield nuclear use.

Outside of its nuclear forces, Russia is fielding advanced anti-access/area denial (A2AD) integrated air defense systems (IADS), precision guided cruise and ballistic missiles, modern cyber and electronic warfare (EW) capabilities, and counter-space weapons meant to impede United States power projection in Europe. They have improved readiness via investments in infrastructure, training, and compensation, and their exercise program demonstrates increasingly sophisticated command and control and integration across multiple warfare areas. In the Arctic, Russia continues to invest in their forces as environmental changes open up access to the High North.

The Kremlin has also demonstrated the ability and political will to deploy its modernized military and expand its operational footprint. Last year we observed a historically high combat maritime presence in the East Mediterranean along with military deployments and demonstrations in Syria. Their most advanced and quietest guided missile submarine, the Severodvinsk, conducted extended deployments in the northern Atlantic.

Russia seeks advantage over the United States and its European allies through its non-compliance with long-standing arms control treaties. Its violations of the INF Treaty allowed Moscow to develop capabilities that the United States continued to forego. Its “suspension” of the Conventional Armed Forces in Europe Treaty gave it greater flexibility to posture forces in regions of special interest to Moscow and to do so with significantly less transparency towards its neighbors in ways we do not because of our adherence to these treaties. Its violation of certain provisions of the Open Skies Treaty—as well as its selective implementation of Vienna Document transparency measures—poses challenges for ensuring full military transparency.

Our NATO allies supported the U.S. announcement to begin withdrawal from the INF Treaty because they recognize that Russia’s Treaty-banned systems hold much of Europe at risk and that despite significant diplomatic efforts—more than 30 engagements over nearly six years—Russia refuses to return to compliance.

While the United States maintains global military superiority over Russia, evolving Russian capabilities threaten to erode our competitive military advantage, challenge our ability to operate uncontested in all domains, and diminish our ability to deter Russian aggression.

#### *Ukraine*

Moscow persists in its multifaceted campaign to destabilize Ukraine and block Ukraine’s democratic choice to align with the West. Following Russia’s purported annexation of Crimea in 2014, Russia’s aggressive activities, including those of Russia-led forces in the Donbas region in eastern Ukraine, target Ukraine’s defense, economic, and political sectors. Russia has not implemented its commitments in the Minsk agreements, and Russia continues to arm, train, lean, and fight alongside antigovernment forces in eastern Ukraine. The conflict in eastern Ukraine remains hot, with numerous ceasefire violations reported weekly. The UN reports that approximately 13,000 people have been killed in the Donbas since Russia instigated the conflict in 2014. More than 100 Ukrainian soldiers were killed in 2018 as well as 55 civilians. Due to Russian intransigence, no peacekeeping initiative has been implemented. Russia’s unjustified use of force against Ukrainian vessels and naval personnel in the Black Sea near the Kerch Strait last November demonstrated Russia’s disregard for Ukraine’s sovereignty and territorial integrity, denying Ukraine its right of free passage in accordance with international law. In addition, through its support of illegitimate elections in the so-called “Donetsk and Luhansk People’s Republics”, Russia has sought to undermine the government of Ukraine. Russia will likely attempt to interfere in Ukraine’s upcoming presidential elections, as it did in 2014.

#### *Georgia*

After the 2008 Russo-Georgian War, Russia stationed 7,000 troops on sovereign Georgian territory. Russia now occupies approximately 20 percent of Georgian territory and maintains a significant military and border presence in and around Abkhazia and South Ossetia. Russia has recognized the two territories as independent, entering into defense agreements with these territories and incorporating South Ossetian and Abkhazian “national military forces” into Russian Army command structures. Russia exacerbates tensions by fomenting discord between these territories and the rest of Georgia. While Georgia supports confidence building measures, such as granting the EU Monitoring Mission in Georgia (EUMM) access to the occupied territories in accordance with its mandate. Russia opposes them.

#### *Balkans*

Security in the Balkans, a strategically significant region, is tenuous, and Balkan nations are a primary target of Russian malign influence. Negotiations between Kosovo and neighboring Serbia to normalize their relations and agree on a long-term solution that is viable for both countries have struggled to make progress for some time and are currently on hold. Russia fuels regional instability in an effort to prevent individual Balkan nations from progressing on a path toward greater Euro-Atlantic alignment and integration. Seeking to maintain its influence in Serbia through political, military, and economic support, Russia also opposes the recognition of Kosovo as a sovereign country. NATO’s Kosovo Force (KFOR), which includes over 3,500 troops from both NATO and non-NATO nations, plays an important role in maintaining security and stability in this region. Bosnia and Herzegovina also

continues to work toward long-term peace and stability. Despite challenges from Republika Srpska, which is influenced by Russia, Bosnia and Herzegovina partners with the United States and NATO, supporting the Resolute Support Mission in Afghanistan.

#### *Baltics and Poland*

Estonia, Latvia, Lithuania, and Poland are a focal point of United States and NATO deterrence posture and activities as Russia attempts to intimidate these nations, both politically and militarily. Russia also tries to influence ethnic Russian populations, especially in Estonia and Latvia, and both countries remain mindful that in Crimea, Russia used these ethnic groups as a justification for intervention. Poland has offered at least \$2 billion towards United States basing in Poland, and the form of such an increased United States troop posture in Poland is currently being discussed in Working Groups under the auspices of a DOD-led Executive Steering Group.

#### *Turkey*

Turkey is a strategically important ally facing significant security challenges, the most pressing of which is the ongoing Syrian conflict. It must maintain security along its border with Syria, and within its borders, Turkey hosts over 3.5 million Syrian refugees. Turkey continues to view the Kurdistan Workers' Party (PKK) and Syrian Kurdish People's Protection Units (YPG) as a single entity, one that constitutes a greater threat than ISIS. This has complicated United States-Turkey cooperation on Syria. USEUCOM works closely with Turkey to help secure its borders, and we have improved our efforts, in support of Turkey, to counter the PKK and the threats this terrorist organization poses to Turkish citizens. USEUCOM also supports United States interagency efforts to effect a deliberate withdrawal of United States forces from Syria that ensures the enduring defeat of ISIS, preserves Turkey's security, and keeps faith with United States partners on the ground. Finally, USEUCOM supported United States interagency efforts to provide an NATO-interoperable alternative to avert Turkey's planned purchase of a Russian S-400 air defense system, which risks triggering the Countering America's Adversaries Through Sanctions Act (CAATSA). Such an opposition puts at risk NATO cohesion and our longstanding and mutually beneficial United States-Turkish defense industrial cooperation.

#### *Violent Extremist Networks*

The risk of terrorism in Europe remains high, despite a decline in fatalities from terrorist attacks in 2018. Violent extremists present a clear and persistent threat to Europe's people and infrastructure. ISIS seeks to re-establish itself in Iraq and Syria, expand into new safe havens, and plan attacks against Western targets. We must remain vigilant to all jihadist groups trying to extend their operational networks and radicalize recruits in Europe.

#### *Israel*

In the Levant, Israel faces a complex set of security challenges from numerous actors across multiple domains. Israel must constantly defend itself from threats posed by Hamas, Lebanese Hezbollah, and Iran, which has expanded its network of proxies while also pursuing advancements in its missile program to assert its influence throughout the Middle East. Israel must also guard against Russia's increased presence in Syria, its facilitation of Iran's presence, and ISIS militants along its Syrian border.

#### *Additional European Security Challenges*

Several other issues present ongoing challenges to European security. Though migrant flows slowed in 2018, Europe's migrant crisis has led to difficult political discussions about demographic integration and the allocation of resources. Transnational organized crime and the illicit trafficking of narcotics, humans, and weapons, to include weapons of mass destruction and related materials, can be linked with terrorism and place an added burden on European security and police forces. USEUCOM is also monitoring China's activities in Europe as it seeks to expand its influence and grow its presence. For example, China is looking to secure access to strategic geographic locations and economic sectors through financial stakes in ports, airlines, hotels, and utility providers, while providing a source of capital for struggling European economies. Russia and China have increased their transactional collaboration based on some common objectives and opportunities to increase their power and influence at the expense of the United States and our allies.



*Strategy Implementation*

USEUCOM is confronting the risks and challenges in its area of responsibility by aggressively adapting our thinking and posture in accordance with the President's National Security Strategy (NSS), the Secretary's National Defense Strategy (NDS), and the Chairman's National Military Strategy (NMS). We are particularly focused on expanding the competitive space with Russia by increasing the lethality of our forces and strengthening alliances and partnerships. Our forces demonstrate commitment to the defense of our allies while our execution of the Dynamic Force Employment concept, along with our operations and exercises, introduce operational unpredictability to our adversaries. USEUCOM will help ensure that our Nation successfully competes with Russia, deters aggression, and if necessary, prevails in conflict.

*Supporting NATO*

The NSS, NDS, and NMS all emphasize the central role of a revitalized NATO in securing our vital national interests. NATO allies help shoulder our common defense burden through cash (defense spending), contributions (such as troop deployments), and critical capabilities (e.g., advanced missile defense systems). Allies have made considerable progress in each of these areas.

Since January 2017, allies have added more than \$41 billion in increased defense spending over the 2016 level; and by the end of 2020, Allies—according to NATO Secretary General Stoltenberg—are on track to add approximately \$100 billion in increased defense spending. In 2018, eight allies spent 2 percent of their GDP on defense and ten more have presented plans or made political commitments to do so by 2024. Fifteen allies are already allocating at least 20 percent of their defense budgets to major new equipment in 2018, and 11 more have presented plans or commitments to do so by 2024. In addition, all U.S. EDI-funded military construction is being submitted for consideration of future funding via recoupment through the NATO Security Investment Program (NSIP).

At last year's Brussels Summit, NATO Heads of State agreed that ensuring alliance responsiveness, readiness, and reinforcement are strategic imperatives for implementing a credible deterrence and defense posture. There are several distinct elements to this commitment. Implementation of the NATO Command Structure (NCS) Adaptation will include a refined Initial State Peacetime Establishment (ISPE) manning increase, the stand-up of NATO Headquarters Joint Forces Command—Norfolk (JFCNF) to command and control (C2) operations in the Atlantic, and the establishment of the Joint Support and Enabling Command (JSEC) in Ulm, Germany.

NATO allies are also making progress in developing a more capable, interoperable, and ready alliance force. NATO's Political Guidance for defense planning (PG19) provides direction for a variety of required cross-domain capabilities. PG19, discussed at the February 2019 NATO Defense Ministers conference, is the first step in the process NATO uses to influence allied nations, develop and deliver interoperable forces, and ensure the alliance has the required capabilities and readiness needed to strengthen deterrence and defense. Additionally, the NATO Readiness Initiative (NRI), which builds upon the 2014 Readiness Action Plan's comprehensive package of Assurance and Adaptation Measures, will provide "4-30s"—30 major naval combatants, 30 medium or heavy maneuver battalions, and 30 air squadrons ready to fight within 30 days—by the year 2020.

In terms of contributions, allies have stepped up their support for NATO-led missions. From 2014 to 2017, the number of NATO troops serving on deployment was up from 18,000 to just under 23,000 (with almost half of that number, 10,500, from outside the U.S.). In addition to the United States, Germany, Canada, and the UK serve as Framework Nations for the enhanced Forward Presence (eFP) battle groups in the Baltics and Poland. The UK, Romania, and Croatia all contribute forces to the United States eFP mission. Germany serves as the Framework Nation for the 2019 NATO Very High Readiness Joint Task Force (VJTF) brigade. NATO allies and partners also contribute forces to NATO's Baltic Air Policing, enhanced Air Policing in the Black Sea region, Standing Maritime Group, Resolute Support Mission (RSM), and KFOR.

As directed by the NDS, we will 'fortify the Trans-Atlantic Alliance' in part by increasing our collaboration with our European allies and partners. With thanks to Congress for its support to our security cooperation and security assistance initiatives, USEUCOM continues to bolster our engagement in places like Ukraine, Georgia, the Balkans, and in other allied and partner nations along Russia's border. USEUCOM employs programs such as the Ukrainian Security Assistance Initiative,

Section 333 of the Fiscal Year 2017 NDAA, and Title 22 Foreign Military Financing (FMF) to build partner capabilities in key European nations, enhancing their abilities to defend their sovereignty and territorial integrity, and to operate in coalition with the United States. Additionally, USEUCOM works closely with NATO planners and forces to integrate our collective capabilities, and we will regularly test and improve these capabilities through title 10 exercises, our Joint Exercise Program, and through NATO Response Force (NRF) certification exercises to ensure interoperability on the battlefield. We will continue to press allies to meet the important 2 percent mark, advocate for individual nation capability targets that meet their most pressing force requirements, and align with their assigned NATO capability targets.

NATO is also a key platform for engagement and displaying solidarity on issues such as Russia's violation of the INF Treaty. The Alliance unanimously supported our declaration of Russia's material breach of the INF Treaty in December and our announcement that we were suspending our legal obligations and initiating withdrawal from the Treaty in February. We remain engaged on this issue with our NATO Allies to ensure NATO is postured to defend against Russia's new intermediate-range capability and to deny Russia any military advantage from its unlawful conduct.

#### *Working with Non-NATO Partners*

Georgia remains a committed partner, especially in Afghanistan, where it is the largest non-NATO contributor to Resolute Support with almost 900 troops currently deployed. The United States-Georgia security relationship has steadily expanded, and the establishment in 2018 of the Georgia Defense Readiness Program (GDRP) marked a milestone in our partnership. The GDRP helps Georgia field and sustain a credible, ready force through training, education, and mentorship. The program is a centerpiece of Georgia's broad efforts to enhance its national defense and contribute to the security of the Black Sea region.

Ukraine seeks to partner more closely with the United States, NATO, and the European Union (EU), and it has made progress in developing a capable, sustainable, and professional force. USEUCOM supports Ukraine's efforts through the Joint Multinational Training Group-Ukraine (JMTG-U), combined exercises including the annual naval Exercise Sea Breeze, and other activities. The United States delivered the Javelin anti-armor capability to Ukraine in April 2018 to deter Russian aggression against Ukraine. Continued senior-level engagement and support for Ukrainian self-defense capabilities and institutional reform will help enhance regional security and demonstrate our continued commitment to Ukraine's security and territorial integrity, and a rules-based international order in Europe.

Thanks to the historic agreement this past summer between Greece and North Macedonia, we are poised to welcome NATO's newest member once Allied ratifications are complete. North Macedonia is a consistent contributor to security, regularly deploying forces to Afghanistan and to other United States and NATO-led exercises, and the Alliance will be stronger with North Macedonia as a full member.

The EU has moved to enact multiple defense reforms and initiatives in an attempt to create efficiencies and commonalities in European defense. These include the Coordinated Annual Review on Defense, which serves as the basis for preparing the EU's long-term Capability Development Plan and identifying defense and investment capability shortfalls; the European Defense Fund, which will amplify research and development undertaken by multiple participants to achieve economies of scale and free up funds for additional capability development; and Permanent Structured Cooperation (PESCO), a legal framework to cooperate more intensively on defense issues and jointly develop defense capabilities for EU military operations. NATO continues to work with the EU to ensure these efforts complement rather than duplicate NATO initiatives or undermine NATO as the foundation of Euro-Atlantic security.

#### *Strengthening U.S. Deterrence Posture*

A combat-credible United States deterrence posture in Europe means fielding a force that is lethal, agile, and able to maneuver across the continent, capable of delivering joint fires, flexible enough to operate inside a highly contested environment, integrated with multi-domain capabilities, resilient through redundant systems, protected through integrated air and missile defense systems, and prepared to leverage the full power of our allies and partners. Establishing this force requires us to make resource-informed decisions about the appropriate combination of persistent forces (assigned, forward stationed, or persistent heel-to-toe 365 day rotations), and those that can quickly reach and operate in theater under the Dynamic Force Employment concept.

Each of USEUCOM's Service Component Commands has strengthened our deterrence posture. The capability and lethality of United States Army Europe (USAREUR) forces stationed in Europe were enhanced by persistent armored brigade combat team (ABCT) and Combat Aviation Brigade (CAB) rotations. The forward stationing of long-range fires and air defense units will further improve the lethality and resilience of USAREUR forces. Naval Forces Europe (NAVEUR) executed a no-notice deployment of the Harry S. Truman (HST) Carrier Strike Group (CSG) to the Mediterranean in the summer 2018 and to the North Atlantic in the fall 2018. As part of its deployment, the CSG participated in Trident Juncture 18, which had not involved a CSG in over 20 years. In Eastern Europe, strategic bombers and fourth- and fifth-generation fighters deployed to support United States Air Forces in Europe (USAFE) deterrence missions. Marine Forces Europe (MARFOREUR) sustained rotational elements in both the Black Sea region and Norway. Special Operations Command Europe (SOCEUR) provided rotational teams that helped build the resiliency of allies and partners exposed to Russian malign influence. In support of the Service components, our Nation's Reserve component forces continue to play a critical role in supporting our assurance and deterrence mission, especially through the National Guard State Partnership Program (SPP).

Enhancing our logistical infrastructure and capacity is another key element to fielding a combat-credible force. EDI investments in resilient joint reception, staging, onward movement, and integration (JRSOI) have resulted in infrastructure improvements as well as the Army Prepositioned Stocks (APS) and European Contingency Air Operation Sets (ECAOS). USEUCOM coordinates with USTRANSCOM in the Joint Deployment and Distribution Enterprise (JDDE) to find integrated solutions and facilitate strategic movement and maneuver through our military and commercial partners. The EU is also addressing logistics through its PESCO project focused on military mobility, with the goal of partnering with NATO to better facilitate the movement of troops and equipment across European borders. Furthermore, we are working to enhance munition stocks and ensure interchangeability with NATO munitions to allow flexibility within the Alliance.

We have also strengthened our deterrence and defense through the Joint Force Headquarters Exercise Program, which prepares USEUCOM to effectively carry out its wartime mission and trains our Component Commands to assume Joint Force Component Command and Joint Task Force (JTF) missions. Our exercises maintain and enhance our ability to jointly operate in a multi-domain and multi-functional environment. We execute four Tier 1 exercises—Austere Challenge, Juniper Cobra, Juniper Falcon, and Jackal Stone, along with numerous theater-specific and global integration exercises.

Although we have increased our forces, improved our infrastructure, and successfully executed multiple rotations, deployments, and exercises, a theater not sufficiently set for full-spectrum contingency operations poses increased risk to our ability to compete, deter aggression, and prevail in conflict if necessary.

As for our nuclear forces, the 2018 Nuclear Posture Review validated the importance of maintaining the nuclear triad for strategic stability with Russia and China. Great power competition requires that we maintain a credible strategic deterrence, which includes modernizing its supporting infrastructure. This underwrites U.S. security, diplomacy, and our conventional military operations worldwide.

#### *Countering Violent Extremist Organizations (VEO)*

USEUCOM works directly with our combatant command counterparts and our European partners to identify and counter terrorist threats. We are increasing our intelligence-sharing and strengthening a counter-VEO network that includes NATO, partner nations, and international organizations such as EUROPOL and INTERPOL. Our EU, NATO, and USEUCOM-shared Tri-nodal Community of Action targets existing VEO networks and facilitates expanded intelligence-sharing with law enforcement. European allies provide the United States with critical strategic access for counter-terrorism operations in USAFRICOM and USCENTCOM theaters, and they also deploy their own forces to support U.S.-led operations, including Operation Inherent Resolve. Counter VEO efforts led to a significant decline in directed and enabled attacks across Europe in 2018.

#### *Competing in Cyberspace*

USEUCOM's ongoing efforts to build operational-level cyberspace capabilities are critical to implementing the NDS. USEUCOM benefits from resources and authorities that enable us to partner more closely with USCYBERCOM. We are well-aligned in the planning and conduct of cyber operations to achieve strategic objectives that include deterring Russia, countering misinformation, and defending computer networks. Our Joint Cyber Center (JCC) continues to mature in manning, fa-

cilities, and authorities to actively counter cyber-attacks and help strengthen ally and partner nation cyber capabilities.

#### *Building Intelligence Capacity*

USEUCOM is working alongside our allies and partners to grow our intelligence and analytical capability in order to meet both steady state and contingency planning requirements. We are leveraging language expertise resident in European nations and are utilizing non-traditional ISR platforms to mitigate the global shortage of high-demand, low-density assets. In addition, USEUCOM is leveraging the growing capabilities of the Defense Intelligence Agency (DIA) in sourcing intelligence communication and dissemination platforms, such as the Machine-Assisted Analytic Rapid-Repository System (MARS), Publicly Available Information and Open Source Intelligence (PAI-OSINT), and the Joint Worldwide Intelligence Communications System (JWICS).

#### *Countering Russian Malign Influence*

As we expand the competitive space with Russia, USEUCOM is working with the interagency to effectively compete below the level of armed conflict. A leading effort in this domain of competition is the Russian Influence Group (RIG), jointly led by USEUCOM and our State Department counterparts in the Bureau of European and Eurasian Affairs. The RIG brings together the interagency to share information and collaborate in efforts to counter Russian malign activities in Europe. Separately, United States Special Operations Forces (SOF) are also working with select European allies and partners to enhance their defense institutions, border security, and resilience to Russian malign influence. USEUCOM and USSOCOM work together to employ SOF in Europe, where their unique access and capabilities can be utilized to compete below the level of armed conflict.

#### *Providing Assistance to Israel*

USEUCOM directly supports our Nation's unwavering commitment to the security of Israel. We meet regularly with senior Israeli military leaders, coordinate in planning, and regularly participate in combined exercises. USEUCOM also assists in the defense of Israel through a continuous missile defense presence in the Mediterranean under Operation Sharp Sentry. Israel continues to be the largest recipient of Foreign Military Finance (FMF) funds, and in September 2016, the United States and Israel signed a new Memorandum of Understanding (MOU) that provides \$3.8 billion per year in military assistance over the fiscal year 2019 – fiscal year 2028 period, totaling \$38 billion, enabling Israel to maintain a qualitative military edge over its adversaries.

#### *Enabling Global Operations*

Strategic geographic access, forward basing, and overflight permissions within Europe support multiple combatant commands and enable allied, coalition, and United States operations. European basing and access remains our strategic military “high-ground” for the United States and a key enabler of our global power projection. The bilateral agreements that grant the U.S. these permissions are built on trust and sustained by maintaining relationships with our allies and partners. Last year's United States-led cruise missile strike in Syria is the latest in a number of examples in which European access, basing, and overflight were critical in executing short-notice, contingency operations.

#### *Fiscal Year 2020 Requests*

The European Deterrence Initiative (EDI) provides funding to improve our deterrence posture and execute our deterrent initiatives and activities. First, EDI ensures that we position the right capabilities and refine the necessary infrastructure to respond to adversaries in a timely manner. Second, it underwrites our commitment to article 5 and to the territorial integrity of all NATO nations. Third, EDI increases the capability and readiness of U.S. Forces, NATO allies, and regional partners so we can effectively deter adversary aggression and adventurism. USEUCOM has remained disciplined in nominating EDI projects that are consistent with Congressional guidance and follow five distinct lines of effort: increased presence, exercises and training, enhanced prepositioning, improved infrastructure, and building partnership capacity.

In accordance with your Congressional guidance, we plan and execute EDI as if it were a Future Years Defense Program. This allows us to maintain fiscal and program discipline and prepares the command for when EDI transfers from overseas contingency operations (OCO) to base service budgets.

Our fiscal year 2020 Budget request focuses on: (1) continued implementation of Enhancing Army Prepositioned Stocks to improve responsiveness of ground forces

and provide rapidly deployable combat capability in the event of contingencies; (2) continued implementation of the Air Force Prepositioned Stocks and airfield facilities to improve flexibility and resilience of air forces and provide rapidly deployable combat capability in the event of contingencies; (3) continued enhancement to the Theater's Anti-Submarine Warfare through the procurement of additional equipment and the improvement to theater infrastructure; and (4) enhancing other key capabilities and requirements throughout the theater including, but not limited to: (a) Naval logistics hubs; (b) Integrated Air and Missile Defense; and (c) JRSOI.

#### *Conclusion*

Given the transformation of the European security environment and its impact on United States national security, a strong commitment to the USEUCOM area of responsibility is more important than ever. I would like to thank Congress for their acknowledgement of these threats and their continued support of efforts within the USEUCOM theater. Russia continues to engage in armed aggression in eastern Ukraine, is yet to fulfill Minsk Agreement obligations, maintains an illegal occupation of Crimea with reinforced forces, openly violates International law, to include the Intermediate Nuclear Forces, Conventional Armed Forces in Europe, and Open Skies Treaties, and blocks Vienna Document revisions which are needed to address non-accountability of political-military realities. As witnessed last March with the Skripal poisoning, the Kremlin is willing to act boldly, employing banned military-grade nerve agents against civilian targets on the territory of our ally, contrary to all international norms, expectations of civilized society, and their obligations under the Chemical Weapons Convention (CWC). The growing capability of Iran and its proxies is challenging Israel's security. Violent extremists, though slightly abridged in activities last year, remain intent on destroying a rules-based system of government and will continue to target United States and European civilians and infrastructure.

Fortunately, we are not alone in meeting these challenges. As stated in the NDS, the NATO Alliance will "deter Russian adventurism, defeat terrorists who seek to murder innocents, and address the arc of instability building on NATO's periphery." NATO has been, and will remain, vital to our national security, and a central element in addressing the challenges of the 21st century. Our Trans-Atlantic bond is strengthened by a shared commitment of collective defense, democratic principles, and mutual respect of national sovereignty.

The soldiers, sailors, airmen, marines, coast guardsmen, and civilians at USEUCOM continue to display selfless service and dedication to meet the demands of the European theater. They are the lethal, agile, and resilient force that will protect and defend the Homeland and ensure that Europe remains whole, free, and at peace.

Chairman INHOFE. Thank you, General Scaparrotti.  
General Lyons?

#### **STATEMENT OF GENERAL STEPHEN R. LYONS, USA, COMMANDER, UNITED STATES TRANSPORTATION COMMAND**

General LYONS. Chairman Inhofe, Ranking Member Reed, distinguished Members, it is an honor to testify before you today and represent the men and women of United States Transportation Command.

I am pleased to join General Scaparrotti. He is one of several but very important supported commands of the United States Transportation Command, and his more than 40 years of exceptional leadership remains a stellar example for all of us.

I could not be more proud of the more than 120,000 soldiers, sailors, airmen, and marines and coast guardsmen and civil servants that are assigned to United States Transportation Command. They project and sustain the joint force every day.

The Department's global deployment networks, transportation capacity in air, on land, and over the sea and our global command and control capabilities combine to provide the United States with a strategic competitive advantage unmatched around the world. Somewhere on the globe a TRANSCOM aircraft is touching down

every 3 minutes. TRANSCOM ships are under way. Aerial refueling missions are orbiting overhead, and planes converted to intensive care units are moving our Nation's ill and injured.

I should remind everybody, though, that the key to our success is global access, and I would like to highlight that our allies and likeminded partners that provide access to key regions, support substantial basing, and reinforce DOD's global reach are critical to our mission.

We know we must never take our success for granted. For decades, we could generally deploy our forces when we wanted, assemble them where we wanted, and operate how we wanted. With the rise of great power competition, we can no longer assume that we can operate with impunity.

Before closing, I would like to acknowledge the letters that I received from more than a dozen members of Congress concerning the Defense Personal Property Program, which relocates the household goods for our servicemembers, civilians, and their families. Simply put, I agree. We lack the capacity during peak season, and we lack measures to hold industry accountable. Our most important resource is our people and we owe them better. In consultation with the service secretaries and the service chiefs and on behalf of the Department, TRANSCOM is leading an initiative to restructure our relationship with industry in an effort to improve quality, capacity, and accountability.

In closing, I am proud to support DOD's enduring mission of providing a combat-credible military force to deter war and protect the security of our Nation. Our nation relies on United States Transportation Command to respond with immediate force on short notice and seamlessly transition to project a decisive force when needed. I am fully committed to retaining this strategic competitive advantage.

Thank you for your support to the Department and your support to United States Transportation Command, and I look forward to your questions.

[The prepared statement of General Lyons follows:]

PREPARED STATEMENT BY GENERAL STEPHEN R. LYONS

UNITED STATES TRANSPORTATION COMMAND 2019

*Delivering for our Nation*

United States Transportation Command (USTRANSCOM) is one of ten warfighting combatant commands (CCMD) in the Department of Defense (DOD). Our ability to deliver and sustain combat power anywhere in the world underpins the lethality of the Joint Force. USTRANSCOM's purpose is to project and sustain military power at a time and place of our choosing in support of the National Defense Strategy (NDS). In doing so, we advance American interests and provide our Nation's leaders with strategic flexibility to select from multiple options and create multiple dilemmas for adversaries. No other country in the world possesses the capability to deploy, sustain, and redeploy forces across strategic distances, providing an immediate force and a decisive force when needed.

With global responsibilities and capabilities that transcend air, land, and sea, USTRANSCOM is uniquely postured to fulfill five specific responsibilities within the 2017 Unified Command Plan that include: 1) the DOD's Single Manager for Transportation, 2) the Mobility Joint Force Provider, 3) the DOD Single Manager for Global Patient Movement (GPM), 4) the Joint Deployment and Distribution Coordinator (JDDC) for the Joint Deployment and Distribution Enterprise (JDDE), and 5) providing Joint Enabling Capabilities via the Joint Enabling Capabilities Command (JECC).

USTRANSCOM responsibilities are operationalized and executed through three component commands; Military Surface Deployment and Distribution Command (SDDC), Military Sealift Command (MSC), and Air Mobility Command (AMC); and one subordinate command, the Joint Enabling Capabilities Command (JECC). In addition, the Joint Transportation Reserve Unit (JTRU) provides critical Reserve manpower augmentation to USTRANSCOM headquarters. USTRANSCOM also has a strong connection with commercial industry, sometimes referred to as the '4th Component,' because they provide important augmentation in day-to-day and surge operations.

Our Total Force team is comprised of more than 122,000 Active Duty, National Guard, Reserve, and Civilians that conduct worldwide operations. In addition, industry partners under contract to the U.S. Government provide critical transportation capacity, access to global trade networks, and trained Merchant Mariners to crew U.S. Navy sealift vessels. On an average day in USTRANSCOM, 115 railcars are moving DOD equipment, 33 ships are underway, 1,500 trucks are delivering cargo, an aircraft is taking off or landing around the world every 2.8 minutes with 455 airlift sorties in motion, 47 tanker sorties are refueling receiver aircraft, and 13 airborne patients are under expert medical professionals' care. This activity, although significant, would be dwarfed by a wartime scenario that requires a fully-mobilized deployment enterprise.

#### *Strategic Environment*

The NDS describes the DOD's response to the most complex security environment we have experienced in recent memory, and we expect that power projection will be contested in all domains. For decades, the U.S. enjoyed dominance in every operating domain; we could generally deploy our forces when we wanted, assemble them where we wanted, and operate how we wanted. China, Russia, and to a lesser extent rogue regimes now challenge this ability through competition across all dimensions of power, resulting in long and potentially contested lines of communication for USTRANSCOM. In this operating environment, focused DOD effort, complemented by a whole-of-government effort, is necessary to enable sufficient comparative advantage in mobility and logistics for USTRANSCOM to project military power decisively when our Nation calls.

#### *Projecting the Joint Force Globally*

USTRANSCOM and the broader JDDE are designed to project and sustain military forces around the world. We conduct globally integrated mobility operations through dynamic synchronization of (1) global deployment networks; (2) a global command & control and integration construct to dynamically allocate resources for our Nation's strategic priorities; and (3) transportation and mobility capacity operating across air, land, and sea.

##### *1. Global Deployment Networks*

USTRANSCOM's global networks of nodes and routes provide the Nation with multiple paths to connect the globe and deliver Joint Force capability for supported combatant commanders (CCDR). Power projection capabilities are enabled by en route infrastructure and are metered by a command's ability to receive the force. Power projection is underpinned by diplomatic alignment and geopolitical agreements with allies and partners to enable strategic maneuver of the force and deliver effects to the point of need.

##### *1a. CONUS Power Projection*

CONUS power projection relies upon DOD installations, seaports, railways, and highways that connect them. USTRANSCOM manages several programs on behalf of DOD, in coordination with other government agencies, to ensure our national infrastructure is sufficient to support military mobilization. The Strategic Seaport Program consists of 23 primary seaports and multiple alternate ports. The majority of these ports are active, commercial ports spread across the east, west, and gulf coasts. The Strategic Rail Corridor Network (STRACNET) program connects rail lines with over 120 defense installations and sites of military importance.

The Strategic Highway Network (STRAHNET) includes over 62,000 miles of roadways connecting important military installations to each other and with strategic seaports to facilitate rapid movement of military cargo. DOD power projection requires close coordination with other federal agencies to create a Joint Force conduit from garrison locations to ports of embarkation.

##### *1b. Geopolitical Access*

Assured, international access across air, land, and sea is underpinned by close coordination with like-minded allies and partners to obtain and retain sufficient and resilient en route support networks providing durable comparative advantage that

no competitor can match. Allies and partners provide access to key regions, supporting a substantial basing and logistics system that reinforces the DOD's global reach. Without that system, the DOD would lack options in many contingencies and our responses would require more time to execute at greater cost. For the past 75 years, our allies and partners have joined us in defending freedom, deterring war, and maintaining the rules which underwrite a free and open international order. Strategic investment in international agreements, defense partnerships, and infrastructure provide multiple power projection pathways supporting global deployment.

## *2. Global Command & Control and Integration*

USTRANSCOM's mission transcends traditional geographic combatant command boundaries, and our ability to integrate global mobility operations enables the JDDE to dynamically redirect capacity and operate at the speed of relevance. Global Command and Control allows USTRANSCOM, in support of Joint Force global integration, to apply resources consistent with strategic priorities in time and space. Through global networks and the capability to prioritize across all missions and modes, USTRANSCOM has the ability to source the optimal method of transportation to maximize value and responsiveness for supported commanders.

Ultimately, Global Command & Control and Integration is necessary for USTRANSCOM to achieve decisive warfighting effects. Our adversaries intend to disrupt or deny this capability through cyber attacks, which requires robust defense capabilities for mission assurance.

## *3. Transportation and Mobility Capacity*

Transportation and mobility capacity provides the lift that operates within the global deployment network. USTRANSCOM's assigned mobility forces consist of sealift, aerial refueling, inter-theater airlift, and intra-theater airlift forces. The DOD mobility force mix is spread across the Total Force with approximately 60 percent of the capacity retained in the Guard and Reserve. They are integrated into our day-to-day operations—some as directed through mobilization and others obtained by volunteerism. Our wartime mission success is dependent on the mobilized output of our Guard and Reserve partners. When necessary or when fiscally advantageous, military mobility capacity is augmented by commercial industry, and during wartime, they contribute to Joint Force projection through emergency preparedness programs. The following paragraphs address mission profiles in the areas of sealift, aerial refueling, airlift, patient movement, and industry capacity.

### *3a. Sealift*

The DOD's sealift transportation fleet is expected to transport approximately 90 percent of our military cargo during wartime surge (primarily for the U.S. Army), and it consists of Roll-On/Roll-Off (RO/RO) ships, prepositioned afloat vessels, specialty ships for heavy lift, over-the-shore petroleum distribution ships, and crane support ships. Because the majority of our sealift fleet support is dedicated to wartime requirements, a significant portion is maintained in a Reduced Operating Status that is available for tasking five days after activation. Due to the increased age of the sealift fleet, degraded fleet readiness, and wartime requirements, *sealift is USTRANSCOM's number one readiness concern*. USTRANSCOM needs continued Congressional support for DOD efforts to improve sealift.

Due to the age of DOD vessels and the level of maintenance funding in prior years, the overall health of the Surge Sealift Fleet has deteriorated. The Ready Reserve Force vessels average nearly 44 years old with the oldest in the fleet being 55 years old. In contrast, the average age of U.S.-flag, militarily useful vessels in the commercial sector is approximately 19 years of age, which by international standards is approaching end of service life. The use of steam-propulsion has become obsolete across the competitive global shipping market, however five steamships remain in the U.S.-flag commercial sector, and they are all scheduled to be phased out by 2021. When that occurs, USTRANSCOM will be the sole U.S. operator of steam-powered vessels, with 26 vessels, complicating readiness because of the near extinction of steam-propulsion engineers, parts obsolescence and unavailability, and increased maintenance costs.

The DOD has not met ship availability goals in recent years, and the U.S. Navy is addressing this problem by pursuing a three-pronged, sealift recapitalization strategy through 1) service life extensions where cost effective, 2) acquiring used vessels with Congressional approval, and 3) procuring new sealift vessels in the out years. The fiscal year 2018 and fiscal year 2019 National Defense Authorization Acts (NDAA) authorized the purchase of seven used vessels, and we expect to procure the first two vessels in 2021 and 2022.

Commercial industry plays a critical role for DOD sealift by augmenting capacity, providing access to global trade networks, and generating a supply of qualified pri-



vate sector Merchant Mariners essential to crew every surge sealift ship. Although the U.S. Merchant Mariner pool is currently sufficient to crew the surge sealift fleet, long-term, sustained conflicts could overstress the commercial industry's supply of contract mariners needed for sustainment operations.

USTRANSCOM utilizes commercial industry during day-to-day contracted operations, and if needed in contingencies, we can activate participating companies through the Voluntary Intermodal Sealift Agreement (VISA) to gain access to critical sealift and intermodal capacity. When required, DOD also leverages U.S. commercial industry and foreign-flag shipping for strategic transport of bulk petroleum.

### *3b. Aerial Refueling (AR)*

The AR fleet provides the backbone of rapid U.S. global operations, and "tankers" are the lifeblood of our Joint Force's ability to deploy an immediate force supporting all NDS mission areas. *AR is USTRANSCOM's number two readiness concern.* Today's AR fleet consists of the new KC-46 currently being delivered, the 33 year-old KC-10 that is planned for divestment, and the KC-135 which is a 57-year old airframe programmed to continue flying through mid-2050. Currently, we must manage limited AR capacity and globally position/reposition tankers to meet the highest priority NDS requirements while taking risk in lower priority missions.

Limited fleet capacity, an aging fleet with degraded readiness, and non-mobilized operational utilization challenges pose significant risks to meeting future demands. Approximately 60 percent of the AR force resides in the Air Reserve Component (ARC), requiring careful management to satisfy daily operations and enable the crew force to attain full spectrum readiness. During KC-46 unit conversions, we are working closely with the U.S. Air Force to retain sufficient AR capacity and potentially delay the retirement of KC-135 aircraft in order to maintain sufficient number of aircraft to meet operational requirements. We strongly advocate for continued Congressional support to enhance tanker readiness and balance new aircraft fielding with aging aircraft divestiture in order to retain the necessary number of accessible AR assets over the next decade to ensure USTRANSCOM can meet NDS demands.

### *3c. Airlift*

Airlift forces enable rapid power projection and sustainment of forces around the world. Our strategic airlift force is comprised of C-5s and C-17s that are designed to carry over-sized and out-sized cargo. In addition to strategic lift, C-130s provide intra-theater delivery under austere conditions. USTRANSCOM also enables theater rotary-wing and fixed-wing contract airlift support where there is a demand and security conditions permit. For example, USTRANSCOM routinely provides contracts which support passenger and cargo airlift services, air ambulance, medical evacuation, sling-load cargo operations, and delivery of supplies for USCENTCOM, USAFRICOM, USSOCOM, and USINDOPACOM.

Sixty percent of the military airlift fleet resides in the ARC underscoring our Nation's reliance on Reserve forces and the need to balance crew tempo in non-mobilized operations. We are at the lowest non-mobilized airlift capacity for daily activities since 2003. The military fleet of 'gray tails' is reinforced by commercial augmentation accessed through day-to-day contracts or through the Civil Reserve Air Fleet (CRAF) emergency preparedness program in times of crisis. We are increasing the use of commercial augmentation to balance daily airlift workload with unit readiness and enhance high-end warfighting proficiency of the Mobility Air Force.

### *3d. Global Patient Movement*

The USTRANSCOM patient movement mission is executed by the U.S. Air Force aeromedical evacuation (AE) system and is a unique and vital part of the military mobility enterprise for supported commanders. En route care is provided by aeromedical professionals across the Total Force that are specially trained to operate within the AE system and enabled by nodal staging facilities located at key locations around the globe. These professionals provide time sensitive, fixed-wing, mission critical in-flight care to patients in transit for varying levels of medical care. Highly specialized Critical Care Air Transport Teams (CCATTs) are capable of providing intensive care while airborne, which are growing to meet anticipated demands of operational plans. Global patient movement is a Total Force mission with nearly 90 percent of the total AE structure in the Reserve component to meet mission requirements.

### *3e. Commercial Industry*

The JDDE is inextricably linked to commercial industry capacity, networks, and capabilities to support DOD requirements. From day-to-day operations through wartime mobilization, commercial nodes, rail infrastructure, trucks, aviation, and sealift capabilities are integral to USTRANSCOM's ability to respond and scale to need.

In times of crisis DOD accesses strategic transportation capacity through designated emergency preparedness programs—VISA and CRAF.

The Maritime Security Program (MSP), authorized by Congress and administered by MARAD, provides a stipend for 60 U.S.-flag ships that are contractually committed to be available for national contingencies. These MSP participants contribute to VISA which enables USTRANSCOM assured access to shipping services using U.S.-flag ships and their global transportation networks during contingencies through pre-approved contingency contracts.

Our CRAF contract providers are essential to meet global airlift mobility requirements for both cargo and passenger movements in times of need. This important relationship provides Long-Range International airlift for approximately 40 percent of DOD air cargo and over 90 percent of passenger movements required in operational plans. To incentivize support for this essential program, CRAF enrollment is a prerequisite for U.S. General Services Administration's City Pair Program, which spends approximately \$3 billion annually on government travel. The CRAF program is fully subscribed and provides DOD with aircraft from 25 safety certified airline companies to augment the U.S. Air Force mobility fleet during contingencies and national emergencies.

#### *Cyber Mission Assurance*

Cyberspace is a warfighting domain, without sanctuary, in which capable adversaries continuously attempt to degrade our Nation's ability to project the Joint Force globally. As in all warfighting domains, assuring mission capabilities requires resilience and simultaneous efforts across multiple functions and stakeholders, including defense, interagency, and industry partners. Our actions are underscored by the need to understand adversary intentions, capabilities, and actions targeting the JDDE. USTRANSCOM actively manages mission risk and advances our cyber domain capabilities by understanding our large and complex cyber terrain, which is an evolving endeavor. Defending cyberspace operations, providing for mission assurance through continuity of operations when degraded, and ensuring our ability to conduct uninterrupted Global Command & Control and Integration are paramount to our success.

In addition to operations on Department of Defense Information Networks (DODIN), USTRANSCOM has special interest and equities in the mission assurance of industry partners relying on non-DODIN cyber networks. We are working closely with industry partners and have mandated contract language to improve cyber hygiene and mandate contractor compliance with National Institute of Standards and Technology (NIST) Special Publication 800-171 standards, which contains 110 distinct cybersecurity controls, on commercial networks. Industry partners are required to conduct annual self-assessments and are encouraged to share information with associated timelines for improvement where necessary. NIST controls are just the first step in a longer journey toward commercial industry's cyber mission assurance. Industry partners have been responsive to DOD cyber initiatives and recognize the utility in resilient operations capability in the cyber domain.

#### *Mobility Capabilities and Requirements Study (MCRS)*

At the direction of the Fiscal Year 2018 NDAA, USTRANSCOM collaborated with the Office of the Secretary of Defense Cost Assessment and Program Evaluation (CAPE) to conduct an MCRS assessing the force sufficiency of airlift, AR, and sealift capacity to meet the NDS missions. The study concluded that current, programmed fleets are sufficiently sized in the near-term to meet combatant commander mobility requirements, as defined in previously approved war plans, with elevated risk. The study also highlighted readiness challenges with the reliability of existing sealift vessels and AR tankers that, if not addressed, will lead to increased risk in mobility support to the NDS wartime missions. Specifically, the study reaffirmed the requirement to recapitalize aging U.S. Navy sealift vessels and U.S. Air Force AR fleets. Key enablers for network resiliency and protection of mobility operations were also identified as beneficial to overcome contested environment challenges. As plans evolve, we will continue to assess the mobility enterprise's sufficiency against globally integrated plans to capture the simultaneous demands of future scenarios.

#### *Joint Enabling Capabilities*

The Joint Enabling Capabilities Command provides DOD's mission-tailored joint communications, planning, and public affairs support packages for all CCMDs, accelerating the establishment, organization, and operation of Joint Force headquarters. In fiscal year 2018, the JECC played a critical role supporting DOD globally integrated operations through short notice, limited-duration deployments of over 1,000 joint personnel (70 percent were Reserve and National Guard) to 18 countries supporting 14 requests for forces, five Global Response Force deployments,

two Defense Support to Civilian Authorities assignments, and tailored organic communications networks supporting simultaneous requirements to multiple CCMDs. The JECC is a key enabler, which has provided planning support for Joint Staff campaign plan development, Customs and Border Patrol, Northeast Asia force flow requirements, Hurricane Florence and Michael support, and multiple operations and exercises around the world. It would be expensive and inefficient to embed this level of highly qualified expertise in every CCMD, so this pool of experts is an economy of force that allows the CJCS to weight the joint effort to achieve desired mission outcomes.

*Keeping Pace: Leveraging the Cloud, Data, and Analytics to Meet Evolving Requirements*

USTRANSCOM is on a path to leverage our Data and Analytics strategy to generate competitive global planning and decision-making advantage for the JDDE. Success in this area starts with access to data through an Enterprise Data Environment coupled with advanced analytics, machine learning, and artificial intelligence. Our primary goal in leveraging data and analytics is to enhance our operational insights and foresights to make better decisions in support of Joint Force power projection. Our cloud journey embraces a modern, digital infrastructure which is critical to defend against cyber-attacks as well as provide greater reliability, adaptability, and scalability of the systems that support USTRANSCOM and our components. Innovation and critical thinking are essential at every echelon, and USTRANSCOM will evolve and overcome emerging threats by being agile in our processes, willing to test, rapidly adopt or reject new technologies, and make wise investments to for the future. Leveraging the cloud, data, and analytics is essential to understand, think, and act at the speed of relevance to out-pace our adversaries in an increasingly complex and dynamic operating environment.

*The Defense Personal Property Program (DP3)*

USTRANSCOM is working with military services and is committed to improving relocation process for military members and families. We appreciate Congress's expressed interest in improving the DP3. Each year, the DOD relocates over 400,000 servicemembers, DOD civilians, and their families to assignments across the globe. Roughly 40 percent of these moves occur between May 15 and August 31, which is the period we refer to as 'Peak Season' due to the strain the DOD's assignment cycle places on commercial capacity. Customer satisfaction survey respondents rate their personal property relocation as either satisfactory (9 percent), good (18 percent), or excellent (63 percent). However, 10 percent of respondents report unsatisfactory experiences, which usually correlate with peak seasons.

In response, the Undersecretary of Defense for Personnel and Readiness and the Undersecretary of Defense for Acquisition and Sustainment established a joint working group to identify ways in which DOD could improve moving experience during peak season. As a result, the Services are attempting to spread military moves to off-peak timeframes and are issuing PCS orders earlier to facilitate planning. These are important initiatives that will generate marginal progress to mitigate stress on the moving industry but will not fundamentally improve DP3, a program plagued by diffused responsibilities and accountability, lack of transparency, and insufficient quality capacity to meet peak requirements. In support of the DOD reform initiative, USTRANSCOM is exploring a centralized acquisition approach that would transition DP3 to a single move manager. This concept would improve capacity and curbside service by incentivizing long-term investment by industry, reduce barriers to entry into DOD markets, and establish clear accountability and transparency. If approved, this contract will be in place by 2021.

*Executive Summary*

The Nation relies on USTRANSCOM to project an immediate force tonight and a decisive force when needed and continues to adapt to the most complex security environment in recent history. JDDE power projection utilizes the global deployment network; global command & control and integration; and transportation and mobility capacity, to include commercial industry, to move Joint Force capability in support of national priorities. This capability is underwritten by whole-of-government coordination to secure and sustain access, basing, and diplomatic agreements. To maintain strategic comparative advantage, we have three top mobility concerns to fulfill NDS mission requirements: 1) readiness of the U.S. Navy's aging sealift fleet, 2) readiness and capacity of the U.S. Air Force's air refueling platforms, and 3) cyber domain mission assurance. We appreciate the exceptional teamwork from the Services, combatant commands, the Office of the Secretary of Defense, and Congress. USTRANSCOM's ability to project the Joint Force globally at the time and place of our choosing provides our Nation's leaders with multiple options while pre-

senting multiple dilemmas for potential adversaries. I am extremely proud of our soldiers, sailors, marines, airmen, and coast guardsmen who serve with pride and answer our Nation's call every day.

Together, We Deliver.

Chairman INHOFE. Thank you, General Lyons.

Senator Reed brought up in his opening statement the question as to whether or not, General Scaparrotti, we have the right posture and capabilities in EUCOM to handle the credible deterrence against Russian aggression in Europe. What is your feeling about that?

General SCAPARROTTI. Chairman, thank you.

We have clearly made progress in European Command, thanks to the support of Congress. We have added forces and capabilities. We have improved the readiness. But I would tell you in response to your question that I am not comfortable yet with the deterrent posture that we have in Europe in support of the National Defense Strategy.

Chairman INHOFE. Where are the shortfalls, as you see them?

General SCAPARROTTI. Sir, I have shortfalls in our land component and the depth of forces there—I would like to get into more detail in that in the closed hearing—and in our maritime component as well, both of those in particular when you look at both the building capability and the modernization of the Russian forces that we face there.

Finally of concern is my intelligence, surveillance, and reconnaissance (ISR) capacity given that increasing and growing threat of Russia. I need more ISR. Again, in the closed hearing, I can go into detail.

Chairman INHOFE. Okay. You will have that opportunity at 2:30 today.

General Scaparrotti, we keep hearing from sources that maybe we have some redundancy in our nuclear program. Now, we have been guilty I think for a long period of time in not addressing our nuclear modernization. We now are faced with a situation where we have both Russia and China with what we would call a triad system. I think that people with your background need to respond as to why a triad system is not redundant and is necessary.

General SCAPARROTTI. Well, sir, first of all, our strategic nuclear force is critical to our deterrence and our security, and a triad as a part of that force is important as well. Each one of those legs of the component gives us specific qualities that are somewhat different, and we need those differing qualities just for a safeguard within the component itself, but also to make it complex for our adversaries to determine or believe that they have the opportunity to strike and gain dominance. I think with the triad I am certain that they cannot. I would note that they also have a triad as well.

Chairman INHOFE. Yes, and it needs to be repeated because the suggestions keep coming on.

In Ukraine, Russia is now in their sixth year at war there. We have talked about and we have actually had language in our defense authorization bills to send lethal help to Ukraine, and to my knowledge, there has only been one case where we actually were using lethal assistance. That was in the Javelin.

Can you tell us why we have not been able to successfully do that since the authorization is there?

General SCAPARROTTI. Senator, I think as recommendations for Ukraine, particularly on the lethal side, work its way, it has to go through the policy deliberations that provide authority to deploy those kinds of weapon systems. As you stated, we got the authority with Javelin. The Ukrainians in my view have trained very well for the use of that. They have been responsible in the security and the deployment of it, and we watch that closely. They have handled that well.

There are other systems, sniper systems, ammunition, and perhaps looking at the Kerch Straits, perhaps consideration for naval systems as well here in the future as we move forward.

Chairman INHOFE. Well, we have an authorization bill coming up. Is this something that you think that we might need some more language on?

General SCAPARROTTI. Well, as you will see, I will have recommendations for that.

Chairman INHOFE. Good.

General SCAPARROTTI. I would like consideration of those recommendations.

Chairman INHOFE. Okay. I appreciate that.

General LYONS, I know there is a problem in trying to get all the service materials transported out where they are needed, and recently there has been some suggestion that maybe some of that should be contracted out. Now, we have gone through some problems with the housing program recently on contracting out.

Do you have any comments to make about that as being one of the solutions to the problem that we face getting this material out?

General LYONS. Chairman, if you are referring to the joint deployment enterprise, we are heavily linked to industry on multiple levels. If we are referring specifically about the household good program—I think that is what you are referring to, sir?

Chairman INHOFE. That is what I am referring to and that is where the suggestion has come out.

General LYONS. Yes, sir. What I would say on that is that is 100 percent commercial industry. It is not an effort to privatize whatsoever, but it is an effort to restructure our relationship with industry in a way that delivers higher quality capacity and holds carriers and the government accountable.

Chairman INHOFE. Good.

Senator Reed?

Senator REED. Thank you very much, Mr. Chairman.

Again, gentlemen, thank you for your service and for your testimony.

Last March, General Scaparrotti, you testified before the Committee, I do not believe there is an effective unification across the interagency with the energy and the focus that we could attain. Is that still your view?

General SCAPARROTTI. Yes, Senator, it is still my view. We have improved, and Congress, as you know, has committed funding to some of the entities in the interagency to help us with this. But it is still my view.

Senator REED. I presume, based on your response, that we need a synchronized campaign prosecuted in a unified manner across the interagency, which is multiple institutions, to counter Russian hybrid warfare and to deter anything greater than that. Is that accurate?

General SCAPARROTTI. That is correct, Senator. We need a whole-of-government approach to this.

Senator REED. Where are the gaps right now? Where is it that we are not making the investments in your view?

General SCAPARROTTI. Well, I think actually we need to probably get greater focus and energy into actually a strategy, a multifaceted strategy, to counter Russia. As you know, General Gerasimov just made another speech that underscored their view of indirect activity, the use of whole-of-government activities as a part of their spectrum of warfare. We have to approach this in a way that we can counter that and I think specifically within information operations, challenging their disinformation, and cyber areas that we need to continue to press.

Senator REED. That would presumably require State Department activity. Again, I am old enough to recall the Voice of America, which is something that was very pronounced in the 1950s and the 1960s. Those types of very proactive information campaigns—they are not being conducted at this point. Are they?

General SCAPARROTTI. Not in the way that you recall, when I recall, and I think we have the talent to pursue particularly when it goes to underscoring our values, which I think is important.

Senator REED. All of this is designed, obviously, to deter and to disrupt Putin's plans or aspirations, and without it, he has more of an open field. Is that correct?

General SCAPARROTTI. Well, they have a good deal of agility, and they seem to have no constraints on what they are willing to say publicly.

Senator REED. Thank you.

General Lyons, thank you for mentioning in your comments the defense personal property program, DP3. As the Chairman indicated, we are receiving some comments, and I am going to follow up with some specific questions for the record because I think this is an important issue. There is a proposal to move to a single mover manager. Again, this has some echoes of some of the discussions we are having currently about housing issues in the military. We want to be ahead of the game. We will send those questions to you for your response.

Even before you took charge at TRANSCOM, the command was concerned about war planning. For many years, we assumed that we would be operating in a benign atmosphere. We could fly civilian aircraft unprotected. We could move ships in unprotected, et cetera.

Last year, General McDew, your predecessor, hinted that, for example, the KC-46 tanker that we are buying might be too expensive to purchase because the number we would need in a challenge situation to replace and to overmatch the adversary would be significantly more than projected.

As a result, we asked TRANSCOM to produce a mobility requirements study, and the report essentially came back and said there

is no problem with our ability to support contingencies, we have got the right mix. It essentially was disconnected with the comments that I heard, at least my perception of what General McDew was talking about.

What has changed? We all recognize this is going to be a much more hostile environment to move equipment in, and we do not seem to be responding in an appropriate way. Your comments, sir.

General LYONS. Sir, thanks for the question.

I think you are referring to the Mobility Capabilities Requirements Study that the NDAA [National Defense Authorization Act] directed in 2018. That study was directed between the Department and TRANSCOM to look at force sizing and sufficiency of the mobility force against the program essentially out to 2023. We did that and we did that based on a demand signal from the existing plans that exist on the books today.

But I would acknowledge to you today—and I think General McDew was alluding to this—as we emerge our defense planning scenarios to be more reflective of the defense strategy, as we emerge and develop globally integrated plans, which are happening right now in the Joint Staff, we do see the potential for an increased mobility requirement, particularly in the area of aerial refuel, which is the lifeblood of the joint force.

Senator REED. What you sent up to us has been overtaken by events, more or less.

General LYONS. Sir, I would say we still have work to do on the plans on which it is based. The demand signal is emerging right in front of us. We will adapt the study to the plans as they evolve. Yes, sir.

Senator REED. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Senator WICKER?

Senator WICKER. Thank you, Mr. Chairman.

General Scaparrotti and General Lyons, thank you very much for your work, and I think it is clear that we have great leadership in your area of responsibility.

General Scaparrotti, about 3 weeks ago, this Congress sent five delegations, House and Senate, to the Munich Security Conference. That show of force was followed on then by a delegation going to the NATO parliamentary assembly and another delegation going on a week later to the OSCE [Organization for Security and Cooperation in Europe] parliamentary assembly.

Does that volume of participation by House and Senate members send a positive statement? Is it helpful to you in dealing with your friends in Europe—with our friends in Europe?

General SCAPARROTTI. Yes, sir. First, it is very helpful, and it is helpful to us as a nation. You know, at Munich, that was the largest congressional delegation that they have ever had there. It was noted by everyone. That in and of itself is a strong message of commitment to our allies in Europe. Then I would tell you the congressional delegations that traveled during the year to different spots within European Command have a very positive influence, again another sign of commitment and actual discussion about the issues of the day. I routinely get feedback from the chiefs of defense, min-

isters of defense, and others when our congressional delegations visit. I know that it has an impact.

Senator WICKER. Okay. Well, I could guess we could have a debate about whether there is a crisis in NATO. I hope there is not. But I do hope that the strong statement of wanting to be involved was heard. I appreciate your comments in that regard.

General Scaparrotti, you are recommending augmenting our forces in Europe. Specifically with regard to sea power, what are your suggestions? For example, there are four destroyers in Rota, Spain now. Do we need six? What else needs to be done? What specifically can you tell us in an open hearing that would help with regard to our sea power aspect of helping you?

General SCAPARROTTI. Well, as you know, specifically for the maritime component, what we are looking at is an evolving and modernizing Russian fleet, and in the closed hearing, I plan to go through just the changes I have seen in the 3 years that I have been in European Command. If we want to remain dominant in the maritime domain and particularly under sea, which we are today, we have got to continue to modernize, and I think we need to build our capacity.

Specifically for destroyers, yes, I have asked for two more destroyers within EUCOM. I would like to go into a little more detail on that in the closed hearing rather than here. But again, we do need greater capacity, particularly given the modernization and the growth of the Russian fleets in Europe.

Senator WICKER. In addition to the two destroyers, can you tell us publicly what else you are asking for in terms of ships?

General SCAPARROTTI. Well, this primarily has to do with capabilities that deal with the numbers of Russian ships that we see within our theater today and also for anti-submarine warfare. I would like to go into the more detailed piece in the closed hearing.

Senator WICKER. Are we going to need more ships or fewer ships?

General SCAPARROTTI. Well, you know, that is a service question as to how they—

Senator WICKER. In your area.

General SCAPARROTTI. In my area, more. I would like to see at least the rotation of naval component, carrier strike groups, amphibious strike groups at a little better pace than I have seen in the 3 years that I have been in command.

Senator WICKER. General, at the Halifax Security Conference and at the Munich Security Conference, a number of us met individually with the defense minister from Turkey. At the military level, are we doing better with Turkey than it would appear on the front pages of the newspapers? What is the news out of Turkey recently, and is there any good news?

General SCAPARROTTI. Well, I would say, first of all, that we have a good, very strong mil-to-mil relationship with our counterparts in Turkey. I know very well their chief of defense and their minister of defense, who was the chief prior to this, prior to him becoming the minister. We do have some differences, as you know and you can see in the paper. But we have very candid and frank conversations, and we have been very successful at working through mutual interest to this point. Our mil-to-mil relationship, as it reflects in



the deployment of our forces, in my view has improved over the past year. That is what I would hope that our work together will continue to do here as we look at the tough issues we have got to face within European Command.

Senator WICKER. In terms of military-to-military, things are a little better than they were a year ago.

General SCAPARROTTI. They are. They have improved, and I think we have a good candid relationship.

Senator WICKER. Thank you, sir.

Chairman INHOFE. Thank you, Senator Wicker.

Senator KING?

Senator KING. Thank you, Mr. Chairman.

First, General Lyons, I noted your concern about the movement of personal items and want to volunteer as a consultant. Fifty years ago, I worked for Allied Van Lines in this area moving military families. If you need technical assistance, it is a lot better, for example, to move a carton, to pick up a carton of lamp shades than it is books. I learned that the hard way. Anyway, I could not resist. You brought back a lot of memories when you talk about moving furniture for military families.

General Scaparrotti, I know you touched on this, but game out for me what happens if little green men appear in Lithuania or Latvia? Have we war-gamed what happened in the Ukraine and Crimea? How do we respond? It seems to me this is a real challenge for our whole deterrent posture.

General SCAPARROTTI. Yes. We have taken a close look at both what has happened in the past and what we think could potentially happen here in the future.

The first thing I would say is that as a result of that, we have worked with our allies in the Baltics, Poland, Romania, Bulgaria along the eastern border on what we have learned and also on the capabilities that we think we need as an alliance, both them and us, in order to deter this. Our first perspective is what do we do today to ensure that Russia fully understands the commitment of article 5 for an alliance.

Senator KING. But the question is what is the definition of attack. It seems to me that is the gray area that we are in to know when and how to respond when it is not clear that tanks are not rolling across the border.

General SCAPARROTTI. You have hit it on—I mean, the thing that I worry about most—

Senator KING. You can continue with that, you hit it on the head, Senator. I like that in the record.

[Laughter.]

General SCAPARROTTI. Well, you did.

The thing that is difficult is not necessarily an actual attack that you can see coming. It is actually the kind of subversive undermining of both the nation's authority, one of the nations that they are undermining, which is what they do, and other elements of power that are not necessarily military. The military would be one of the last that they want to use. That is the most difficult.

But we also work with our interagency to the point that Senator Reed made. That is the importance of all of our elements of power here. When you can combine 29 nations with their elements of

power in response to Russia's, it is a slam dunk. There is no doubt that we can handle this, and they will be deterred. But we have got to work together.

Senator KING. A question about funding and budgets. We have not seen a budget yet, but there is talk that there will be a significant increase in the military budget but primarily in OCO [Overseas Contingency Operations] as opposed to line items. Give me your thoughts about having money in OCO rather than allocations and authorizations that you can put to work in your AOR [Area of Responsibility].

General SCAPAROTTI. Well, primarily those budgets that come in within the base budgets itself, laid out in a FYDP [Future Years Defense Program], give me greater stability and knowledge of what is coming in the future. Really what we need is predictability. OCO tends to fluctuate each year. I personally underscore the greater predictability we have and stability in our budget as we look forward. Obviously, the more efficient we can be with our funding and the more sure that what we need in terms of force capability, readiness, et cetera, can be planned and we can deliver it.

Senator KING. Thank you. I appreciate that.

General Lyons, you mentioned in your testimony—and it is clear—that a large part of your responsibility is met through civilian enterprises, shipping, airplanes. I know you talked about this, but please outline for us your level of satisfaction and confidence in the cybersecurity of the private sector partners.

General LYONS. Sir, we acknowledge this is a significant challenge. We work very closely with our industry partners. As a matter of fact, we have introduced language into our contracts. We require self-assessments. We do a level of analysis on that, and we work more closely to ensure that their resiliency is improving.

However, I would admit to you that if an advanced, persistent threat actor were on their systems today, it would be problematic. There is no question about that.

Senator KING. Do you red team their systems? Self-analysis does not make me sleep a lot better at night. Do you have a red team capacity where you can mock attack them to show them their vulnerabilities?

General LYONS. No, Senator, we do not.

Senator KING. I would urge you to consider that as an option. In other areas of the government, that has been very effective. It has a way of waking people up when a skull and crossbones appears on the CEO's [Chief Executive Officer]'s computer.

General LYONS. Sir, I agree with that.

Senator KING. Thank you, General.

Thanks, Mr. Chairman.

Chairman INHOFE. Thank you, Senator King.

Senator FISCHER?

Senator FISCHER. Thank you, Mr. Chairman.

General Lyons, as you know, Nebraska is the home of the 155th Air Refueling Wing, and that plays an important role especially during deployment with your command. I am proud of those airmen. I just met with them a couple of weeks ago back in Nebraska.

But my question to you is when we are looking at the challenges and the risks that we are facing in order to meet the future de-

mands—you kind of touched on that earlier—what is the biggest issue you see contributing to the limiting capacity of the fleet?

General LYONS. Ma'am, specifically in the area of aerial refueling?

Senator FISCHER. Yes.

General LYONS. I think you alluded to this. Aerial refueling is the lifeblood of the joint force's ability to project power immediately. There is nothing in the joint force we can do without that capability. I was very pleased to see the Air Force accept the KC-46 and begin that modernization process. I think that is a very important first step.

The other initiatives that the services are working—the service in this case, the Air Force—is improved readiness against the KC-135 fleet and the potential deferment of divestiture of some of those weapon systems so that we do not have a dip in capability over time.

Senator FISCHER. I am happy to hear you say that. As you know, the KC-46—it is online, but it is going to take quite a while to make it an important part of the fleet. As we look at the 135, there are maintenance issues, and we are seeing delays in that.

Are you confident that there is a good balance between Active, Reserve, and Guard when it comes to refueling?

General LYONS. Ma'am, I am. I will defer to the service on the force mix specifically, but I think you know very well we have guardsmen on alert, 2 hours trip alert today. It is a total force effort in everything we are doing. Over 60 percent of our capability does exist in the Guard and Reserve.

Senator FISCHER. What would you offer us as suggestions so that we can mitigate some of the obstacles we are facing with that limited refueling fleet that we have with their capacity? Do you have any suggestions for us?

General LYONS. Well, ma'am, in the near term, it is really about generating higher levels of readiness. In the KC-135 fleet, for example, we are unable to meet that 85 percent goal. The Air Force is working very, very hard to improve that readiness. In the near term, that would generate more tails available for mission.

Senator FISCHER. Thank you.

General Scaparrotti, I would like to ask you about some logistic challenges that I think you face in EUROM. There have been quotes in the past, in fact, from you when you said the expansion of the alliance to include former Eastern Bloc countries has exacerbated the lack of common transportation networks between the newer NATO members in the east and the more established allies in the west. For example, Germany just allows trucks loaded with tanks to be on their highways at night on weekdays. The rails on the Baltic railroads—the gauge is set wider apart than we have in the western standard. It is my understanding trains have to be unloaded and then reloaded near Poland's border with Lithuania.

As we are looking at movement of troops and to be able to respond quickly, to some of the possible challenges that we are looking at in that area, how serious is this issue today? What steps have you taken in order to address that?

General SCAPARROTTI. Well, thank you.

It is true what you stated in terms of the status today in Europe. It is a serious issue because we need to be able to move 360 within Europe with our forces and the allies' as well.

If there is good news, the good news is that, as you know, Congress has supported, particularly through EDI, some of the key infrastructure improvements that we need, particularly in the east, to support our movements, reception of our troops, support of the troops that we put in place there, but also it helps the allies. The allies, as well, are financing, along with many of those projects, things that they should do with regard to airfields, fuel lines, rail, et cetera.

Senator FISCHER. I apologize for interrupting you, but are we trying to facilitate some changes so that our NATO allies can make those changes? Are they working together as well?

General SCAPARROTTI. They are. Within NATO and the EU [European Union] both, NATO had a study of the infrastructure and logistics support that needed to happen. EUCOM was very involved in that. We provided help to them, and we also provided to the EU who did a mobilization study. That has resulted in about \$7 billion the EU is going to invest in logistics and infrastructure over the next 5 or 6 years. Much of what we recommended was, in fact, accepted. We now have a study. We know what our issues are. We have insight within both EU and NATO on that, and we have got to follow up and make sure that that investment goes to the right places and actually makes a difference in military mobility.

Senator FISCHER. To be able to have a rapid response.

General SCAPARROTTI. That is correct.

Senator FISCHER. Thank you, sir.

Chairman INHOFE. Thank you, Senator Fischer.

Senator Peters?

Senator PETERS. Thank you, Mr. Chairman.

To our witnesses, thank you for your testimony and your service over many years.

General Scaparrotti, you are well aware that if there is ever a major conflict in Europe, the first shots are likely to be cyber. They are not going to be kinetic. We have to be prepared for that. I know since the Russian attack against Estonia in 2007, the Baltic countries have been really leaning into this in a pretty major way. Estonia created the Cyber Defense League, established NATO's Cooperative Cyber Defense Center of Excellence, and as you know, Latvia is home to NATO's Strategic Communications Center of Excellence.

But I would like you to give us an update and share some of your thoughts on what you are seeing in the Baltic countries, lessons learned, things that we may want to be replicating in other places around the world.

General SCAPARROTTI. Well, you noted the changes that have taken place. I would add as well that after NATO determined that cyber was in fact a domain, which needed to happen to give me as SACEUR authorities, we now have a cyber center that operates within NATO. It is connected with each of our nations. Most of them are building a cyber capability. You noted the Cyber Center of Excellence, for instance, that I think is a very good one. It is important because it is through that process—that is one of those nodes that we are able to advance lessons learned, do training, en-

sure that we can help with defense within NATO but also to specific nations.

Like anything in cyber, though, it is a very dynamic world. We are facing Russia, who is very agile in this and good at it. We really cannot rest. We have got a lot to do yet in cyber, particularly capacity. We have to build the skills we need to man these centers.

Senator PETERS. You know, one idea that has come to me—and I would love to have your comments on it as we try to provide more resources into that and really leverage some of the State partnerships we have with the National Guard. For example, we have a cyber unit in Michigan, but those around the country as well. I know our partners in the Baltics would love to have more presence of United States Forces in country there as well.

Talk to me a little bit about whether or not it makes sense to have rotations of particularly cyber National Guard units. I mean, this would be good for morale. It would be great for retention. It would be great for recruiting. It would allow them to be at the tip of the spear while exchanging great ideas. Is that something that makes sense to you?

General SCAPARROTTI. It absolutely makes sense, and it is something we are already doing particularly where you have State partnership programs because they have a level of trust that has been built, some over 25 years, and they have that expertise. It helps me in EUCOM because otherwise I pull from my cyber center expertise, and I send that team out to a nation. Here we can rotate forces through from a State with the same expertise and ability to build that capacity. We are actually beginning to do more of that in Europe today.

Senator PETERS. I understand there might be some need for additional funding through the National Guard to do that. Are there adequate resources for you to conduct that program or will you need more?

General SCAPARROTTI. You would have to ask the National Guard for the specific answer to that, but my general response is when you pick up an OPTEMPO [Operational Tempo] like that and you bring them in—generally, for the Guard there is a funding issue, and one of us has to pick that up.

Senator PETERS. We can explore that further because I think that is necessary for us to do that.

General Lyons, I am a former supply corps officer in the U.S. Navy Reserve, and so I think there is a lot of truth in General Omar Bradley's maxim that amateurs talk tactics and professionals study logistics. It is good to have you here.

I wanted you to comment a little bit about a recent Defense Science Board Task Force Survivability Logistics Publication that came out that talked about the decay in logistic readiness was perhaps a result of insufficient war-gaming that incorporated logistics. In a lot of war games, they are typically just wished away. We know professionals cannot wish away logistics or you are in a world of hurt pretty quickly.

Could you comment on that report and give us an update on how you are integrating combatant commanders with exercises so the logistics is an integral part of war-gaming and a real part of war-gaming, not just wished away?

General LYONS. Senator, thanks for the question.

I am familiar with the report. There are efforts actually ongoing now, given the defense strategy and the security environment, that will operate in the future to better connect logistics outcomes, for example, in TRANSCOM's case, mobility outputs and our ability to generate the force with a campaign analysis, which is currently disconnected. We are working with the Department to move in that direction in the future.

Senator PETERS. General Scaparrotti, briefly. I know we are running out of time. But how is that being incorporated in your war-gaming?

General SCAPARROTTI. We work very closely here in terms of our war-gaming and do a transportation feasibility in each one of those. Our planners in fact work with this, either coming back or they come when we do our war planning. That is just a standard part of what we do.

Senator PETERS. You do not think it is just being wished away—the logistics challenges and the war-gaming?

General SCAPARROTTI. No, I do not. In fact, if anything, we have leaned into this trying to be very factual about what our problems will be, particularly with respect to those in Europe, as we mentioned earlier.

Senator PETERS. Great. Thank you, gentlemen.

Chairman INHOFE. Thank you, Senator Peters.

Senator Cotton?

Senator COTTON. Thank you, Mr. Chairman.

Thank you, gentlemen. General Scaparrotti, welcome to your last hearing and, General Lyons, to your first hearing. I am sure there were no jokes made at General Lyons' expense before this hearing began by General Scaparrotti.

General Lyons, with that smile on your face, I would like to address some issues I have heard from logistics companies, including some in Arkansas, dealing not just with your command but with the Federal Government as a whole, but obviously, your command is one of the largest if not the largest in the entire government when it comes to moving things and equipment. They express frustrations with the kind of inscrutability or perplexed at the bureaucratic challenges of dealing with the government. A lot of these companies are either run by veterans or they have a large veteran workforce, given the training that the military gives its personnel in logistics. They would like to work more with the government and with TRANSCOM in particular. They just sometimes find it to be a challenge.

What kind of working groups, if any, does TRANSCOM have with private industry to try to make what you do more transparent to them so they can better serve our personnel through your command?

General LYONS. Senator, it is a great question. We are inextricably linked in our relationship with industry and their ability to generate the force.

We have a relationship with our industry partners at multiple echelons, all the way from action officer to executive working groups that my three-star deputy leads. I also meet at least two times a year with the senior executives from our industry partners.

I acknowledge your point that from time to time, based on our federal acquisition regulations, it can be a bit of an obstacle to work with the government. We try to minimize that as much as possible, and in fact, that is really, Senator, what is driving some of our restructure initiatives on the household goods side of the house to open up the market to more capacity.

Senator COTTON. Good. I would just like to encourage that kind of linkage to continue. As the logistics industry changes so rapidly through the use of information technology, the more connections you can have to private sector leaders and to the people who are out doing this on the front lines I think it will just be beneficial to the personnel that you are serving on the front lines, whether it is moving household goods in the summer months or getting material down range as well. I would like to have my office continue to work with your command to try to facilitate some of those conversations.

General LYONS. Sir, that will be great. Thank you.

Senator COTTON. General Scaparrotti, I noted with great interest that Vladimir Putin yesterday directed Russia to withdraw from the Intermediate-Range Nuclear Forces [INF] Treaty, which I find somewhat ironic since they have been violating their commitments under the INF Treaty for the last 10 years. Do you have any thoughts on that news?

General SCAPARROTTI. It would only be to underscore what you just suggested and that was the fact that they left the INF Treaty some time ago, years ago, by very deliberately producing a weapon in violation, and they have been deploying that weapon.

Senator COTTON. The United States Government has publicly recognized these violations under both the Obama administration, and the Trump administration. We recently announced our intent to withdraw from the INF Treaty.

Was there any public opposition from a NATO partner or was it uniform NATO support for the United States' decision to withdraw from that treaty?

General SCAPARROTTI. NATO both in December and February produced very strong statements in support of each step that we took in terms of our withdrawal from the INF Treaty.

I would say that our NATO allies understand that the INF [Treaty] is a very important component to European security from their view. They will emphasize—I am sure you have heard them—with each step they would hope that we would continue to work to bring Russia back into compliance before we are fully out, the 6-month period, or that we would look forward from that then to perhaps a new treaty that would encompass the new weapon systems, et cetera. They very much understand the importance of this, but they did support us strongly—29 nations strongly—in our decision.

Senator COTTON. Thank you.

Obviously, one reason why it is in our national security interest to withdraw from the INF Treaty besides Russia's noncompliance with the treaty is that China has been free to build intermediate-range missiles at unlimited rates for decades now. As you know from your time at United States Forces Korea, that has a significant impact on our security interest in the Pacific region.

But China is not just limited there. It wants to be a global player. I noted with interest last year that the government of Denmark agreed to build some airports at Greenland, which it controls, not exactly considered a traditional EUCOM area, but it is within your area of operations.

What are the implications of Chinese presence if they were to get a foothold, which they were largely denied in that airport construction project last year in the high north?

General SCAPARROTTI. Well, it could have an absolute impact. I mean, I am concerned personally about the strategic investments that we see by China throughout Europe in air and sea ports or vicinities of that in critical technologies and companies that hold that particularly in the high north where you note Greenland and Iceland both are important bodies in that line of communication. I think we need to watch carefully China's investment in these ports. As you know, many of their commercial companies are actually state-owned.

Senator COTTON. Thank you.

General Scaparrotti, I want to thank you for your service to our Nation for over 40 years. I know you have been wearing that fourth star on your shoulder for longer than anyone else in the armed forces right now. You have well earned the retirement that you have ahead of you. But I think I speak for most members of this Committee when we say that we would like to see you back in the employ of Uncle Sam sometime in the future.

Chairman INHOFE. Thank you, Senator Cotton.

Senator Shaheen?

Senator SHAHEEN. Thank you both for being here and for your service to the country.

General Lyons, I want to follow up on some of the concerns that have been raised by Senators Reed and Fischer about the phasing out of our KC-135's and when the KC-46's are going to arrive. It is my understanding that in New Hampshire where we have the 157th Air Refueling Wing that there will be a period of months between the time the 135 is phased out and the 46 is delivered, given that it is already behind schedule.

Can you comment on what we should assume will happen during those months when there is no refueling capacity and whether the intent will be to try and keep the 135's around longer until the delivery of the 46's?

General LYONS. Ma'am, from my perspective, the key issue is to maintain operational capability throughout the conversion. The Air Force is working that very issue. In fact, they are working currently to delay the divestiture of a select number of KC-135's so that we do not have this exorbitant dip in capability over time. The service is working that, ma'am.

Senator SHAHEEN. Should we assume that that is going to happen? I appreciate that the service is working it, but does that mean that we are going to see that extension happen?

General LYONS. Senator, it has been my request. It has been well received by both the air component and the chief. Obviously, it is going to cost some money, and when the money is put into the program, that is when we will know. But the intent is to retain 28 weapon systems beyond their currently scheduled retirement.



Senator SHAHEEN. Thank you.

In terms of Boeing's delivery of the 46's, I know that they have accepted or made a commitment to address some of the concerns that have been expressed about the tankers. Do we know whether that is going to speed up the further delivery, or should we assume that we are going to see further delays?

General LYONS. Ma'am, the decision to deliver I think was a good one. Right now, we are on a pause, as you may know, based on some Boeing issues with a foreign object. I do not have a sense, until that is cleared up, for the impact on the program. But I will talk to the Air Force about that.

Senator SHAHEEN. Thank you. I appreciate that. I am sure that all of us hope that Boeing will do everything they can to make sure those deliveries are done to address the concerns that have been raised.

General Scaparrotti, you mentioned in your testimony the concern about Turkey acquiring the S-400 at the same time they are supposed to take delivery of the F-35's. I know that there has been an effort underway to try and encourage Turkey to look at other alternatives and that there was an offer made early in January for the sale of the Patriot system. They have until the end of March, it is my understanding, to decide whether they are going to take delivery of that or not.

But the question I have is, if Turkey moves forward with the agreement with Russia on the S-400, do we assume that they should receive delivery of F-35's and what does that do to their accessing that technology?

General SCAPARROTTI. Senator, I would say, first of all, if they accept the S-400 and to establish it within Turkey, there is, first of all, an issue that it is not interoperable with NATO systems nor is it interoperable inside of our integrated air missile defense system. That presents one problem.

The second has to do with the F-35. It presents a problem to all of our aircraft, but specifically the F-35 I believe. My best military advice would be that we do not then follow through with the F-35 flying it or working with an ally that is working with Russian systems, particularly air defense systems, with one of our, what I would say, is probably one of our most advanced technological capabilities.

Senator SHAHEEN. I am pleased to hear you say that, but the question I have is I understand that some of the parts for the F-35 are being made in Turkey and what happens to that assembly and who picks up that slack if Turkey cannot receive the F-35.

General SCAPARROTTI. Well, that is one of the issues that is being considered and will be considered I am sure, as you know.

But for them, I would just underscore the fact that this is a huge decision for Turkey. I have talked to them personally as all of our leadership has. It connects in many different ways to the employment and the integration that they have within the system itself, the F-35, but also the FMS [Foreign Military Sales] and other systems that we sell to Turkey as well. I would hope that they would reconsider this one decision on S-400, one system, but potentially forfeit many of the other systems and one of the most important systems that we can provide them.

Senator SHAHEEN. Well, thank you. I share that view. I think Turkey is an important ally, but it is one that we hope to be able to depend on.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Shaheen.

Let me inform you that some of the KC-46's have been delivered. In fact, I flew the right seat of a KC-46 from Seattle, Washington to Altus. It is running fine.

Senator Sullivan?

Senator SULLIVAN. Thank you, Mr. Chairman.

Gentlemen, thank you for being here and your service.

General SCAPARROTTI, I want to talk about a few things. First, there is a narrative that I think has played out a lot in the media that the administration or what you are doing in your capacity is somehow being weak on Russia and Putin. I just want to talk about a few actions that under your leadership we have been taking because is it not true that the one thing that Putin understands more than anything is power. Right? Would you agree with that?

General SCAPARROTTI. I would agree.

Senator SULLIVAN. Power of military forces, energy production, not worth by actual power.

Does it help that we have now our forces deployed in countries like Poland and the Baltics in the European Reassurance Initiative, which this Committee has supported in a bipartisan fashion?

General SCAPARROTTI. Yes, sir, very important.

Senator SULLIVAN. It does not get a lot of press, but my colleague, Senator Ernst, was recently in Ukraine. As you know, the previous administration was reluctant and never helped the Ukrainians with defensive weapon systems that they could use to protect themselves. Under Secretary Mattis' leadership when he got involved, we did provide the Ukrainians the Javelin anti-tank missile system. How is that working out?

General SCAPARROTTI. Senator, first of all, as I said earlier in testimony, they have received the system. I have been impressed with their training and their preparation to utilize it.

Senator SULLIVAN. Do you think that makes Russian T-72 tank drivers in eastern Ukraine a little more nervous?

General SCAPARROTTI. I think it does. I think the fact that they have a Javelin that they can employ and they know how to employ it is a deterrent.

Senator SULLIVAN. Are we seeing any force posture indications that they are taking that into consideration when they are moving those kind of forces? I am talking about the Russian forces.

General SCAPARROTTI. Not directly because we have not employed them right on the line. The Ukrainians have not. But I am sure that they are aware of them, and they take that in consideration in the employment of their forces and where they put them. They know it is a lethal weapon system.

Senator SULLIVAN. Thank you.

I do not know if you mentioned it—I am sorry. I had to step out prior to your testimony. But could you talk a little bit about the Vostok 2018 exercise? My understanding was it involved 300,000 Russian troops, 80 ships, notably 3,200 Chinese troops, including

up to as many as 900 Chinese tanks. Are those reports accurate and should we be concerned about that?

General SCAPAROTTI. Well, first of all, the numbers that they published are higher than what was factually present. I can talk in more detail on this in a classified hearing this afternoon. It was not that large, but it was large. Yes, we should take notice primarily because it was designed for them at a very strategic operational level to be able to command and control large forces in a force-on-force type of exercise scenario. It connected them with multiple of their regional commands specifically in order to practice that. It covered both conventional long-range precision munitions training, as well as nuclear training offset toward the end. It included China, as you noted, which is the first time I can recall them providing forces in a partner training scenario, which is quite unusual. The size of it, the complexity of it, the communications that they demonstrated, the fact that it was a hybrid conventional and nuclear exercise I think is all important.

Senator SULLIVAN. Thank you for that.

General Lyons, you and I had a discussion, and the Chairman I see was just talking about the KC-46 and the deployment of that. I know that is not ultimately your call, but certainly you are an advocate and you have a lot of knowledge. I am going to ask just a couple quick questions that I would just appreciate quick answers to.

But when you look at the places where you would want to deploy that, either CONUS [Continental United States] or OCONUS [Outside Continental United States] decisions, you know, the National Defense Strategy prioritizes great power competition with China and Russia, decisive action against North Korea, would it make sense to place KC-46's in a part of an American territory, State, or otherwise as closely proximate to those places?

General LYONS. Senator, just to be clear, Alaska is clearly a strategic location.

Senator SULLIVAN. You are getting to my punch line already. I have not even gone through the list. Let me go through the list.

We are close to all those places. We are the only State where you are actually right at the seams of EUCOM, PACOM [United States Pacific Command], NORTHCOM [United States Northern Command], STRATCOM. The State of Alaska is in the seams of every one of those. The OPLANs [Military Operation Plans] that support contingencies all focus on Alaska. It has the fourth largest fuel storage area of the Air Force in any place in the world. It is going to have over 100 fifth generation fighters in the next 2 years. One hundred. No other place on planet earth will have 100 combat-coded fifth gen fighters. It has the existing infrastructure to support aerial refueling operations. JPARC [Joint Pacific Alaska Range Complex] will be the best training place for fifth gen aircraft anywhere in the world.

Is your advocating for the KC-46—I mean, of course, I am advocating for the State I represent, but I would not do it unless I thought it made 100 percent strategic sense. Just give me your thoughts on that very quickly.

General LYONS. Sir, I know the Air Force is still developing the basing plan. It is not complete yet, particularly in the future years.

I do have confidence that they will look completely at the operational range and capability to be able to swing and give us the flexibility in TRANSCOM to employ that important weapon system. I am sure that Alaska is part of that discussion. I just do not know the details, sir.

Senator SULLIVAN. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Sullivan.

Senator Duckworth?

Senator DUCKWORTH. Thank you, Mr. Chairman. I hope on that right-seat ride, you did not try to get them to do a hammerhead or anything, did you, with any aerobatic maneuvers?

[Laughter.]

Senator DUCKWORTH. Stay within the restrictions.

Gentlemen, thank you so much for your participation today.

General Scaparrotti, I want to return to the discussion about logistics challenges especially in the Eastern European area. Illinois National Guard has been the sponsor in the State Partnership for Peace program with the nation of Poland for 28 years now I believe—27-plus years. Through my service, I am somewhat familiar with the challenges that we face there.

Could you update us on how the establishment of the NATO Joint Support and Enabling Command [JSEC] is going? Let us remind us of why it was created and what it will better enable you to do in theater to respond to Russian aggression. When will this command be fully operational?

General SCAPARROTTI. The establishment of JSEC, as you called it, is moving I think on timeline. It is actually ahead of pace in my view. The Germans who were the framework nation for this headquarters in Ulm, Germany have—in my view they have really leaned into this. They have already got their commander designated. They have a portion of the staff there. They have been present in my headquarters in SHAPE [Supreme Headquarters Allied Powers Europe] to do the further planning that needs to take place to ensure that it is right-sized, to make sure that the planning, the understandings, roles, and responsibilities are correct. That is really the piece that we are doing right now, but it is moving along very well.

This fall is IOC [Initial Operational Capability], and it is another year before it would be fully operational. We have got some time here before it would be fully operational. But I would say to you that I think they will be ahead of that in terms of real output. They are already making a difference in terms of our logistics planning with other logistics commands within the headquarters and throughout the component. I think they will actually be leaning into that before they are actually fully established, so to speak.

Why did we set that up? Primarily because in a European environment where we have got to be able to support and move 360, not just to the eastern border, but north to the high north, south, and west with a threat that is actually 360 and then we needed to protect the central lines of communication, critical ports, sea-ports, and infrastructure in doing that because as has been testified to here by General Lyons, we are now in a contested environment. We needed a headquarters that both looked logistically, as

well as protection of those key assets. That is really why we stood up that command, and it is well placed being in kind of the heartland of Europe, so to speak, in Germany.

It is a very important step for NATO to take, and I think it demonstrates NATO's focus on making sure that it will be relevant for the environment that we are in today.

Senator DUCKWORTH. Thank you, General.

General Lyons, how would TRANSCOM plug into the JSEC, and has this been tested yet? I mean, how would you plug in during conflict, for example, and have we tested it?

General LYONS. Senator, first let me tell you thank you for your understanding of logistics and the importance of logistics to warfighting. I greatly appreciate that.

I have actually been to Europe several times, and I met with the leadership that were developing the JSEC and I understand that concept very well. I think it is a great initiative that General Scaparrotti and his team are moving out on.

I do not know that we plug in directly. We plug in directly to his EUCOM headquarters through a European deployment and distribution operations center and then across at echelon to include his headquarters, and we would take the signals that he would be sending on his priorities for mobility and then meter them accordingly. Then he would have the role then to integrate that from a coalition perspective.

Senator DUCKWORTH. Thank you.

With that, I would like to return, General Scaparrotti to an understanding of sealift. We had a discussion earlier today. I understand that recently NATO reactivated its Atlantic Command to guard the sea lanes of approach into Europe in the event of war.

Can you describe for me in general terms the amount of sealift that would be required to move significant United States Forces to Europe in the event of conflict? Are you comfortable with the amount of sealift at your disposal right now in the event of a conflict?

General SCAPARROTTI. Well, Senator, when we go to the closed session, I can probably get into more detail on that. But I would say it is significant. Because of the types of forces I move—I think Steve would agree that we rely on sealift largely for a lot of that bulk and heavy movement.

You know, I am aware of the challenges to particularly our Reserve Force for naval forces and our commercial support. That is all important if we had a full conflict in Europe. I would just underscore the importance of funding that and making sure that we have the readiness in the right place because we will rely on it heavily for any crisis in Europe.

Senator DUCKWORTH. Thank you. We will probably try to follow up in the session later today. Thank you, gentlemen.

Chairman INHOFE. Thank you, Senator Duckworth.

Let me just, since you brought up the KC-46, remind all of us here that is replacing eventually the KC-135. The first KC-135 that was delivered to Altus Air Force Base was in 1959. It has been operating for 60 years. It gives you an idea of the significance of the KC-46 to the distant future of that capability.

Senator Hawley?

Senator HAWLEY. Thank you, Mr. Chairman.

General Scaparrotti, General Lyons, thank you both for being here. Thank you for your exemplary service, and thank you to the men and women under your command.

General Scaparrotti, if I could just start with you, I want to talk a little bit about the NDS Strategy Commission. The NDS Commission, various RAND studies, and others have clearly indicated that we are not optimally postured to deal with a Russian assault into the Baltics in particular. The NDS clearly states that the joint force has got to be prepared to blunt this assault and to prevent a Russian fait accompli.

My question is building on the positive work in the previous years, the European Defense Initiatives, and other activities, could you give us a progress report? I understand you may want to save some of this for the closed session, but can you give us a progress report on our force posturing developments to prevent that fait accompli? Where are we on this in your judgment?

General SCAPARROTTI. We have made clear progress as I stated up front in this regard, and largely thankful to the support of Congress, particularly EDI, in funding the changes that we need to make. We made progress, I would tell you, in every domain that is important to that, including cyber in that, for instance. But we are not postured yet where we need to be, and as you cited, the studies that have come out recently have underscored that. In a closed session, I would like the opportunity to talk to you more specifically about where we are at and what we are short.

But, for instance, you know, we now have rotational brigades, an armored brigade, a CAB [Combat Aviation Brigade] in the east, a battalion task force as a part of NATO. We have rotational air forces. We have rotational bomber forces. We have had twice now—well, three times actually—a carrier strike group once already in the high north for the first time in 20 years. At the beginning of my time here, 3 years ago, we were moving one brigade at a time and challenged. A month ago, I moved four brigades, two armored, two CABs, simultaneously in Europe. That is the progress. Thanks to TRANSCOM and others that help us do the work, provide the assets, increase the infrastructure to make that happen. Clearly progress, but we are not there yet.

Senator HAWLEY. Again with the reservation I realize you wanted to save the specifics for the closed session, I think it is important to get some of this on the record as we are about to, as you know, go into the authorization season here and then the appropriations season where we will be needing to make the case for authorizing and then spending what is necessary in order to get you what you need.

Can you give us an overview at least about what more you think we need, generally speaking, to get you to the posture that the NDS recommends?

General SCAPARROTTI. Well, first of all, we will start with the cyber domain. There is a plan and an increase in my cyber capability, and I have been increased by CYBERCOM as a priority. That has happened. But I still have personnel and skills in the numbers of around 50 personnel yet. It would be very helpful to have them in place. That is one of those.

If you go to the land component, I need greater land component capability not only in armored elements but with my enablers, and I will go into more detail on that in the other.

I have mentioned maritime, greater capacity there, as well as specific capabilities to stay ahead of, frankly, the modernization that we see in Russia's maritime forces.

The Air Force is presently on a rotational basis providing fifth gen aircraft to me, bomber aircraft, et cetera, which we need to employ for a deterrent factor and also to ensure our readiness and capability. I am looking forward to those being stationed permanently in some numbers within Europe as well.

Senator HAWLEY. Thank you.

Let me ask you about our European allies. Can you give us a report—you mentioned some of this in your written testimony. Can you give us a report on the work with our European allies especially Germany to ensure that they are meeting their NATO commitments and have a plan to do so going forward?

General SCAPAROTTI. Well, as you know, we have been working with all of our allies, and I mentioned up front the cash contribution. Since 2016, our allies have put another \$41 billion into defense. By 2020, it will be \$100 billion based on the plans that they had to provide here in December. Their contributions have stepped up. We asked for greater force structure to assist in Afghanistan. Our allies responded. I think when you look at that, they are clearly responding, but we have a ways to go yet.

Germany in particular has responded as well. They plan to bring their defense investment up to 1.5 percent. That is not 2 percent yet. That is where it needs to be, but they are clearly refocused on their contribution, as well as their readiness. As you know, they have got some readiness issues. That has been in the paper. I believe that is true from what I have seen.

But they are providing the very high joint task force, for instance, for NATO, and they made sure that they produced a force that was ready and credible. I have seen it. We operated with that force in Trident Juncture, for instance. They understand the issue and they are working hard to get their readiness up to where it is going to be. But they spent a good deal of time, in particular, as many of the other—we did as well, but European nations where they rested and they did not invest in their defense, and now they are having to invest heavily to get back up on step.

Senator HAWLEY. Great. Thank you, General.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hawley.

Senator Warren?

Senator WARREN. Thank you, Mr. Chairman.

I want to discuss the national security threat that cannot be addressed by traditional military power at all, and that is climate change. The unclassified worldwide threat assessment by the Director of National Intelligence said—and I am going to quote here—global environmental and ecological degradation, as well as climate change, are likely to fuel competition for resources, economic distress, and social discontent through 2019 and beyond. End quote.

That assessment also said, quote, damage to communication, energy, and transportation infrastructure could affect low-lying military bases, inflict economic costs, and cause human displacement and loss of life.

I have asked this question to other combatant commanders, so I want to make sure that I get this on the record. General Scaparrotti and General Lyons, do you agree with the intelligence community's assessment of the climate change threat?

General SCAPARROTTI. I do, and I believe that, as you noted, much of this will be drivers for potential conflict or at least very difficult situations that nations have to deal with.

The second, I would point you to the high north and that is the increasing opening of the northern sea route and the challenges that presents from a security perspective.

Senator WARREN. Yes. Thank you.

General Lyons, do you also agree?

General LYONS. Ma'am, I agree. These are sources of conflict, and we certainly have to be prepared to respond to them.

Senator WARREN. Good.

Could I then ask each of you very briefly because we have very limited time just to describe how climate change impacts your operations in your commands and what you are doing to adapt to these changes? General Scaparrotti, would you like to start?

General SCAPARROTTI. Well, I think the most apparent to me is the one that I noted and that is in the Arctic. We already are seeing longer periods of time that the northern sea route is open. As a part of that, there is an increased interest in commercial and resource capabilities there. China, for instance, is pressing to get into the high north and have some presence there. That creates competition. Russia, because that northern sea route is the one that follows most closely to their borders, has increased—reopened 10 of their airports there. They now have radar systems up. They have begun to move, on periodic times, different weapon systems up there for control of the area. Those are all things—

Senator WARREN. That is serious.

General SCAPARROTTI.—that I have to bring into my planning.

Senator WARREN. What has been your response to that, just briefly?

General SCAPARROTTI. Briefly? We have updated our plans as a result of that. We have had to change the posture of some of our forces. We have changed our operational patterns so that we, in fact, deter and we send a signal of the importance of the Arctic to us. Those are just some of the ways day to day that we have made changes in our normal routine in order to demonstrate significance and capability in the Arctic.

Senator WARREN. Thank you.

General Lyons?

General LYONS. Ma'am, anything that degrades our ability to project and sustain power globally at our time and place of choosing is a concern. We know that we have to operate in any conditions whatsoever.

Senator WARREN. What are you doing by way of response?

General LYONS. Ma'am, in other words, in our planning and so forth, we consider all environments. But more specific to General



Scap's point about the more scientific piece of it is, that is a little bit out of my area of expertise.

Senator WARREN. Fair enough. I really was not looking for so much of a scientific answer, but as General Scaparrotti said, how you have to kind of readjust where you are and what you are doing.

If I can, I just want to say adapting to climate change impacts our military readiness, and I am glad you both take this threat seriously. I appreciate that.

In my remaining time, I just want to ask very briefly, if I can, about the INF Treaty. We all know this is a landmark arms control treaty with Russia negotiated in 1987 by President Ronald Reagan. The treaty prohibits both of our countries from testing and deploying ground-launched ballistic and cruise missiles with a range of 500 to 5,500 kilometers. Yes, we know that Russia is in violation of the treaty since 2014, but rather than use the mechanisms within the treaty or other tools available to us to try to get Russia back into compliance, the administration is abandoning the treaty entirely.

I just want to ask what is our plan to prevent Russia from building more INF Treaty-prohibited missiles in the absence of the treaty? Do we have a plan here? General Lyons?

General LYONS. Ma'am, I would have to defer on that. That is a little bit out of my area of expertise.

Senator WARREN. Okay.

General Scaparrotti?

General SCAPARROTTI. Well, Senator, I think that we are still in a 6-month period here where we are looking at what our options are. We, in fact, have told our allies in NATO that we will do the planning in collaboration with them. We have begun that. I do not know that we have a plan today. I know that we are working on what we think that plan might be. I personally think that it has to be multi-dimensional. It has to be across all of our domains, and it has to be whole-of-government in order to respond to that.

I would finally say that from my point of view that when you have a peer competitor, particularly a modernizing one, that will be challenging us, such as Russia, that we should look toward treaty capabilities in order to provide some stability, to provide signals and communications and limits that we understand that we can work from.

Senator WARREN. Well, I am glad to hear that you are trying to work with our allies. I think the Polish, for example, have said that they are concerned about missiles on their land. I just urge you to think about, instead of withdrawing from the INF Treaty, whether or not we should be redoubling our efforts to bring Russia back into compliance with the treaty. We know that Putin cannot be trusted, but we have a responsibility to prevent a dangerous and expensive arms race in Europe and without the treaty I am worried that is what we are doing.

Chairman INHOFE. Thank you, Senator Warren.

Senator WARREN. I apologize.

Chairman INHOFE. Senator Tillis?

Senator TILLIS. Thank you, Mr. Chairman.

Thank you both, gentlemen, for being here.

General Lyons, I was down at Fort Bragg this past Friday with Secretary Esper, and we were talking with folks there who are in unacceptable housing conditions.

We also talked a little bit—and I have had a number of discussions in the past with families about some of their household belongings being moved, some of the bottlenecks, and unsatisfactory service.

I like the idea of taking the personal property program into what I would consider to be one throat to choke sort of model. But maybe if you could briefly describe where you think this is going to end up. I really want to make sure that we get this right in terms of accountability, predictability, and customer satisfaction so that any relationship we create with this confederation of movers—I get that you are going to have a consolidator, but you are still going to have a number of individual providers. We have got to get the compensation and accountability models right so that we do not end up here honestly trying to do a good thing and ending up where we are with the housing situation.

Can you give me some assurances or briefly describe how that is going to work?

General LYONS. Senator, I can. This is definitely not a privatization effort by any stretch of the imagination. As a matter of fact, what I have offered to the service secretaries and service chiefs is instead of this completely de-aggregated, diffuse value chain of very little centralized responsibility even inside the government, I would look at them and I would say hold me accountable. Allow me to develop an acquisition tool to hold industry accountable. We have a track record of being able to do that, as a matter, in other parts of the defense personal property program like personal-owned vehicles. We do this today.

I do know, Senator, that there is some concern in industry. We get a lot of feedback from industry. Some are very, very supportive where we are headed. They see opportunities to enter the market. We want to grow the market. Others are concerned about potential change. What I tell them and what I have seen in our past acquisitions that have been similar is that below the level, we still need the same or greater number of movers out there who just need a level of quality and accountability in the system.

Senator TILLIS. And some peaking capability.

I would be very interested in maybe having the right people in your organization meet with my staff to describe what that really looks like operationally. In a simplistic way, it would almost be this baseline guarantee of capacity with some peaking capability that is almost uber-like in terms of having the household know that they are going to get their things moved at the appropriate time hopefully to a house that is in much better condition than some of the ones that I saw down at Fort Bragg on Friday, a separate issue and not your problem.

General Scaparrotti, I appreciate the time you spent in the office yesterday. I appreciate your years, decades of service, and I associate myself with Senator Cotton's comments that if you take your uniform off, we hope that does not mean that we will not see you back here serving in some other capacity.

I am going to save a lot of my questions for the classified briefly, but I do want to highlight my concern with the Turkey situation, particularly with the S-400's. I know—and you gave a great briefing on where we are working together on a legitimate homeland security threat that they are dealing with with the PKK [Kurdistan Worker's Party]. On the one hand, we are trying to partner and continue to build on that relationship.

Turkey is a vitally important NATO partner in the most complicated part of the world. I understand some of their behaviors, but I do not understand under any circumstances why on earth they would be considering purchasing a missile defense system that would not be interoperable, that would require the deployment of capabilities on the ground in Turkey that would threaten the presence of our Joint Strike Fighter, why on earth they would be considering a decision that would make us have to rethink whether or not they can actually even be in the supply chain for the Joint Strike Fighter, let alone deploying assets that are scheduled to be there in 2020, but even raising doubts about whether or not we can legitimately manufacture and distribute parts in the supply chain for the production of Joint Strike Fighters.

The message that I want to send to the Turkish leadership is this is an area—Congress got educated quite a bit on the Joint Strike Fighter and on Turkey last year when we were dealing with a matter involving a pastor from my State. I think we are very well briefed on it now and some of the risks there. I would just encourage the Turkish Government and the leadership to recognize that they should not have this one decision put all the other great things that we are doing, that we will do in the future in the balance and have Congress potentially in a position where we would have to act.

General SCAPARROTTI. Senator, thank you. As you know, we, the United States, have a team there today talking to the Turks, and I am sure a very candid conversation about the S-400 and the potential consequences are a part of that conversation.

Chairman INHOFE. Thank you, Senator Tillis.

Senator Blumenthal?

Senator BLUMENTHAL. Thank you, Mr. Chairman.

General Lyons, let me first ask you a question about privatization. As you are familiar, as you know, Army veteran and military spouse Megan Harless recently wrote an op-ed that criticized TRANSCOM's plan to privatize the military move program. She stated that the military move advisory panel convened by TRANSCOM has not been consulted regarding privatization, and TRANSCOM also has not solicited feedback from military families or from the moving industry.

Do military families support privatization? Does industry support it?

General LYONS. Senator, there is no initiative whatsoever to privatize the household goods industry. This is a 100 percent—every task inside that value chain is conducted by commercial industry today.

What we are proposing, however, is a restructure of how the government approaches this with industry. To be honest with you, Senator, I have received more letters on this particular issue in the

6 months that I have been Commander than any other issue that TRANSCOM deals with. In fact, I agree with the criticisms of the program. I think we need to take action to remedy the program as it exists today. We have been studying this since 1996.

Senator BLUMENTHAL. Will you commit to prioritizing the needs of those military families in any kinds of reforms that you may consider?

General LYONS. Sir, there is no question about it. This is all about improving curbside service for military families. That is our north star. That is the only reason that we are doing this, sir.

Senator BLUMENTHAL. Will you commit to consulting with the TRANSCOM advisory panel?

General LYONS. Yes, sir. We consult regularly with industry. Some very much support where we are headed, and some are very, very concerned.

I do know, Senator, that the moving associations, for example, are drafting language to insert in the NDAA that would delay any kind of progress in this area, perhaps to study it for 2 more years. I can just say I really think that would be a gut punch for our military families.

Senator BLUMENTHAL. General Scaparrotti, talking about the Ukraine, is there evidence of the Russians meddling in the Ukrainian elections that are planned?

General SCAPARROTTI. Well, in terms of their influence, they certainly are supporting the parties where they believe they can have the most influence and those individuals. There is certainly disinformation as a part of that. They are playing in that way. I think, for instance, Russia's seizure of their ships and their 24 sailors and the fact that they have not been released is likely also another way that they have some leverage and influence on the outcome of that election.

Senator BLUMENTHAL. Has there been an increase in disinformation or other Russian interference?

General SCAPARROTTI. Well, just generally it has been targeted at undermining the present government and the president.

Senator BLUMENTHAL. What is your command or other American resources doing to counter it?

General SCAPARROTTI. Well, both not only my command—I deal with the military aspects of this, but there are others diplomatically, for instance, in State that we are working with in this regard. But we do have personnel there that support in military means their defense of disinformation, appropriate information, and cyber defense as well. In the closed hearing, I can be more specific about precisely what we are doing.

Senator BLUMENTHAL. Just to reassure the American people—and that is the purpose of an open hearing really to inform the American people—can you provide some description of what is being done in the cyber domain by your command to bolster the Ukrainian defenses?

General SCAPARROTTI. Well, I guess I would underscore, first of all, what we do with the others is just to make sure that this is a free and fair election. Within the cyber domain, mine is to help them with their defense of their systems. It is not selected by any

means at all. It is primarily defense and help them to understand how they ensure that they do, in fact, have a free and fair election.

Senator BLUMENTHAL. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Blumenthal.

Senator Blackburn?

Senator BLACKBURN. Thank you, Mr. Chairman.

I will tell you it has been such a pleasure for me to go through this series of hearings with our different commands in your area of responsibility and hear repeatedly from you all some of the needs and stepping up our game, if you will, dealing with Russia and China and especially with cyber.

General Scaparrotti, I am from Tennessee, and I have got some National Guardsmen that are under your command at this point, folks in the Ukraine and Poland. We appreciate their service, and we appreciate you and the leadership that you have shown throughout your career to our men and women in uniform and to those that are currently under your command.

Let me stay with looking at our enemies, Russia, China, the cyber component, and we will come back to that this afternoon in the briefing. But what I would like to know, General, as you look at Europe and as we talk about the rollout of 5G and you are looking at that European Deterrence Initiative, do you have what you need? Where do we need to be planning forward on that, and how are you approaching the integration and the utilization for really what some of our troops at Fort Campbell—when I talk to some of our special ops guys, 5th Division, 160th, this is very important to them, 5G and the utilization of that, knowing that that is going to help fuel artificial intelligence, et cetera, knowing they are going to use that with some of the ISR capabilities. If you will just touch on that briefly, and then we will explore it a little more this afternoon.

General SCAPARROTTI. Well, first of all, I will just start with the 5G part of this. This is a considerably different capability than what we have today. It is not just a modernization or an upgrade.

Senator BLACKBURN. It is a whole new world. It is like going from analog to digital.

General SCAPARROTTI. That is right. It is a different world. What we have to know is that we have a secure 5G capability. That is one of the reasons that when you now go to our allies, that we have said they need to be very careful about Chinese investment—

Senator BLACKBURN. Yes. No Huawei and no ZTE.

General SCAPARROTTI.—in their telecommunications capabilities because we also want to know that we are secure with our allies that we can act with. There may be an outcome where we cannot connect with our allies unless they change the composition of their systems. We are trying to get ahead of that.

Senator BLACKBURN. Is this an open discussion that you are having?

General SCAPARROTTI. Yes, it is an open discussion.

I would say to you that just to give you an idea of how this has come along, 2 years this would not have been a topic. A year ago, it was starting to come in, and now—

Senator BLACKBURN. It is front and center.

General SCAPARROTTI. Now it is front and center, and we are beginning to have the right conversations as a security issue.

Senator BLACKBURN. Good. That is great.

General Lyons, TRANSCOM has had some problems with some breaches, and I think it was a couple of years ago, Chinese hackers got into the network like 20 times. What you do and with logistics—and we have talked about different points. I think Chairman Wicker brought up Rota, Spain. As you look at the integration and all that comes under you, give me an update on the security of your systems and then how are you dealing with contractors that are a part of your system.

General SCAPARROTTI. Yes, ma'am. As you indicated, this is an area of concern and it is a high priority for the command. I tell folks this is a warfighting domain. There is no one thing that is going to solve this. We have got multiple things going on, everything from just operator discipline, through cyber hygiene, through defense, through infrastructure, and a high level of collaboration with Cyber Command to create conditions to allow us to operate.

As for our industry partners, we are also upping our game there through our contractual language and their compliance with NIST [National Institute of Standards and Technology] standards, basically their assessments and collaboration and information sharing. But that is a much more complex area outside of the DODIN [Department of Defense Information Network] where a level of protection is lower, and that does become a vulnerability in the enterprise.

Senator BLACKBURN. We will talk a little more about that in this afternoon's hearing.

Mr. Chairman, I yield back.

Chairman INHOFE. Thank you, Senator Blackburn.

Senator KAINE?

Senator KAINE. Thank you, Mr. Chair.

Thanks to the witnesses for your service and your testimony.

A House bill to overturn President Trump's emergency declaration is pending before this Committee and will likely be voted on on the floor of the Senate within the next 10 days or so.

There are at least two issues that Senators are grappling with about the bill: one, the question of whether there is an emergency. General O'Shaughnessy of NORTHCOM testified before us last week and said in a very straightforward way there is no military emergency at the border.

But a second issue we are grappling with is where will the money come from. The President has proposed to use \$6 billion from the Pentagon to direct toward this non-military emergency: \$3.5 million of MILCON [Military Construction] funding and \$2.5 billion of drug interdiction monies within the DOD budget.

I want to ask you about these proposals because we are trying to get information about exactly how the moving of the \$6 billion is doing to affect military operations.

Have either of you in your commands been asked to provide lists of MILCON projects that should be either delayed or reduced or eliminated with respect to this particular \$3.5 billion proposal? General Scaparrotti?

General SCAPARROTTI. Not with respect to this proposal, no, sir.

Senator KAINE. General Lyons?

General LYONS. No, sir. But it probably would not be appropriate. TRANSCOM relies on the services for their MILCON.

Senator KAINE. Right, so that you do not have the big MILCON back list that the others do. I understand.

General LYONS. That is correct.

Senator KAINE. General Scaparrotti, you say not with respect to this proposal. I gather what you mean by that is you are often putting together MILCON lists. That would be one of the things you would do in EUCOM is looking at MILCON needs within that command. You have been doing that, but you have not been asked with respect to this proposal what MILCON projects could be reduced, delayed, or eliminated.

General SCAPARROTTI. With respect to the budget as a whole, well prior to this question, we went through the normal process of our discussion within DOD as to what the priorities were across the Department with respect to my MILCON.

Senator KAINE. Right.

General SCAPARROTTI. We had to prioritize. We did delay some, but that was well before this conversation.

Senator KAINE. Do you know if and when a decision is made about where the \$3.5 billion of MILCON projects, which will be affected—do you know whether you will be in that decision loop or whether it will be made by others?

General SCAPARROTTI. I expect I will be in the decision loop within the Department. We have a close relationship with them. We generally would have. No one has discussed it with me, and I am confident they would when and if that should—

Senator KAINE. The “they” would probably be the service secretaries and the SecDef?

General SCAPARROTTI. It would be the service secretary or the SecDef, probably the SecDef as well. I actually talked to the SecDef personally about the potential delay, et cetera that I just told you about as we were going through the budget.

Senator KAINE. Let me ask the second half of the question. The other funding that is suggested could be used is the \$2.5 billion drug interdiction account at the Pentagon. Reporting suggests that there is not \$2.5 billion in that account. There is about \$750 million, of which only \$85 million is available for use right now. There is a suggestion that what the Pentagon would do would be to take monies out of other accounts to fill up the drug interdiction account to \$2.5 billion prior to using it for the emergency proposal that the President has suggested.

Have either of you been involved in any discussions about funds within your bailiwick that might be used to pull into the drug interdiction account?

General SCAPARROTTI. No, Senator, I have not.

Senator KAINE. General Lyons?

General LYONS. No, sir.

Senator KAINE. General Scaparrotti, let me ask you about this. The 70th anniversary of NATO is in April, a really important one. NATO has a headquarters both in Brussels and also in Virginia in the Hampton Roads area. I have a proposal, a bill that is a bipartisan bill, that would stipulate that NATO, a treaty that the Senate

ratified—the U.S. should not unilaterally withdraw from that without either a Senate vote or an act of Congress. The bill is a bipartisan one, and it is meant to send a strong signal of congressional support for the NATO alliance at the 70th anniversary.

Would that message be positively received by our NATO allies?

General SCAPAROTTI. Senator, I believe it would. The votes by Congress that you have taken in the past to reinforce our commitment to our allies have been helpful as well.

Senator KAINE. Great. Thank you.

No further questions. Thanks, Mr. Chair.

Chairman INHOFE. Senator Ernst?

Senator ERNST. Thank you, gentlemen, very much for being here today and willing to answer questions.

Like so many of my colleagues, I do want to make sure that you have the tools and resources necessary to enable you in your missions and make you successful.

As Senator Sullivan mentioned just a little bit earlier, I did recently return from a trip to Ukraine, and during that trip, I was able to see firsthand the Russian aggression that is being exhibited in that region against what is a very important strategic partner to us. Not only do we want to push back against Russia because of Ukraine and Europe but, of course, for many of our other allies around the world as well.

General Scaparrotti, I would like to start with you, sir.

Of course, while I was in Ukraine, the Ukrainians expressed a very strong desire for military assistance, defensive assistance and lethal assistance. Senator Sullivan mentioned that we have provided Javelins to the Ukrainian army.

I met with members of the defense establishment there, as well as members of the Ukrainian parliament, and those that I had the opportunity to meet with in Kiev and also the joint forces headquarters near the eastern front—they really appreciated that assistance.

What more can we do for the Ukrainians in that regard for lethal assistance? Is it just simply more Javelins, or is there additional assistance we can provide?

General SCAPAROTTI. Well, I think personally—and you will see soon here a list. I think it has already been provided to Congress. But as you know, we provide that prior to it being authorized, the actual purchase from the funding that you have given.

But from my point of view, the things that we need to continue is to continue their support for counter-battery, Q-36/37, that they have the assets and the systems that they need to do that well. They have asked us for help in communication at an operational level, and they do have a distinct need for that because while we focus on the line of contact, their chief of defense is also focused on other areas of the country that are a threat, that Russia could present a threat as well. He is trying to determine—he is trying to establish a good communications system for his entire force, as well as just the front.

They have asked us specifically for some assistance to help with sniper proficiency, the right kind of ammo and weapons, grenade launchers.



Then finally the area that I would say is that we need to study how we help their maritime component, their navy, which as you know, is not large to begin with, given the portion of the fleet that Russia took when it annexed Crimea, and they just lost a couple of ships as well in the Kerch Strait. I think there are some areas there that we can help them get this navy back up and begin to supply it with what they believe they need to defend themselves and deter Russia's aggressive actions.

Senator ERNST. I appreciate that very much, sir. Thank you for bringing up the Kerch Strait incident because they are still holding those 24 sailors, as you referenced earlier, and using those sailors as leverage with the elections coming up. I do appreciate that you think we need to do more on the maritime front, not only in assisting them with their navy, but is it possible that we as an American force need to have more of our naval forces in the Black Sea region?

General SCAPARROTTI. Both the United States and NATO has stepped up its presence in the Black Sea. As you know, the Donald Cook just departed yesterday or the day before, and it is the second time that we have had a destroyer in the Black Sea here in the past 2 months. We believe there is a need for that. We have stepped up and our allies have as well. NATO has a fleet right now in the Black Sea.

Senator ERNST. Do you think it is sending a clear message to President Vladimir Putin?

General SCAPARROTTI. I think it is. I mean, they frankly do not like us in the Black Sea. It is international waters and we should sail and fly there.

Senator ERNST. That is a great thing, and I love it. Thank you, sir.

The presidential elections are coming up. I will just close with this. I think it was very important that I take this trip to Ukraine and spend time with the folks within their defense sector and also spent time with some of their brand new special operations forces that had just graduated from their Ukrainian Q Course, which is run by our American special operations forces. I appreciate what we are doing in that region, sir. I appreciate your leadership in that region.

Gentlemen, thank you very much for being here today.

Chairman INHOFE. Thank you, Senator Ernst.

Senator Jones?

Senator JONES. Thank you, Mr. Chairman.

Thank you both for being here today and for your service. General Scaparrotti, I appreciated you coming by the office the other day. I enjoyed that very much.

I also appreciated your candid answers concerning climate change. I think we sometimes get caught up in the political discussions about climate and not really focus on the real world consequences that are affecting us today.

Earlier today, you spoke with Senator Cotton about China's investments in your AOR. If you can, I would like to have you discuss what, if any, actions EUCOM may be taking to counter China's activities in Europe today.

General SCAPARROTTI. Well, most of all, in terms of EUCOM, it is discussions with our counterparts and leaders about the concerns of China's what I would say is strategic investments. Most of this is diplomatic at this point, but we do try to ensure that we can point out to them not only economic benefits which China demonstrates and make sure they are aware of, but also the security aspects of their control of seaports, airports, critical key terrain, investment in infrastructure particularly with technology that is critical to security. We try to emphasize the security aspects of their investments.

Senator JONES. Has the administration's tactics with regard to the tariffs and European tariffs—have you seen any effect on that with any of our allies—the economic impact?

General SCAPARROTTI. Well, it is certainly a point of discussion among the allies and one of concern because our country and Europe has a very significant trade and economic linkage there. But in terms of the direct impact for me, the mil-to-mil relationships are strong. That essentially is dealt with on the diplomatic side.

Senator JONES. Thank you, sir.

General LYONS. I want to kind of go back to a conversation you had with Senator King on cybersecurity. If you can in this hearing as opposed to the closed hearing, could you please maybe describe the impact on operations of a nation state cyber attack on TRANSCOM's networks and how this could impact your discussions and your ability and interaction with COCOMs [U.S. Combatant Commands]?

General LYONS. Senator, anything that would degrade our ability to project power is a concern. Cyber as a warfighting domain does create an area of vulnerability across what is largely an unclassified surface of employment. We are working very, very hard to prioritize and to ensure that we have the appropriate level of resiliency and to move to an infrastructure that is more secure. We are moving very, very rapidly in that area.

Senator JONES. Right.

Just staying with you, General Lyons, you mentioned earlier that there was a plan to improve the household goods shipment process using a single contractor to manage transportation service providers. How will that change improve the process? What will it cost, and will it increase accountability?

General LYONS. Senator, it will definitely increase accountability, and I believe it will also increase capacity. Those are the two major issues. Those are the two major complaints. The way that enhances capacity is it is a longer-term investment with our industry partners, and so they are willing to invest in capacity over time, as well as reducing barriers to entry into the market that we, unfortunately, create for ourselves.

There is no question that it will improve accountability. Today, there are 950 various transportation service providers that compete for work on a transactional basis. Very, very difficult across the services and TRANSCOM to maintain accountability and all that. But the business folks know the business, and that is the right relationship to have with a single move manager.

Senator JONES. Great. Thank you both for being here.

Mr. Chairman, I will yield back the remainder of my time. Thank you.

Chairman INHOFE. Thank you, Senator Jones.

Well, it looks like we have run out of members here so we will close it.

Several people during the course of this hearing, General Scaparrotti, have speculated this may be your last time that you attend this hearing. It is also your birthday today. Is this a birthday present to you?

General SCAPARROTTI. Yes, sir. It is Congress' birthday present, I assume. I have enjoyed it.

Chairman INHOFE. Well, we thank you so much for all of the service. Both of you, but particularly you because you have appeared so many times, and as has been pointed out by Senator Reed, you have held the fourth star longer than anybody else in existence here. You have served your country in a way that many others have not. Thank you so much for that service.

Anything else?

Senator REED. No, Mr. Chairman. Just let me join in thanking both General Scaparrotti and General Lyons, particularly General Scaparrotti. Thank you.

Chairman INHOFE. We are adjourned.

[Whereupon, at 11:26 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR ROGER F. WICKER

##### READY RESERVE FORCE

1. Senator WICKER. General Lyons, the fiscal year 2019 NDAA [National Defense Authorization Act] provided authority to procure seven used vessels, sufficient to sustain sealift recapitalization requirements through fiscal year 2025. Based on the Navy's fiscal year 2019 30-year shipbuilding plan, meeting the full sealift recapitalization requirement would entail procuring 26 used vessels through fiscal year 2031. Has the Navy developed and shared with you its acquisition plan to procure the vessels needed to recapitalize the ready Reserve force?

General LYONS. Yes, the Navy coordinated with USTRANSCOM when it developed its plan titled, "Sealift that the Nation Needs," which includes plans for new construction and used ship acquisitions to recapitalize the sealift fleets. The Navy continues to work with USTRANSCOM to enhance near-term readiness of strategic sealift capabilities through an accelerated buy-used acquisition timeline.

##### READY RESERVE FORCE

2. Senator WICKER. General Lyons, last year's NDAA authorized the procurement of seven used vessels to sustain sealift recapitalization requirements through fiscal year 2025. What is the status of procuring those new vessels and where are we getting them from?

General LYONS. USTRANSCOM established requirements and is coordinating with the Navy and the Maritime Administration (MARAD) to acquire used vessels and recapitalize the Ready Reserve Force. MARAD completed a Request For Information (RFI) that identified 78 viable ships owned by U.S. and international companies. While authority exists to purchase now, Navy budgeted funds to purchase two vessels in fiscal year 2021 and fiscal year 2022. USTRANSCOM has submitted an Unfunded Priority List requesting that funds be appropriated in fiscal year 2020 to purchase the first two vessels. Once funding is available, MARAD will release a request for proposal (RFP) to initiate the acquisition process. The source of the ships will be determined through responses received from the RFP.

##### SEA AND AIR LIFT

3. Senator WICKER. General Lyons, I read with interest the op-ed in the Wall Street Journal on March 4, 2019 by Mark Helprin. In particular, I was concerned

with his statement regarding “America’s inadequate military sea and air lift” abilities when it comes to resupplying our forces. As Chairman of the Senate Commerce Committee, I worry not only about our Navy fleet but also our commercial maritime industry, which is critical to our surge abilities during war. What is TRANSCOM [United States Transportation Command] doing to work with the Navy and MARAD [United States Maritime Administration] to ensure both our military and commercial supply ships can maintain sea lines of communication to our bases in South Korea, Japan, and Guam during a potential conflict in the Pacific?

General LYONS. Within the DOD, geographic combatant commanders and fleet commanders are tasked with planning and establishing the necessary protection and security of USTRANSCOM’s military and commercial assets to ensure their safe transit. To further aid in assurance, in coordination with Military Sealift Command, we are reevaluating the strategic posture of strategic sealift assets and how commercial assets are utilized in the Pacific when operating within a contested environment. Additionally, we partner with MARAD on improving civilian mariner manning, training, and the industrial base to support high-end conflict. Finally, in support of these efforts, we, along with combatant and fleet commanders, continue to plan and conduct wargames, multi-faceted experiments, tiered exercises, and innovative proofs of concept that address the challenges of operating within a contested environment.

---

#### QUESTIONS SUBMITTED BY SENATOR DAN SULLIVAN

##### DEFENSE PERSONAL PROPERTY PROGRAM (DP3)

4. Senator SULLIVAN. General Lyons, broadly speaking, how will outsourcing the Defense Personal Property Program to a single source contract improve the current program?

General LYONS. Rather than describing this as ‘outsourcing,’ USTRANSCOM characterizes this effort as a fundamental restructuring of DOD’s relationship with industry to enhance accountability, stability, and capacity. Currently 100 percent of servicemembers’ movements are executed by commercial providers. Under a single commercial move manager construct, 100 percent of the movements will continue to be performed by commercial providers. Rather than relying on 42 DOD offices to coordinate the operations of 950+ Transportation Service Providers on a shipment-by-shipment basis, with no underlying formal contractual agreement, DOD seeks to award end-to-end transportation and storage processes to a single commercial move manager to drive integration and capitalize on the market intelligence of industry.

We seek to evolve beyond the current transactional approach, which hinders industry’s ability to conduct long-term planning and invest in sustainable relationships. Entering into a multi-year relationship provides industry with both the confidence and rationale to invest in capacity and strategic relationships with trusted suppliers to meet peak demand. DOD will have a single company to engage and hold accountable when necessary to better meet the needs of military families.

5. Senator SULLIVAN. General Lyons, can you detail how the transition to a single-move manager will affect the costs to the Defense Personal Property Program and what metrics are you using to measure this effect?

General LYONS. The purpose of transitioning to a single move manager is to improve access to—and management of—quality capacity to meet peak demand and enable DOD to affix responsibility and accountability. DOD will withdraw this recommendation if the formal acquisition process identifies no viable candidates or if the Military Services deem the final product is unaffordable.

6. Senator SULLIVAN. General Lyons, can you detail how the transition to a single-move manager will increase moving capacity and what metrics are you using to measure this increase?

General LYONS. The fractured nature of the current Defense Personal Property Program (DP3)—both in terms of the number of Transportation Service Providers (TSPs) and disparate government offices trying to manage them—is a root cause of the capacity and quality issues reported by servicemembers and DOD civilians.

The DOD is the largest single consumer of moving and storage services, accounting for 20 percent of the domestic household goods market, yet we still compete with the broader population for assets. Under our current construct, each of the DOD’s 42 regional shipping offices deals with a pool of TSPs and awards business on a shipment-by-shipment basis. In day-to-day operations, the transactional nature of this approach results in inefficient crew and truck utilization. More broadly, this

transactional approach hinders industry's ability to conduct long-term planning, and with no meaningful forecast of what they can expect to move—offers no basis to invest in relationships with agents or assets to respond to DOD's very predictable demand. Centralizing demand planning with a single entity improves utilization of available capacity. In addition to better utilizing existing capacity, I believe this construct will attract new providers. Industry representatives who are currently unfiliated with DP3 state that the programs existing over-engineered rules make DOD an unattractive partner; while the DOD pays competitive rates, much of industry would rather serve the 80 percent of the non-DOD domestic moving and storage market.

Regarding metrics, we will specifically measure on-time pickup and delivery, counseling, completion, claims settlement, and overall customer satisfaction.

7. Senator SULLIVAN. General Lyons, can you detail how the transition to a single-move manager will improve customer service for our military families and what metrics are you using to measure this improvement?

General LYONS. The DOD encounters the same set of challenges—and results—each peak season: quality capacity is lacking, DOD has limited accountability measures to drive improvements, and DP3 customers do not know who to call when things go wrong. Restructuring DOD's relationship with industry promotes long-term stability and investment that ultimately eliminates unnecessary friction and opacity for DP3 users. Building relationships with trusted suppliers and increasing accountability should lead to increased customer satisfaction.

Regarding metrics, we will specifically measure on-time pickup and delivery, counseling, completion, claims settlement, and overall customer satisfaction.

8. Senator SULLIVAN. General Lyons, how are you working to include input from industry and servicemembers in your decision to outsource the DP3 program?

General LYONS. USTRANSCOM interacts with industry and servicemembers in a number of venues. We conduct spring and fall Personal Property Forums with industry and personal property professionals representing the Military Services. We conduct monthly calls with those same professionals during the non-peak season and weekly during the peak season.

USTRANSCOM conducted two 'Industry Day' engagements as part of ongoing market research, which included the opportunity for industry personnel to conduct one-on-one meetings with DOD personnel to address their specific questions and concerns regarding the single move manager contract. My team has also released a DRAFT RFP to industry for their review and feedback to improve the final RFP. My Deputy and I have personally hosted group meetings with industry CEOs, leaders of the associations that represent them, and accepted numerous requests for one-on-one phone calls and office calls with CEOs.

We have a monthly Open Discussion Group with industry leaders and we also conduct a monthly Personal Property Relocation Advisory Panel with some leading spousal advocates from the military services. Additionally, I have personally engaged each Service Secretary and Service Chief on this effort.

Each of these engagements leaves me more in tune with industry's concerns as we develop the path ahead. They have informed how we intend to structure the program and how we continue to solicit inputs for program improvement. They have also informed the development of the acquisition strategy and DRAFT RFP. After every engagement, I am more convinced that restructuring DOD's relationship with industry and implementing this single move-manager construct is the right answer for DOD personnel and their families.

#### RUSSIA/CHINA GREAT-POWER COLLABORATION

9. Senator SULLIVAN. General Scaparrotti, what are the strategic, operational, and tactical implications of China's involvement in Russia's exercise Vostok 2018?

General SCAPARROTTI. [Deleted.]

10. Senator SULLIVAN. General Scaparrotti, how does China's investment in the infrastructure of nations like Denmark and Belgium, especially ports, relate to China's intention to develop a "blue economic passage" connecting China to Europe through the Arctic Ocean?

General SCAPARROTTI. China is leveraging their growing economic, diplomatic, and military clout to increase economic, trade, and transit links to Europe and in the Arctic through projects such as the "One Belt, One Road" Initiative (OBOR).

Since 2013, China has elevated OBOR from a regional infrastructure project connecting western China with Eurasia to a global foreign engagement strategy that

presents Belt-Road Initiative as a new platform of international cooperation and showcases China as an alternative model of economic and political development.

China has increased activities and engagement the Arctic region since gaining observer status on the Arctic Council in 2013. In January 2018 China published its first Arctic strategy that promoted a Polar Silk China linked its OBOR initiatives. The strategy identifies China's interests as access to natural resources, Sea Lines of Communication, and promoting an image of a responsible major country in Arctic affairs.

11. Senator SULLIVAN. General Scaparrotti, in your personal opinion, is there incentive for a resource-producing nation like Russia and a resource-consuming nation like China to work together?

General SCAPARROTTI. [Deleted.]

EUCOM [UNITED STATES EUROPEAN COMMAND] & NATO [NORTH ATLANTIC TREATY ORGANIZATION] ARCTIC CAPABILITY

12. Senator SULLIVAN. General Scaparrotti, as Russia dramatically increases its Arctic capability and capacity, what is the strategic cost of not increasing United States and NATO activity in the Arctic?

General SCAPARROTTI. The strategic risk is that we would cede the Arctic to the Russians. The intent of increasing U.S. and NATO activity in the Arctic should not be to militarize the Arctic but to ensure that the region continues to be an area of international cooperation. It will be important to continue the cooperation and governance that has historically made the Arctic a region of cooperation, not a zone of conflict. Having U.S. and NATO assets increase Arctic activity ensures that no single nation can unilaterally make decisions there that affect the world.

13. Senator SULLIVAN. General Scaparrotti, what specific capabilities are needed to improve our Arctic posture in EUCOM?

General SCAPARROTTI. Across the USEUCOM AOR, including the Arctic, there is a need for domain awareness capabilities (such as intelligence, surveillance, and reconnaissance equipment) in the undersea, surface, and air domains. Additional communication capabilities and infrastructure are also required to facilitate military activities as well as basic search and rescue operations.

VOSTOK 2018

14. Senator SULLIVAN. General Scaparrotti, what are the strategic implications and messaging of the scale and complexity of Russia's exercise Vostok 2018 and what should we be doing to respond?

General SCAPARROTTI. [Deleted.]

15. Senator SULLIVAN. General Scaparrotti, in light of Vostok 2018, what does EUCOM need to do to maintain a credible deterrent to Russian activity?

General SCAPARROTTI. [Deleted.]

#### QUESTIONS SUBMITTED BY SENATOR DAVID PERDUE

REPUBLIC OF GEORGIA—ASCENSION INTO NATO

16. Senator PERDUE. General Scaparrotti, in your written testimony, you said, "Georgia remains a committed partner, especially in Afghanistan, where it is the largest non-NATO contributor to Resolute Support with almost 900 troops currently deployed." How important are non-NATO partners like Georgia for NATO to fulfill its objectives?

General SCAPARROTTI. The contributions of our non-NATO partners are critically important to our mission in Afghanistan. Our various partners, including Georgia and Bosnia and Herzegovina, support Resolute Support Mission (RSM) objectives by providing critical functions, including trainers, advisors, planners, and security and force protection units. These contributions not only allow NATO to make progress in RSM, but also demonstrate commitment to shared values and closer relationships.

17. Senator PERDUE. General Scaparrotti, the United States-Georgia security relationship has steadily expanded, and the establishment in 2018 of the Georgia Defense Readiness Program (GDRP) marked a milestone in our partnership. The GDRP helps Georgia field and sustain a credible, ready force through training, edu-

cation, and mentorship. The program is a centerpiece of Georgia's broad efforts to enhance its national defense and contribute to the security of the Black Sea region." How important is engagement and security cooperation with Black Sea countries like Georgia to NATO's posture in the region?

General SCAPARROTTI. Security cooperation and assistance efforts with Black Sea countries like Georgia are vitally important to United States and NATO interests. These efforts promote regional security, good governance, and democratic principles of civil-military relations, especially professional service, civilian control of the military, transparency, and accountability. Additionally, programs such as the GDRP improve Black Sea nations' ability to generate and sustain their own military forces, which further strengthens regional security.

18. Senator PERDUE. General Scaparrotti, the fiscal year 2019 NDAA affirmed support for the Open Door policy of NATO, including the eventual membership of Georgia in NATO?

General SCAPARROTTI. Yes. Section 1248 of the fiscal year 2019 NDAA states that in order to strengthen the defense of the United States and its allies and partners in Europe, the Department of Defense should affirm its support for the Open Door policy of NATO, including the eventual membership of Georgia in NATO. This statement is consistent with the 2008 Bucharest statement and does not dictate a time frame for Georgia's membership. USEUCOM provides assistance to Georgia that will help the country's defense establishment prepare for a future political decision among the NATO allies on Georgia's eventual membership.

19. Senator PERDUE. General Scaparrotti, how would NATO strategically benefit from Georgia's ascension into NATO?

General SCAPARROTTI. With Georgia's ascension to NATO, the Alliance would benefit from Georgia's geographic position and steadfast support for NATO operations, in particular in Afghanistan. NATO would also benefit from Georgia's assistance to counter Russia's malign narratives along their periphery.

#### JOINT ELECTROMAGNETIC SPECTRUM OPERATIONS

20. Senator PERDUE. General Scaparrotti, in the era of great power competition, electronic warfare has risen in strategic importance. For example, Russia demonstrated in its incursion into Ukraine a full range of capabilities, including communication jamming, message intercepting, and geolocating units based on the electromagnetic signatures they emit. Last year's NDAA required a report on the status of operationalizing the Joint Electromagnetic Operations Cells at the COCOMS and what resources were needed to do so. The United States Army fielded Raven Claw, a mobile variant of the their EW Planning and Management Tool (EWPMT), in Eastern Europe last year, as well. How important is it to provide our warfighters in the European theater with the right tools to plan and manage military operations in the face of sophisticated EW attacks in EUCOM?

General SCAPARROTTI. It is vitally important that we provide our forces in Europe the right electromagnetic warfare (EW) equipment and training as the electromagnetic spectrum (EMS) is a critical warfighting area that crosses all military domains. Russia is increasing its EW capabilities and already integrates EW into their military operations. Our ability to leverage the EMS requires tools that combine multiple intelligence and operational feeds to quantify EW threats and electromagnetic interference, while not interfering with host nation infrastructure. Additionally, effectiveness in this domain will require the continued coordination with host nation partners to manage and utilize the electromagnetic spectrum.

21. Senator PERDUE. General Scaparrotti, in your assessment, how would the availability of a joint version of EWPMT and the mobile version, Raven Claw, benefit EUCOM?

General SCAPARROTTI. A joint version of an Electromagnetic Battle Management (EMBM) system, similar to EWPMT, would be highly beneficial as it helps reduce labor-intensive manual processes and enables greater freedom of action in the electromagnetic environment. Any EMBM system would require thorough evaluation to ensure it meets current and emerging needs for USEUCOM forces.

#### CONTINUING RESOLUTIONS

22. Senator PERDUE. General Scaparrotti and General Lyons, in as much detail as possible, through specific examples, please describe the operational and financial impact continuing resolutions have on EUCOM/TRANSCOM?

General SCAPARROTTI. Continuing resolutions significantly impact the operations, training, and readiness of units in our European footprint and the Atlantic Resolve (AR) assurance and deterrence mission. Constrained distribution of fiscal resources causes execution impasses, decreases unit OPTEMPO, and impairs rotations (e.g., ABCT, CAB, MP/CSSB RFFs, IACB) to, from, and within Europe. Additionally, the investment of resources to improve infrastructure and facilities throughout the European theater provides our allies, partners, and potential adversaries a clear indication of the United States' long-term commitment to Europe. Continuing resolutions limit the capacity to execute these improvements, compromising our ability to set the theater for assurance and deterrence. The specifics of these infrastructure and operational impact can be found in USEUCOM fiscal year 2020 J-book submission.

General LYONS. As we have seen in the past, a Continuing Resolution impacts readiness, mission operations and modernization funding when the Services cannot project funding levels for manning, training, and equipping mobility forces. In order to maintain readiness, USTRANSCOM requires a balance between Services having adequately appropriated funding and workload levels in order to provide the enterprise a sufficient Transportation Working Capital Fund (TWCF) cash balance. A Continuing Resolution has some direct, immediate impact to USTRANSCOM's appropriated workforce such as our Research and Development and new start projects including Joint Capability Technology Demonstrations; however, a Continuing Resolution will significantly impact readiness of our Service Components, who execute our missions, and ultimately reflect on our overall readiness to conduct global mobility operations.

---

QUESTIONS SUBMITTED BY SENATOR KEVIN CRAMER

EUROPEAN ENERGY SECURITY (RUSSIAN COERCION)

23. Senator CRAMER. General Scaparrotti, Russia currently has significant leverage over many of our European and NATO allies due to their reliance on Russian natural gas exports to provide for their power needs. Last year, General Scaparrotti, you testified before the HASC [House Armed Services Committee] that "we [and our allies] are working toward relieving some of the dependency on Russia ... [and] there's facilities being built that will allow us to transport [liquefied natural gas]" . You also said "frankly, I think we should continue to do that, because, as you know, Russia uses energy to coerce and compel". Nord Stream 2 is set to be completed later this year and would double the amount of gas Russia transports directly to Germany. Eventually Russia aims to eliminate the movement of Russia gas to the European Union through Ukraine. Such a development would eliminate 1.5 percent of Ukraine's GDP outright and make Ukraine more vulnerable to gas cutoffs by Russia, making Ukraine more vulnerable to annexations. General Scaparrotti, is Russia continuing to use its natural gas exports to Europe as a weapon against our European allies and NATO partners?

General SCAPARROTTI. Russia uses its status as a major energy exporter as a tool of coercion in Europe. Russia continues to demonstrate a willingness to use (or threaten to use) energy supply disruption as a tool of leverage to affect partner and Allied decision-making, or as a punitive response to decisions viewed as counter to Russian interests.

24. Senator CRAMER. General Scaparrotti, what can we and our NATO partners do to clear the regulatory roadblocks and make the infrastructure investments to ensure the United States can prevent Russia from coercing our European allies by threatening to turn off the taps to their energy supply?

General SCAPARROTTI. Since most of the infrastructure and energy markets in NATO nations are owned and operated by the private sector or by civilian-managed, government-owned entities, NATO governments are responsible for addressing any shortfalls and roadblocks to promote investment and energy supply diversification. USEUCOM, together with our military counterparts in NATO, are identifying fuel supply-chain vulnerabilities and providing civilian leadership our best military advice on energy security risks and infrastructure investments that can help mitigate Russian coercion. Civilian and military investments in enhanced energy efficiency, fuel supply diversification, and overall energy resilience programs and policies will help grow our shared capabilities to respond to future supply disruptions.

---



## QUESTIONS SUBMITTED BY SENATOR JOSH HAWLEY

## DEFENSE PERSONAL PROPERTY PROGRAM:

25. Senator HAWLEY. General Lyons, I understand your command is considering getting out of the personal property moving business by privatizing the Defense Personal Property Program. But TRANSCOM is in fact in the business of moving stuff. Watching what has come to light over the last three weeks with the military's privatized housing initiative, I have grave concerns with the idea of TRANSCOM handing this off to the lowest bidder. Could you describe your Command's deliberations on privatizing the Defense Personal Property Program?

General LYONS. USTRANSCOM is not taking action to 'get out of the Personal Property moving business,' nor is it 'privatization.' In part, the current DP3 program is prone with problems similar to those identified with the privatized housing issue. Much like individual rental contracts for housing without adequate leader oversight each servicemember arranges household goods shipments one transaction at a time without accountability provided by leader oversight. Rather, USTRANSCOM—on behalf of DOD—is taking action to fundamentally restructure our relationship with industry to improve quality capacity, stability, and accountability. Ultimately, USTRANSCOM will be responsible for holding industry accountable. We will never relinquish this responsibility.

Currently, 100 percent of servicemembers' movements are executed by commercial providers. Under a single commercial move manager construct, 100 percent of the movements will continue to be done by commercial providers. Rather than relying on 42 DOD offices to coordinate the operations of 950+ Transportation Service Providers on a shipment-by-shipment basis, with no underlying formal contractual agreement, DOD seeks to award end-to-end transportation and storage processes to a single commercial move manager to drive integration and capitalize on the market intelligence of industry.

USTRANSCOM will award this contract based on a "best value" basis that meets the needs of the program. We will not award a contract, and will withdraw this recommendation if the acquisition process identifies no viable candidates or if the Services deem the final product unaffordable.

Restructuring DOD's relationship with industry in this manner will promote stability and ultimately eliminate some of the most critical gaps and seams that generate unnecessary friction and opacity for military families.

26. Senator HAWLEY. General Lyons, what can you do to assure me that TRANSCOM will maintain sufficient oversight of any contract that privatizes the DP3?

General LYONS. Under the single move manager construct, USTRANSCOM will be the DOD's lead agency for maintaining rigorous centralized oversight—something today's DP3 lacks in the current construct. The DOD's 42 regional shipping offices (which are independently managed by the Military Services) award business on a shipment-by-shipment basis to a regional pool of Transportation Service Providers. This fractured nature of operations also stymies accountability. In 2018, the Services issued over 50,000 letters of warning detailing areas where TSPs were operating outside the bounds of program guidelines, and issued over 2,000 suspensions when those issues were not addressed; however, because letters and suspensions are handled by 42 separate offices in an uncoordinated fashion, these well intended actions do not translate into meaningful outcomes. Restructuring our relationship with industry will enhance our ability to provide oversight of this program.

## F-15X PROCUREMENT

27. Senator HAWLEY. General Scaparrotti, according to public remarks made by Secretary Wilson and General Goldfein at the Air Warfare Symposium, the Air Force will include new F-15s in this year's budget request as part of an effort to refresh the F-15C fleet. What impact would fielding new, advanced F-15s for the 48th Fighter Wing at RAF Lakenheath have on your ability to reassure United States allies and deter Russian aggression?

General SCAPARROTTI. As the current fleet of F-15Cs continues to age, the Air Force's initiative to field new, advanced fighters will help ensure that USEUCOM has the necessary assets to maintain air superiority, deter Russia, and reassure United States allies and partners, in part through participation in the NATO Air Policing mission.

## QUESTIONS SUBMITTED BY SENATOR JEANNE SHAHEEN

## WOMEN, PEACE AND SECURITY (WPS) ACT AND GENDER ROLES

28. Senator SHAHEEN. General Scaparrotti, how has United States European Command (EUCOM) been satisfying the Women, Peace and Security Act?

General SCAPARROTTI. USEUCOM's approach to institutionalizing the Women, Peace, and Security program focuses on formal change management, establishing internal structures and training, and external capacity building in partnership with the Department of State, USAID, and the Department of Justice. USEUCOM has implemented an "Executive Coaching" initiative focused on educating our senior leaders on the importance of participation by women in conflict prevention, peace processes, mitigation, and resolution. Additionally, with our Command Gender Advisor, we mandate training on international human rights law and protecting civilians from violence, exploitation, and trafficking in persons.

29. Senator SHAHEEN. General Scaparrotti, how do you view EUCOM's approach to WPS and the progress that has been made?

General SCAPARROTTI. In the past year and a half, USEUCOM has made good progress in operationalizing the WPS program by working with our Allies and partners to ensure a synchronized effort moving forward. USEUCOM's approach centers on values-based education and change management within the command. It nests with NATO's approach to WPS and reinforces the role of women in conflict prevention, management, and resolution and post-conflict relief and recovery efforts.

30. Senator SHAHEEN. General Scaparrotti, what is EUCOM doing to get to a place where it can hand over a crisis situation to NATO with a seamlessly integrated gendered approach?

General SCAPARROTTI. USEUCOM is mirroring NATO WPS structures as well as adopting their key terms of reference for WPS. During our last headquarters exercise, which focused on managing a crisis with NATO, our Gender Advisor was an active participant in several key decision-making discussion forums. Additionally, during our everyday steady state operations, we are actively engaged with the NATO gender network.

31. Senator SHAHEEN. General Scaparrotti, does EUCOM have a full-time gender advisor?

General SCAPARROTTI. Yes. USEUCOM has a full-time Gender Advisor (GENAD).

32. Senator SHAHEEN. General Scaparrotti, if so, what are the responsibilities of the current gender advisor?

General SCAPARROTTI. Internally, USEUCOM's Women, Peace, and Security Program Management and Gender Advisor (GENAD) is responsible for: strategic document and orders mainstreaming, internal instruction writing and implementation, education and training for all of USEUCOM and the component commands, training exercise gender advising, advising senior interagency representatives from State and USAID, and senior military leaders' preparation and advising for key leader engagement.

Externally, the GENAD is responsible for capacity building throughout EUCOM's 51 country AOR to include mainstreaming of documents, strategy development of national action plan implementation as well as education and training support, and supporting and advising the NATO International Military Staff and Allied Command operations GENAD.

33. Senator SHAHEEN. General Scaparrotti, is he/she exclusively focused on WPS and what else do they work on?

General SCAPARROTTI. The USEUCOM Gender Advisor's primary task is to execute the WPS program. As a member of our Interagency Partnering Directorate (ECJ9), her additional performance elements are related to Humanitarian Mine Action (HMA) and Interagency Coordination.

## QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

## MILITARY MOVE SYSTEM

34. Senator BLUMENTHAL. General Lyons, how would privatizing the military move process improve transparency and better serve military families?

General LYONS. USTRANSCOM is not taking action to ‘privatize’ DP3. Rather, USTRANSCOM—on behalf of DOD—is taking action to fundamentally restructure our relationship with industry to improve quality capacity, stability, and accountability. Currently, 100 percent of servicemembers’ movements are executed by commercial providers. Under a single commercial move manager construct, 100 percent of the movements will continue to be done by commercial providers.

The single move manager construct will not only improve accountability, but will also improve transparency in the program. Under the single move manager construct, USTRANSCOM will be the DOD’s lead agency for maintaining rigorous centralized oversight—something today’s DP3 lacks. Under the current DP3 construct, the DOD’s 42 regional shipping offices (which are independently managed by the Military Services) award business on a shipment-by-shipment basis to a regional pool of Transportation Service Providers. This fractured nature of our operations also stymies accountability. In 2018, the Services issued over 50,000 letters of warning detailing areas where TSPs were operating outside the bounds of program guidelines, and issued over 2,000 suspensions when those issues were not addressed; however, because letters and suspensions are handled by 42 separate offices in an uncoordinated fashion, these well intended actions do not translate into meaningful outcomes. Restructuring our relationship with industry will enhance our ability to provide oversight of this program.

35. Senator BLUMENTHAL. General Lyons, what oversight and accountability measures would you implement to ensure we don’t make the same mistakes made when the military housing system was privatized?

General LYONS. The increase in accountability by transitioning to a single move manager cannot be overstated. In many respects, the fragmentation and diffused responsibility associated with our current program mirrors the shortfalls Congress highlighted with DOD’s privatized housing model. As we restructure our relationship with industry, we will similarly restructure the DOD’s management framework to provide the rigorous, centralized oversight required.

The current lack of accountability in DP3 mirrors the lack of accountability in housing privatization, reinforcing the need to fundamentally change our relationship with industry with a single commercial move manager construct. USTRANSCOM, as DOD’s lead agency for maintaining rigorous centralized oversight, will never relinquish responsibility for moving military families.

36. Senator BLUMENTHAL. General Lyons, what cost-benefit analysis have you conducted on privatization?

General LYONS. After conducting an internal program review and a survey of decades of studies on the topic, three consistent themes emerge: 1) that DOD’s assignment cycle exerts considerable strain on capacity during the summer months; 2) that the transactional nature of our relationship with industry prevents us from capitalizing on the capacity that is available; and 3) that the program is fractured.

The cost of delaying significant action and committing resources to extended study while preserving the status quo is clear; we will continue to subject our military families to substandard moves, something that has been brought to my attention through multiple discussions with servicemembers, industry, and Congress. In order to fundamentally improve the program, restructuring our relationship with industry is necessary to capitalize on the market intelligence and capability of industry to develop lasting relationships to increase accountability, stability, and capacity.

37. Senator BLUMENTHAL. General Lyons, what other studies have you conducted on your proposal to transition to a fully privatized moving system?

General LYONS. This program has been studied numerous times by OSD, the Military Services, GAO, DOD IG, and various think tank organizations. These studies, which are still relevant because they apply to the same system, reveal the same root causes and repeat the same recommendations which have led to our intended transition to a single move manager. Accountability and oversight will be enhanced in this system and remain under USTRANSCOM’s scope of responsibility.

38. Senator BLUMENTHAL. General Lyons, do military families support privatization?

General LYONS. Military families have spoken out, loud and clear, that they want improvements in the relocation process. Improving the process for military families is our North Star and the reason we are taking action. Military families’ concerns, along with surveying decades of studies on the topic highlighting recurring problems based on the fractured nature of the current system, have led me to the decision

to restructure our relationship with industry to improve quality capacity, stability, and accountability.

39. Senator BLUMENTHAL. General Lyons, does industry support privatization?

General LYONS. We have a monthly Open Discussion Group with industry leaders, and we have held multiple industry days to gather feedback. My Deputy and I have personally hosted group meetings with industry CEOs, leaders of the associations that represent them, and accepted numerous requests for one-on-one phone calls and office calls with CEOs.

Many move managers and larger asset-based providers agree that DOD's business model is outdated, and recognize the business opportunities associated with this change. Some of these companies support the proposal knowing full well that they do not have the resources to serve as the prime contractor; yet, the opportunity to engage and invest in longer-term relationships and operate in an environment with other industry professionals free from DOD's artificially complex business rules is an attractive prospect.

Each engagement with industry leaves me convinced that restructuring DOD's relationship with industry and implementing this single move-manager construct is the right answer for DOD personnel and their families.

40. Senator BLUMENTHAL. General Lyons, have you included military families' input in your plans for privatization?

General LYONS. Yes, improving the relocation process for our servicemembers and their families is our North Star and the reason we are taking action. We have received feedback through our monthly Personal Property Relocation Advisory Panel with leading spousal advocates from the military services.

41. Senator BLUMENTHAL. General Lyons, will you commit to prioritizing the needs of military families as you consider reforms to the personal property program, and reporting back to Congress on how their input is being implemented?

General LYONS. Yes, I will.

#### INCREASED MILITARY PRESENCE IN EUROPE

42. Senator BLUMENTHAL. General Lyons, with a returned focus to Europe, are you reestablishing routes and connections previously used during the Cold War?

General LYONS. In coordination with USEUCOM, USTRANSCOM is consistently reviewing various means of providing efficient and effective distribution based on the geographic combatant command's analysis of their requirements. This may include previously used routes and nodes, as well as newly established locations to meet that commander's timeline across various OPLANS.

USTRANSCOM is closely coordinating air and sea ports of debarkation with USEUCOM; some of those are the same as the Cold War and some may be different based on the nature of the planning as it evolves; the National Defense Strategy (NDS) mandates strategic predictability with operational unpredictability and the use of theater nodes will adapt to the USEUCOM planning.

43. Senator BLUMENTHAL. General Lyons, are these routes and connections adequate for the technology, interoperability, and capacity required by missions?

General LYONS. USTRANSCOM continues to analyze the distribution network for the most effective and efficient means of meeting the geographic combatant command's requirements. There are identified risk areas, for which mitigation strategies are being developed. A key responsibility for USTRANSCOM is to meter the strategic flow of forces and sustainment in daily competition and under wartime conditions to ensure onward movement meshes with the capacities planned by USEUCOM. This is both an operational and information technology challenge that must be effective at multiple echelons to coordinate end-to-end movements.

European seaports and airports, for the most part, are very modern and have robust infrastructure, capacity, and capability. Associated routes and connections to these entry points will adapt to the plan, specific USEUCOM concepts of operations, and implementations of Dynamic Force Employment in accordance with the NDS.

44. Senator BLUMENTHAL. General Lyons, NATO allies and EU member states may be moving troops, equipment, and cargo along the same routes and will use the same platforms, such as railroads, that we use to move assets. Is there a mutually agreed upon plan in determining which countries' assets have priority in the various European transportation modalities?

General LYONS. There is a command and control structure designed to prioritize transportation movements. If NATO allies are moving assets during a contingency operation, the USEUCOM Commander will be dual hatted as the Supreme Allied Commander Europe and will make prioritization decisions.

As far as the strategic network is concerned, there is sufficient capacity at European seaports which will receive the bulk of military equipment, and USEUCOM has done considerable coordination with industry on the availability of railcars and trucks for onward movement. While USEUCOM is responsible for intra-theater movement coordination with NATO allies and EU members, USTRANSCOM needs awareness of that movement in order to meter strategic flow. To that end, USTRANSCOM will be linked with USEUCOM through the Europe Deployment and Distribution Operations Center at USEUCOM headquarters.

45. Senator BLUMENTHAL. General Scaparrotti and General Lyons, what capabilities does Russia have to interfere with our logistics pipeline in Europe?

General SCAPARROTTI. Russia has numerous kinetic and non-kinetic means of interfering with the United States logistics chain in Europe. Kinetically, Russia can threaten ports, supply depots, and lines of communication throughout the European theater with land, sea, and air-delivered precision-guided munitions, potentially assisted by special operations forces. In the non-kinetic domain, Russia can use cyber or electronic warfare attacks against a variety of targets throughout the supply chain, including factories, sea, rail, and highway transportation, key nodes such as airports and seaports, and space-based navigation and communication systems. Russian actions against logistics nodes and distribution routes would delay and disrupt force closure and sustainment movements to include commercial commerce.

General LYONS. [Deleted.]

46. Senator BLUMENTHAL. General Scaparrotti and General Lyons, should we be more concerned about physical obstructions, manipulation, and destruction, or meddling in the cyber realm?

General SCAPARROTTI. [Deleted.]

General LYONS. [Deleted.]

#### UPCOMING ELECTIONS IN UKRAINE

47. Senator BLUMENTHAL. General Scaparrotti, have you observed any instances of Russian meddling leading up to Ukraine's presidential election?

General SCAPARROTTI. [Deleted.]

48. Senator BLUMENTHAL. General Scaparrotti, what is EUCOM doing to deter and counter Russia's propaganda and misinformation campaigns in Ukraine's upcoming elections?

General SCAPARROTTI. Our Military Information Support Team- Ukraine (MIST-UKR) has and will continue to conduct DOD Military Information Support Operations (MISO) activities in coordination with the United States Embassy Kyiv since May 2014 in accordance with a SECDEF approved EXORD. MIST-UKR focuses its enduring efforts providing alternative, truthful information, reinforcing the U.S. Commitment to NATO Allies and Partners, and expressing United States support for Ukraine sovereignty and self-determination.

49. Senator BLUMENTHAL. General Scaparrotti, how are you working with other agency partners, such as the Department of State, to ensure Russia does not employ covert ways to influence the vote?

General SCAPARROTTI. [Deleted.]

#### CONFLICT IN EASTERN UKRAINE

50. Senator BLUMENTHAL. General Scaparrotti, in your testimony, you state that "the conflict in eastern Ukraine remains hot, with numerous ceasefire violations reported weekly." What progress, if any, has been made in the last year to counter Russia's aggression and improve the capabilities of Ukraine's forces?

General SCAPARROTTI. Through the Ukraine Security Assistance Initiative (USAI), over the past year the United States has provided counter-battery and counter-mortar radars, secure communication equipment, and night vision devices. This assistance has increased situational awareness, early warning, and survivability for Ukrainian units operating in the Joint Forces Operations (JFO) area. The first \$125 million tranche of USAI 2019 is also being contracted to provide two additional counter-battery systems, sniper rifles, shoulder fired rocket launchers, and, in re-

sponse to Russia's actions in the Sea of Azov, counter-sea-mine equipment, special operations inflatable boats, and dive equipment.

51. Senator BLUMENTHAL. General Scaparrotti, what more can the United States do to help Ukraine reestablish sovereignty and territorial integrity?

General SCAPARROTTI. The United States must remain committed to the Multinational Joint Commission (MJC), which is the leading organization for eight partner nations to determine requirements, identify shortfalls, and coordinate international assistance efforts to support Ukraine's sovereignty. We must also continue to leverage the Joint Multinational Training Group—Ukraine (JMTG-U) mission to help Ukraine develop a modern and self-sustaining capacity to generate combat units. Finally, we must sustain funding for the Ukraine Security Assistance Initiative (USAI), which helps enable Ukraine to defend itself and deter further Russian aggression.

52. Senator BLUMENTHAL. General Scaparrotti, what do you see as the most impactful thing the United States can do to support Ukraine?

General SCAPARROTTI. Unwavering United States political support to Ukraine, both bilaterally and through NATO, will have the most significant impact on Ukraine's efforts to secure its sovereignty and territorial integrity.

#### SEALIFT SHORTFALLS

53. Senator BLUMENTHAL. General Lyons, you state in your testimony that sealift is TRANSCOM's number one readiness concern. Is DOD [United States Department of Defense] properly addressing TRANSCOM's readiness concerns—particularly Sealift—in their budget requests?

General LYONS. Yes, the Navy is in close consultation with USTRANSCOM, the Maritime Administration (MARAD) and the Military Sealift Command (MSC) who maintain the government-owned organic sealift fleets. Through current and future budget cycles, the Navy is reviewing all parts of the recapitalization strategy, including maintenance and repair of the current fleets, Service Life Extensions, funding used acquisitions, and the new construction program.

USTRANSCOM's focus is on improving near-term sealift readiness which will benefit by accelerating the retirement of aging, difficult-to-maintain vessels and acquiring more modern, used vessels.

54. Senator BLUMENTHAL. General Lyons, how can Congress assist TRANSCOM in addressing these concerns?

General LYONS. Congress can assist through continued budget stability and execution in support of the DOD. Additionally, Congress's oversight and advocacy for sealift recapitalization requirements as outlined by the DOD and MARAD will assist greatly in mitigating USTRANSCOM's #1 readiness concern. Specifically, USTRANSCOM is focused on the immediate need to improve sealift readiness at an affordable level. This can be accomplished in part by accelerating the replacement of aging, difficult-to-maintain vessels and acquiring more modern, used vessels.

USTRANSCOM, with the Navy, is working to fully employ the Congressional authorization to acquire seven used vessels with the understanding that 26 total used vessels are required as part of the sealift recapitalization effort.

55. Senator BLUMENTHAL. General Lyons, can the American shipping industry support recapitalizing the Ready Reserve Force, the Maritime Security Program, and the 355 ship Navy?

General LYONS. Although I cannot speak to the 355 ship Navy, the American shipping industry will play a significant role in providing new construction capacity to recapitalize a portion of the organic sealift fleet. Regarding the Maritime Security Program, the law requires participants to replace ships in the program upon reaching a maximum age of 25 years. MSP participants have provided ship replacements as needed since the program's inception, providing the DOD with significant capacity and capabilities, although not typically from U.S.-built sources. However, the refurbishment of these used ship replacements and the construction of new ships will both occur in U.S. shipyards.

56. Senator BLUMENTHAL. General Lyons, what is your priority here?

General LYONS. My top priority is maintaining sealift readiness to meet DOD force deployment and sustainment requirements. Given the advanced age of the organic sealift fleets, continued Service Life Extensions on existing ships will not provide readiness outcomes needed. The acceleration of the acquisition of more modern,

used vessels is the most practical means to alleviate readiness concerns in the near-term.

57. Senator BLUMENTHAL. General Lyons, what does Congress need to do to support recapitalization?

General LYONS. Congress can assist through continued oversight and advocacy for sealift recapitalization requirements as outlined by the DOD and MARAD. Specifically, USTRANSCOM is focused on the immediate need to improve sealift readiness at an affordable level. This can be accomplished in part by accelerating the replacement of aging, difficult-to-maintain vessels with more modern, used vessels. USTRANSCOM, with the Navy, is working to fully employ the congressional authorization to acquire seven used vessels with the understanding that 26 total used vessels are required as part of the sealift recapitalization effort.

58. Senator BLUMENTHAL. General Lyons, do you think the Navy has the capability to escort Sealift ships?

General LYONS. Combatant and fleet commanders are tasked, in coordination with USTRANSCOM, with planning and establishing the necessary protection and security of USTRANSCOM's military and commercial assets to ensure their safe transit within the respective areas they operate. With any near peer competitor, all the Services will be challenged to maintain open lines of communication including from the sea. Defense of the sea lanes is a Navy mission that can be accomplished by a variety of means, to include escort; however, with an increased threat level, the Navy may have limited escort capacity available for sealift at a given time. In that scenario, the Navy may augment escort with additional measures such as aerial reconnaissance, patrol or the use of escort support from a coalition partner.

59. Senator BLUMENTHAL. General Lyons, in your testimony, you state that "TRANSCOM will be the sole U.S. operators of steam-powered vessels." Can the American maritime labor force support the operation of steam vessels?

General LYONS. The steam engineering skill set is eroding in the commercial maritime sector as commercial fleets rely less on steam engineering plants. However, mariners with steam credentials and experience are vital to the continued success of existing steam powered vessels in the MSC and MARAD Ready Reserve Force Fleets.

This decline in steam ships and steam engineers paints a dire picture for manning and maintaining steam powered vessels. At the same time, the American labor force is increasingly unable to support the operation of steam vessels as the number of steam vessels in the American Fleet is decreasing. MSC and MARAD are working together on options to alleviate this potential shortfall in mariners with experience in steam engineering, to include leveraging military-to-mariner transition of military personnel with steam experience that are departing the service and providing opportunities for cross-deck training of mariners to expand their skill sets. For this reason, USTRANSCOM is focused on the immediate need to improve sealift readiness at an affordable level. This can be accomplished in part by accelerating the replacement of aging, difficult-to-maintain vessels with more modern used vessels.

60. Senator BLUMENTHAL. General Lyons, do sailors require additional training?

General LYONS. The mariners that crew the surge fleet are commercial contractor mariners who are trained to their respective commercial standards. There are some unique military training requirements, and those are generally handled during the activation period. Under certain conditions, augmentation with government personnel may be necessary to perform all the necessary tasks in contested environments. Our mariners and shore staff must be ready for the threats and complex problems they may encounter. Focusing on ship and crew readiness is a priority—be it the material condition of our platforms, training of our shipboard personnel, proper manning of our ships with qualified mariners, or the resilience of our people and their families.

61. Senator BLUMENTHAL. General Lyons, Last year, Department of Transportation chief Mark Buzby stated in an interview that the Navy may not have enough ships to escort the sealift fleet during a wartime surge. This is a vulnerability we must address to ensure our servicemembers have the resources to defend against an attack on our vital logistics network. Are you concerned that our logistics network is vulnerable to attack if we cannot defend our shipping lanes?

General LYONS. USTRANSCOM recognized this growing problem a few years ago and has conducted analysis of operations in a contested environment and begun to take actions to negate anti-access/area-denial threats. To increase the resiliency or-

ganically within sealift fleet against potential threats and provide greater confidence in mission assurance in a contested maritime environment, we have renewed our focus on operational tactics, techniques, and procedures, as well as procuring secure communications, navigation, and force tracking equipment. Naval escort may be one of several means to enhance the protection of sealift operations. Other means may include maritime aviation patrols, routing away from engagement zones, and decoy or masking of vessels. All such protective measures will be considered in the risk calculus.

The recent Mobility Capability and Requirements Study included contested environment injects, and we have some initial insights to build as our understanding of potential effects on force projection and delivery. We are in coordination with other combatant commands, the Services, and the Joint Staff on these issues through a variety of DOD and USTRANSCOM forums. We continue to conduct analysis to determine the vulnerabilities of greatest impact.

#### QUESTIONS SUBMITTED BY SENATOR MAZIE HIRONO

##### ALLOCATION OF NAVAL ASSETS

62. Senator HIRONO. General Scaparrotti, recent increases in Russian naval activity, particularly submarine activity, deserve the full attention of EUCOM. During the hearing, you mentioned that you need two additional Destroyers in EUCOM. How many more submarines and anti-submarine warfare aircraft do you need in EUCOM to maintain awareness of Russian submarine activities?

General SCAPARROTTI. [Deleted.]

63. Senator HIRONO. General Scaparrotti, the Navy recently announced its intent to eliminate the mid-life refueling and overhaul of the aircraft carrier, USS *Harry Truman* (CVN 75), effectively retiring the ship more than two decades before the end of its planned service life and reducing the inventory of aircraft carriers from 11 to 10 in the near future. What is the impact to the combatant commanders in general and you specifically in EUCOM of having less aircraft carriers available?

General SCAPARROTTI. Increased Carrier Strike Group presence is essential to expanding the competitive space, especially in the Northern Atlantic and Eastern Mediterranean, and achieving a combat-credible posture for deterrence and defense as directed by the 2018 National Defense Strategy. Achieving this increased carrier presence in the European theater depends not only on the Navy's capacity (in terms of the number of carriers in the fleet) but also upon how that capacity is allocated globally through the Department's Global Force Management process.

##### RUSSIA'S GOALS IN THE PACIFIC

64. Senator HIRONO. General Scaparrotti, Russia remains your primary threat in EUCOM, but Russia is a power in the increasingly competitive Pacific as well. What do you assess are Russia's strategy and goals in the Pacific?

General SCAPARROTTI. In the Pacific, as in the Euro-Atlantic, Russia's strategy and goals are to undermine U.S. interests, ensure its territorial security, and achieve greater influence over its neighbors. Russia also maintains economic interests throughout the region and seeks to develop additional markets for military equipment, grain, and energy exports. Moscow aims to attract more direct investment from China, Japan, and South Korea for development of the underpopulated, resource rich Russian Far East.

##### JONES ACT

65. Senator HIRONO. General Lyons, your written testimony describes the challenges in the Ready Reserve Fleet, both in terms of vessels and Merchant Marines. The Jones Act helps maintain a critical base of U.S. Merchant Mariners that the nation will depend on in a crisis. Quite simply, it is an investment in our national security that will pay huge dividends in the event of a crisis. Does TRANSCOM continue to affirm the importance of the Jones Act for our national security?

General LYONS. The domestically trading fleet is a critical component to the Voluntary Intermodal Sealift Agreement (VISA), providing assured access to wartime production capacity, global reach to intermodal networks, and a pool of trained merchant mariners to bring our government-owned, organic fleet from reduced to fully operational status. Additionally, the Jones Act contributes to a robust domestic maritime industry by helping maintain the U.S. industrial shipyard base and infrastructure to build, repair, and overhaul U.S. vessels.



66. Senator HIRONO. General Lyons, what would be the implications for the number of U.S. merchant mariners if the Jones Act were eliminated?

General LYONS. The impact would be significant. Currently there are 30 Jones Act eligible ships committed to VISA. At approximately 40 mariner jobs per ship, the overall mariner pool could decline by approximately 1200. Recent studies indicate there is already a shortfall of approximately 1,800 mariners for sustained contingency operations.

#### READY RESERVE FLEET

67. Senator HIRONO. General Lyons, your written testimony does a good job of laying out the readiness challenges regarding sealift. Does your current plan with the Navy to pursue service life extensions and buying a mix of new and used vessels fully address current readiness shortfalls?

General LYONS. Service Life Extensions are part of the current plan as a short-term means to maintain capacity until either new or used replacement capacity can be acquired; however, extending the life of aging, difficult-to-maintain ships is not desired and will not fully address current readiness shortfalls without increasing cost and risk. For this reason, USTRANSCOM is focused on the immediate need to improve sealift readiness at an affordable level. This can be accomplished in part by accelerating the replacement of aging, difficult-to-maintain vessels with more modern used vessels.

68. Senator HIRONO. General Lyons, based on your strategy with the Navy for the Ready Reserve Fleet, when will DOD meet its ship availability goals?

General LYONS. USTRANSCOM will continue to have readiness and availability issues until a substantial portion of the fleet can be replaced with newer ships. Extending the life of aging ships will not fully address the current readiness shortfalls without increasing cost and risk. USTRANSCOM is focused on the immediate need to improve sealift readiness at an affordable level. This can be accomplished in part by accelerating the replacement of aging, difficult-to-maintain vessels with more modern used vessels. The authority to acquire used vessels will help to raise fleet readiness and availability as the newer ships are brought into the fleet.

#### MARITIME SECURITY PROGRAM

69. Senator HIRONO. General Lyons, the Maritime Security Program (MSP) is a critical link in our ability to project military power. Are the 60 vessels currently contracted in the MSP enough to meet operational needs?

General LYONS. Yes, MSP's 60 ships and associated 2,400 highly qualified U.S. Merchant Marines continues to meet USTRANSCOM's operational requirements. The MSP is an extremely valuable part of USTRANSCOM's overall sealift portfolio to meet operational needs. MSP carriers' global networks provide DOD not only with the vessel capacity committed by participants through VISA but also with access to their complete intermodal transportation systems and freight management capabilities around the world. Those intermodal systems—not just the ships but also the terminals, people, training, facilities, and information systems provide DOD the global reach it needs for mission accomplishment.

#### STRATEGIC IMPORTANCE OF RED HILL

70. Senator HIRONO. General Lyons, the Red Hill Bulk Fuel Storage Facility at Joint Base Pearl Harbor/Hickam is a key component of the Defense Department's operations in the Indo-Pacific, as it provides the largest source of underground fuel storage in the region. What is the potential impact to operational plans and logistics if the Navy were no longer able to use the Red Hill facility?

General LYONS. Defense Fuel Support Point (DFSP) Pearl Harbor includes war Reserve and day-to-day operational stock fuel storage at Naval Station Pearl Harbor, Hickman Air Force Base, and the Red Hill storage facility. The fourteen operational tanks at Red Hill provide storage capacity for up to 175,000,000 gallons of fuel. The primary fuel products are jet fuel, naval jet fuel, and maritime fuel.

In addition to Joint Base Pearl Harbor-Hickman, DFSP Pearl Harbor supports Schofield Barracks, Wheeler Army Air Field, Marine Corps Air Station Kaneohe as well as Sand Island (Honolulu Harbor) and Barber's Point Coast Guard stations. Red Hill is the largest storage area in the Pacific and facilitates trans-load, forward deployment, and sustainment operations in support of various operational plans for the region. I defer to INDO-PACOM as to potential risks to operational plans and logistics.

## QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN III

## DEFENSE PERSONAL PROPERTY PROGRAM (DP3)

71. Senator MANCHIN. General Lyons, in 2017 TRANSCOM took over the Defense Personal Property Program (DP3). Your command has stated objectives that attempt to streamline the move process and reduce backlogs, ultimately aiming for a centralized, or single, move manager. Despite these actions, there are still numerous stories of damaged goods, late shipments and overall dissatisfaction with the companies that are executing the moves. As you prepare for the second “peak season” in charge of the DP3, what actions have you taken or are undertaking to ensure that this move season is an improvement over last year?

General LYONS. Improving the overall relocation process requires a variety of initiatives and investments from the Military Services’ Personnel and Logistics communities. OSD has established a Personnel and Logistics Cross Functional Team that has the Department properly aligned and focused on an action plan with near and long-term tasks to improve many aspects of the overall relocation experience.

The Department of Defense has emphasized a number of improvements for the 2019 Peak Season. These improvements include: earlier delivery of permanent change of station orders for servicemembers and civilian employees, allowing earlier scheduling of transportation and personal property appointments; more in-person quality assurance inspections on moving days; and increased claims valuation. In addition USTRANSCOM has taken steps to add 68 new providers to the program, created new transit time standards in partnership with industry, and relaxed overly-engineered and burdensome business rules to allow industry more flexibility to provide better service.

USTRANSCOM is also fundamentally restructuring DOD’s relationship with industry with a single move manager to achieve the accountability, stability, and quality capacity required for substantial progress. We expect to award a contract in January 2020 with performance beginning in October 2020.

72. Senator MANCHIN. General Lyons, delays in the move process for military families have been attributed to the overall housing boom in the United States taking commercial capacity away as well as an overall lack of numbers of commercial moving company capacity. Can you describe what TRANSCOM is doing to incentivize or encourage the growth of private moving companies required to meet the demands of the Defense Personal Property Program?

General LYONS. A single move manager contract will provide industry with both the confidence and rationale to invest in capacity and strategic relationships with trusted suppliers to meet peak demand. In turn, that single move manager will have the latitude to partner with the companies it believes will provide both capacity and quality on the terms and conditions those companies believe make sense (versus being bound by the DOD’s overly-complicated rule set). In addition to better utilizing existing capacity, DOD assesses this construct will attract new providers. Industry representatives who are currently unaffiliated with DP3 state that the program’s existing over-engineered rules make DOD an unattractive partner; while the DOD pays competitive rates, much of industry would rather serve the 80 percent of the non-DOD domestic moving and storage market.

## TRANSCOM CIVILIAN PARTNERSHIPS

73. Senator MANCHIN. General Lyons, in your testimony you extensively cover the numerical problems with and ageing of our mobility assets, especially in the sealift realm. The truth is in a major conflict we are going to be relying heavily on civilian support to move our military through both the Voluntary Intermodal Sealift Agreement (VISA) and Civil Reserve Air Fleet (CRAF) programs. Do you assess that industry will be able to provide the promised and required mobility assets to meet our demand in the case of a major conflict in Europe or the Pacific?

General LYONS. Yes, the Mobility Capability Requirements Study examined both organic and commercial capacity and concluded the combined capacities from organic and commercial providers were sufficient to meet NDS objectives based on current plans. Additionally, CRAF and VISA providers are committed under contract to provide their capacity when needed. We have close relationships with our industry counterparts through the National Defense Transportation Association and CRAF/VISA Executive Working Groups that meet twice a year and are chaired by my three-star deputy where we identify and resolve issues on these programs. One area of focus going forward is the impact of the contested environment on CRAF/VISA and what that will mean for when, where, and how we use this vital and required commercial capacity.

However, a fundamental premise for use of commercial CRAF/VISA capabilities is the necessity to operate in an acceptable operating environment to minimize risk. This often requires setting conditions to mitigate threats or conducting trans-load operations at locations removed from the immediacy of the combat zone which complicates operations and potentially increases the burden on military capabilities for subsequent onward movement.

74. Senator MANCHIN. General Lyons, what quality control mechanisms do you have in place or are working on to ensure that our industry capability has not atrophied and remains accountable and able to deliver on their agreements given the changing international environment and the concern over a conflict with a major power?

General LYONS. USTRANSCOM closely tracks and reports capacity levels monthly and compares this data to our mobility requirements to ensure the Command's strategic sealift portfolio is adequately sized and ready to meet any contingency. VISA and MSP are joint programs between MARAD and USTRANSCOM in which vessel selections are managed to ensure they continue to meet national defense needs. Additionally, regular industry engagements such as the National Defense Transportation Association Fall Forums, CEO Meetings, and CRAF/VISA Executive Working Groups pay huge dividends by enhancing relationships with our commercial partners. These executive sessions, regular operational wargames, and planning sessions ensure we align the emerging threat environment with industry capabilities and expectations.

#### WORLDWIDE LOGISTICS

75. Senator MANCHIN. General Lyons, the only reason we're able to offer a credible threat to our enemies at any time is TRANSCOM and the logistical support it provides in moving cargo, personnel and refueling operations. As the United States continues to expand operations in foreign countries as we see increased aggressiveness out of Russia and China, there is concern that logistical networks outside of our country will be unable to handle the burden if we do go to war. What is TRANSCOM doing to address the ability to quickly and efficiently move military equipment through Europe, Japan and Korea given significant challenges in access to highways, rail and other mass transportation mediums in these areas?

General LYONS. USTRANSCOM participates in integrated planning with the Joint Staff, Geographic and Functional Combatant Commands, and Combat Support Agencies to address contingency and crisis requirements for projecting and sustaining the Joint Force. As part of our everyday activities, USTRANSCOM works with geographic combatant commands' theater posture efforts to maintain and expand access, basing, and overflight across the globe. Additionally, we maintain close working relationships with our commercial partners and components through various forums to translate required capacity from planning into capability at the point of need.

76. Senator MANCHIN. General Lyons, as we expand our operations in Africa, can you explain logistical issues with a lack of real road or rail infrastructure or even developed airfields in much of Northern Africa and the Sahel and what initiatives the command is executing or advocating for to ensure that we are able to project power or defend allies whenever and wherever we choose?

General LYONS. With the significant size of the African land mass and the lack of robust infrastructure, deployment and distribution is challenging and often resolved via airlift, which is quite expensive. To mitigate gaps and optimize distribution in the West and Central regions, we have partnered with United States Africa Command to develop the West Africa Logistics Network (WALN) designed to reach forces in these far reaching locations. WALN is structured with a single, strategic, multi-modal hub with tactical lift to several West and Central Africa locations. We are considering a similar "hub and spoke" approach in East Africa where we also have regularly scheduled airlift missions. USTRANSCOM also provides regularly scheduled strategic airlift missions to Tunisia in North Africa. Russian and Chinese influence at various ports are growing concerns from an access perspective. In order to enhance our relationships with partners and allies, USTRANSCOM holds annual multinational logistics symposium and explores common avenues for multinational cooperation, interoperability, and innovation with logistics professionals.

77. Senator MANCHIN. General Lyons, what are TRANSCOM's priorities to invest in regarding relationships with allies or infrastructure and capabilities for airfields

or naval facilities to ensure constant access for our currently deployed forces in support of combat or security operations?

General LYONS. USTRANSCOM's priorities for infrastructure investments and capabilities are aligned with the National Defense Strategy and the combatant commands' planning to conform to that strategy. USTRANSCOM's Posture Plan, which includes the En Route Infrastructure Master Plan, provides the basis for responding to a wide-range of global activities. We seek agreements to ensure constant access for deployed forces. The Command continually reviews requirements for infrastructure and agreements, coordinating closely with the various combatant commands and incorporating their operations planning mobility needs via various cross-organization collaborations.

#### EUCOM AND ISRAEL

78. Senator MANCHIN. General Scaparrotti, Israel is the lone country in your area of responsibility that faces the constant threat and use of rockets and missiles against their nation. The United States-Israel Memorandum of Understanding on Security Assistance approved by Congress provides \$500 million in funding for annual missile defense cooperation. How do you assess the effectiveness of programs and systems that have resulted from this investment such as Iron Dome, Arrow and David's Sling?

General SCAPARROTTI. The Iron Dome, Arrow, and David's Sling systems are highly capable and have demonstrated their effectiveness in testing and in defending against real-world threats. Nevertheless, large numbers of rockets and missiles with enhanced capabilities could overwhelm Israeli defenses.

79. Senator MANCHIN. General Scaparrotti, what benefit do you see to see to United States national interests through security cooperation with Israel and where do we need to increase this cooperation to ensure we are paying attention to the areas that require the most support?

General SCAPARROTTI. Israel and the United States share many regional interests, and Israel supports United States interests in the Middle East by deterring Syrian aggression, countering Hamas and Lebanese Hezbollah, combatting the Iranian threat network, fighting radical Islamic extremist organizations in both Syria and the Egyptian Sinai, and enabling United States access and presence in the eastern Mediterranean and Levant. We must continue to strengthen cooperation in rocket and missile defense, air superiority, cyber capabilities, and intelligence sharing.

80. Senator MANCHIN. General Scaparrotti, last month EUCOM participated with the Israeli Air Force in exercise Juniper Falcon and with the Israeli defense forces in the Juniper Cobra ballistic missile defense exercise. What are the benefits to the United States and our allies of continued bilateral military exercises with the Israelis and EUCOM, and how are we going to continue to realize these benefits through future military exercises?

General SCAPARROTTI. Bilateral exercises with our Israeli partners are an integral component to one of USEUCOM's core missions—assisting Israel in its inherent right to self-defense. The Juniper Cobra and Juniper Falcon exercises not only demonstrate United States commitment to the defense of Israel, but also enhances our ability to rapidly deploy, integrate, and conduct military operations with a critical ally who furthers our objectives and protects our interests in the Middle East.

Through the Juniper exercise series, United States Forces are postured and ready to integrate military personnel and combat systems into a combined architecture for the defense of Israel. As the United States and Israel both bring new combat systems on line, such as the F-35 and Israel's Arrow 3 missile defense system, and as we continue to upgrade existing systems such as the Patriot and Aegis missile defense systems, future bilateral exercises with Israel will allow the United States to hone weapons systems, tactics, techniques, procedures, bolster capabilities, and increase interoperability.

#### RELATIONS AND SECURITY ASSISTANCE WITH TURKEY

81. Senator MANCHIN. General Scaparrotti, our relationship with Turkey has become increasingly strained due to actions taken by their government and policies regarding their relationship with Russia and the Kurds in northern Syria. Regarding Russia, Turkey has continue to pursue the purchase of the S-400 surface to air missile system despite the United States offering to sell them a Patriot missile system. Acting Secretary of Defense Shanahan said a few days ago that we won't transfer any F-35's to Turkey if they complete their acquisition of the S-400. What actions or precautions are you taking in EUCOM to try and reinforce our alliance with

Turkey given the apparent change in temperature regarding United States-Turkey relations?

General SCAPARROTTI. Continued efforts to reinforce our bilateral relationship, in the face of current difficulties, is critical. EUCOM maintains strong Mil-Mil relations with Turkey through such lines of effort as intelligence sharing, counter-terrorism cooperation, military training, cyber security, and other regional security issues. EUCOM also participates in land, air, and maritime exercises with the Turkish Armed Forces. We are also exploring ways we can provide forces to support Turkey as it leads the NATO Very High Readiness Joint Task Force beginning in 2022.

The United States's extensive security cooperation with Turkey includes 334 Active Foreign Military Sales cases worth \$9.9 Billion and the participation of 112 Turkish Officers in various International Military Education and Training opportunities, including participation at United States War Colleges.

82. Senator MANCHIN. General Scaparrotti, what actions are you taking with regard to Turkey and CENTCOM [United States Central Command] to ensure our Kurdish partners who have fought so hard alongside us against ISIS [Islamic State of Iraq and Syria] are protected even as we begin to draw down combat operations in Syria?

General SCAPARROTTI. The USEUCOM staff has been closely integrated with the USCENTCOM staff as withdrawal planning is formulated and executed. Throughout this process, we have reinforced the message with our Turkish counterparts that the Kurds must be protected.



**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**THURSDAY, MARCH 14, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**BUDGET POSTURE**

The Committee met, pursuant to notice, at 9:31 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee Members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Sullivan, Perdue, Cramer, McSally, Scott, Blackburn, Hawley, Reed, Shaheen, Gillibrand, Blumenthal, Hirono, Kaine, King, Heinrich, Warren, Peters, Manchin, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. The meeting will come to order.

It's nice to have the—Steve Turner, Northeastern State, in the audience today to advise us along our line.

We're very pleased to have the—Patrick Shanahan, the Acting Secretary of Defense; General Joseph Dunford, the Chairman of the Joint Chiefs of Staff; and David Norquist.

I have to say, David, I enjoyed our breakfast together the other day. I think—some people think it's pretty outrageous that we can actually have an audit. I'm glad that you're in charge of it.

Secretary NORQUIST. Thank you, sir.

Chairman INHOFE. Thank the panel for their distinguished service to the country.

I'm pleased to see that—the Department of Defense budget request for \$718.3 billion and the overall national defense request of \$750 billion. This amount is an increase of less than 3 percent of real growth. You know, this manual represents the blueprint that we're following right now. We had a hearing on this. I think, in all the years I've been here, this is the most productive hearing that we've had, where we had Democrats and Republicans alike in agreement on what our needs are to try to perform this function. Well, one of the things that is in this book that we all agreed to, and all the uniforms that came to our hearings agreed with this, was to have an increase while pulling out of this period of time and

rebuilding our military would be between 3 percent and a 5 percent increase over inflation. Well, this 750 is actually less than 3 percent over inflation. So, I just want to remind people of that. We didn't quite get to that point.

The top line is only part of the story. We must ensure that we are effectively and efficiently spending the money. That's why I want to commend you, Secretary Norquist, for all of your hard work delivering an audit of the Defense Department this year. It's something we haven't seen. That audit should help us identify areas that need more attention and hold people accountable to spend the money more properly.

Despite leadership changes at the Department of Defense, I believe the implementation of the National Defense Strategy should continue, without pause. This is the book that we're referring to, right here. When President Trump came to office, he inherited an American military in crisis. Meanwhile, China and Russia were rapidly modernizing their militaries and actually passing us up in many areas.

America's military advantage has eroded in key warfighting areas, such as long-range ground-based fires, cyber, space, electronic warfare, as well as air and missile defense. The Commission on the National Defense Strategy, a bipartisan, independent commission, stated, quote, "Put bluntly, the U.S. military could lose the next state-versus-state war that it fights," unquote. The conclusion of the 2018 National Defense Strategy states that we—and I'm quoting again—"need urgent change, at significant scale, to address strategic competition with China and Russia."

I look forward to hearing what the urgent changes are and, our witnesses, what they recommend. Even the best-prepared budget request will be meaningless if we don't reach a budget agreement soon. The Commission on the National Defense Strategy also stated that there must be—another quote—"There must be greater urgency and seriousness in funding the national defense. Without sufficient, sustained, and predictable funding, we'll squander the progress the military has made over the past 2 years." Improved readiness, increased procurement, and critical capabilities and investment in future technologies, I see no bigger imperative than this, to reach a budget agreement immediately in order to fully fund defense and to fully implement the National Defense Strategy.

Senator Reed.

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Well, thank you very much, Mr. Chairman.

Let me join you in welcoming the witnesses, Secretary Shanahan and General Dunford and Secretary Norquist.

Before we consider the details of the Defense Department's budget request, I'd like to address some of the broader fiscal challenges we face. Once again, we find ourselves in a situation all too familiar, debating how best to fund the government under the caps required by the Budget Control Act of 2011, the BCA. There is bipartisan consensus that enforcing budget discipline through the BCA and sequestration is ineffective and shortsighted, and that the BCA caps for fiscal year 2020 will deprive us of the resources needed to sufficiently meet the needs of our Nation.



Last year, because we had passed the Bipartisan Budget Act of 2018, and we knew the permitted spending parameters, and therefore, were able to mark up and pass the fiscal year 2019 defense authorization and appropriations bills before September 30th, this gave the military the funding certainty that it has lacked for many years. I believe Congress should pass another 2-year budget agreement to provide further relief from the caps and provide stability for budget planning. Without such an agreement, we will face great difficulty in crafting a bipartisan authorization bill and will be hard-pressed to provide the Defense Department with another on-time appropriation. Delay will likely lead to recurring continuing resolutions that disrupt planning and, ironically, add cost and inhibit readiness and modernization, and, to the Chairman's point, undermine that sense of certainty that is probably worth billions of dollars in budget authority. So, I would urge that we do that.

Today, we consider the fiscal year 2020 budget for the Department of Defense, which seeks \$544.5 billion for the base budget and \$164.6 billion in overseas contingency operations (OCO), of which \$97.9 billion is designated to pay for base requirements. In addition, there is another \$9.2 billion requested for emergency funding.

In its base budget request, the Defense Department highlights resources intended to prioritize programs targeted for the high-end fight against near-peer competitors and to operationalize the National Defense Strategy, including investments in the space and cyber domains, larger purchases of aircraft, ships, and munitions, and increased research-and-development dollars for unmanned systems, artificial intelligence, hypersonics, and directed energy. The base budget request also supports the quality of life of our servicemembers by sustaining family support initiatives and by authorizing a 3.1 percent pay raise, the largest in 10 years. However, it is clear that the base budget request will not cover all the Defense Department's requirements, so we've been presented with a particularly egregious misuse of the OCO account. I acknowledge that both Congress and other administrations in the past have included elements of base funding in OCO accounts, but overloading the OCO request with \$97.9 billion worth of activities that truly belong in the base budget just to avoid the threshold of the BCA cap far exceeds any President and cannot be justified.

Ironically, last year, the President's Acting Chief of Staff, Nick Mulvaney, called for a, in his words, "transition away from using OCO as a gimmick to avoid the sequestration caps," close quote, in his testimony before Congress. Yet, this defense budget is a prime example of such a use and undercuts the integrity of the entire request.

I'd also highlight that section 1524 of the Fiscal Year 2018 Defense Authorization Act directed the Defense Department to update the guidelines regarding the budget items that may be covered by OCO. Neither OMB nor the Defense Department have updated these guidelines. I hope our witnesses shed some light on when this will be done and what the details are of this OCO-for-base request.

I also have serious concerns with the \$9.2 billion requested in emergency funding for unspecified military construction projects, \$3.6 billion of that total is intended to replenish funds that may

be diverted from military construction projects that Congress already authorized and appropriated to build a wall on the southern border. Even if this funding is replenished, these projects could be delayed or even canceled. I would also like to note that Congress has not yet been given the list of projects whose funding may be diverted, and I'm interested if the witnesses can provide some information on that list.

Moreover, we've learned that an additional \$3.6 billion of emergency funding in Defense Department's budget will be used to build more of the wall, projects that have not been identified in any way and arguably have zero military utility. Much of our witnesses' testimony today describes the \$750 billion in investment needed to fulfill the National Defense Strategy, but the National Defense Strategy Commission, as the Chairman cites is authoritative in his comments, noted that comprehensive challenges will require whole-of-government and even whole-of-Nation cooperation, extending far beyond DOD. Diplomatic statecraft and other nonmilitary tools will be critical. So will adequate support for funding for those elements of American power. With the State Department and other agencies facing drastic cuts in this budget request, I'm interesting to know if the Defense Department will truly be able to realize the National Defense Strategy.

It is a duty of this Committee to ensure the men and women we send into harm's way have the resources necessary to complete their mission and return home safely. But, I firmly believe, if the Senate decides to modify the budget caps for fiscal year 2020, we must do so in a manner that continues to provide sufficient funding for both defense and nondefense, as we have done every other time we've adjusted the caps.

I'm proud that this Committee has always worked in a bipartisan fashion during this process. I look forward to working with all the Committees to come to a reasonable agreement again this year.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

We'll now have opening statements by both the Secretary and General Dunford. Your entire statement will be made a part of the record, but, if you can hold it down to around 5 minutes—we have a full house today, and we want to get to questions by all of our members on both sides.

So, we'll start with you, Secretary Shanahan.

**STATEMENT OF THE HONORABLE PATRICK M. SHANAHAN,  
ACTING SECRETARY OF DEFENSE; ACCOMPANIED BY THE  
HONORABLE DAVID L. NORQUIST, UNDER SECRETARY OF  
DEFENSE (COMPTROLLER)**

Secretary SHANAHAN. Thank you, Chairman Inhofe and Ranking Member Reed, distinguished Members of the Committee. Thank you for this opportunity to testify in support of the President's budget request for fiscal year 2020.

I'm joined by Chairman of the Joint Chiefs of Staff, General Joseph Dunford, and the Department's Comptroller and Chief Financial Officer, Mr. David Norquist.

During my time at the Department of Defense, I've engaged in substantive discussions with many of you. In our conversations,

there has been an enduring constant. That is, the bipartisan nature of defense, proved by the sustained funding increases Congress has provided, the last 2 years. On behalf of our military's selfless patriots, thank you.

It has been a great privilege and honor to serve alongside the men and women of the Department of Defense, and it was a pleasure to work with Secretary Mattis to craft the 2018 National Defense Strategy. Released in January of 2018, that strategy laid the foundation for restoring military readiness and modernizing our joint force for an era of great-power competition.

I now oversee the continued execution of our strategy, which is the undisputed driver of today's budget request. It was extremely helpful for the Department to receive the authorization and appropriation bills on time and at the requested top line last year. That is equally important this year, as our competitors have not been complacent. China's defense spending approaches that of the United States when we take into account purchasing power and the portion of our budget going to military pay and benefits. That, coupled with China's organized approach to steal foreign technology, has allowed China to modernize its missile, space, and cyber capabilities, as well as project power far beyond its borders. Russia, for its part, continues to compete asymmetrically with the United States, modernizing and developing its own missile, space, and cyber capabilities. Simultaneously, North Korea's nuclear weapons and missiles remain a pressing concern. Iran's missile and cyber threats and malign aggression across the Middle East and beyond threaten United States national interests. We know violent extremist organizations like al Qaeda and ISIS continue to foment instability in vulnerable areas.

We have seen marked progress in our current operations as we work by, with, and through an expansive network of allies and partners across the globe. In Syria, the 79-member Defeat ISIS Coalition has liberated virtually all of the territory ISIS once held. As the United States drawdown continues, we will maintain a presence to prevent ISIS resurgence.

As part of a whole-of-government approach, we fully support Iraq's fight against terrorism, and we continue to enable the Iraqi Security Forces' progress in securing liberated areas and thwarting ISIS's attempts to mount a clandestine insurgency.

In Afghanistan, United States and coalition forces are training, advising, and assisting Afghan forces to apply pressure on the Taliban. We support the ongoing negotiations, the best window for peace there in 40 years, and continue to stymie terrorist threats to our Homeland.

Defeating al Qaeda in the Arabian Peninsula and ISIS remains the top United States national security interest in Yemen. At the same time, we fully support UN efforts to bring all relevant parties of the civil war to the negotiating table. The \$750 billion top line for national defense enables DOD to maintain irregular warfare as a core competency, yet prioritize modernization and readiness to compete, deter, and win in any possible high-end fight of the future.

The budget is critical for continued execution of our strategy, and reflects difficult but necessary choices that align finite resources

with our strategic priorities. To highlight some of those choices, this is the largest research, development, training, and evaluation budget in 70 years. The budget includes double-digit increases to our investments in both space and cyber, modernization of our nuclear triad and missile defense capabilities, and our largest ship-building request in 20 years, when adjusted for inflation. It also increases our total end strength by roughly 7,700 servicemembers and provides a 3.1 percent pay increase to our military, the largest in a decade.

Now to the specifics. The top line slates \$718 billion for the Department of Defense. Of that total, the budget includes \$545 billion for base funding and \$164 billion for the overseas contingency operations. Of the overseas contingency operation funds, \$66 billion will go to direct war and enduring requirements, and \$98 billion will fund base requirements. To round out the numbers, \$9.2 billion will fund emergency construction. That includes an estimated \$2 billion to rebuild facilities damaged by Hurricanes Florence and Michael; up to \$3.6 billion to support military construction projects that will award in fiscal year 2020 instead of fiscal year 2019 so we can resource border barrier projects under emergency declaration this year; and \$3.6 billion in case additional emergency funding is needed for the border. Military construction on the border will not come at the expense of our people, our readiness, or our modernization. I caution that no adversary can be as damaging to our military readiness as budget instability.

We built this budget to implement the National Defense Strategy, and I look forward to working with you to ensure predictability, on-time funding at our requested top line so our military can remain the most lethal, adaptable, and resilient fighting force in the world.

I close with the words of William Jennings Bryan etched into the walls of our Capitol so we may never forget their meaning, “Our Government, conceived in freedom and purchased with blood, can be preserved only by constant vigilance.”

Senators, I appreciate the critical role Congress plays to ensure our warfighters can succeed on the battlefields of both today and tomorrow. I thank our servicemembers, their families, and all those in the Department of Defense for maintaining the constant vigilance as they stand always ready to protect freedoms.

[The prepared statement of Secretary Shanahan follows:]

#### PREPARED STATEMENT BY ACTING SECRETARY OF DEFENSE PATRICK SHANAHAN

##### INTRODUCTION

Chairman Inhofe, Ranking Member Reed, distinguished Members of the Committee, I appreciate the opportunity to testify in support of the President's budget request for fiscal year 2020. I am joined today by Chairman of the Joint Chiefs of Staff, General Joseph Dunford, and the Department's Comptroller and Chief Financial Officer, Mr. David Norquist.

The size, scale, and importance of collaboration between Congress and the Department of Defense (DOD) shows we are united in our purpose to protect and defend our Nation. During my time as Deputy Secretary of Defense and now as Acting Secretary of Defense, I have engaged in substantive discussions with many Members of this Committee. I look forward to continuing our engagements, in this hearing and beyond, with both long-serving and new members, as the Department drives results along our strategic priorities.

We in DOD appreciate Congress's partnership in repeatedly demonstrating the bipartisan nature of defense. I thank Congress for voting to lift budgetary caps and providing sustained funding increases over the last two years, which have helped our military meet today's challenges while preparing for those of tomorrow. Members of this Committee, the entire Congress, and the American people can rest assured that DOD has efficiently and effectively invested your money. Thank you, in particular, for your support of the fiscal year 2019 2.6 percent pay increase for our military personnel.

Our responsibility is to remain responsible stewards of your trust and the American people's hard-earned tax dollars. DOD has accelerated necessary changes in how we develop, posture, and employ our Joint Force. We are taking a clear-eyed approach to the strategic environment in which we operate and marrying our past experiences to new ideas, driving progress and fostering innovation in the process.

Our fiscal year 2020 budget reflects the President's vision for prioritizing the security, prosperity, and interests of the American people. It also reflects my vision for the future—one marked by a more lethal, results-oriented Department of Defense with the capabilities and capacity to ensure national security and implement our National Defense Strategy (NDS) at the speed of relevance. Today I look forward to discussing that vision and how it is reflected in DOD's posture and resourcing decisions.

#### THE 2018 NDS: AN ENDURING FRAMEWORK

To provide context for that discussion, I want to take us back in time: two years ago, our Department had brand new civilian leadership ready to drive results. With a military enduring the longest continuous duration of combat in American history, we contended with a host of challenges, including an increase in North Korean missile testing; an aggressive Iran; violent extremists in Iraq, Syria, and Afghanistan; and growing strategic competition with China and Russia. In addition, cyber and space emerged as contested, warfighting domains, further complicating an already complex security environment.

Amidst these challenges, the release of our 2018 NDS last January provided the strategic unity DOD needed, with clear direction on restoring military readiness and modernizing the Joint Force to address great power competition.

The 2018 NDS's unified framework enables a potent combination of teamwork, resources, and an unmatched network of allies and partners stepping up to shoulder their share of the burden for international security. The NDS also fosters alignment within the Department, the Interagency, industry, and Congress.

Fourteen months after its release, I say with conviction: the NDS remains the most effective aligning mechanism for the Department. Its implementation is our most critical mission. Yet, strategy cannot be static; it must be constantly reevaluated. Last month, my staff concluded a clear-eyed assessment of our NDS priorities and our progress in meeting them, highlighting our successes and making clear we still have more work to do. Most significantly, it reaffirmed that erosion of our competitive edge against China and Russia continues to be DOD's most pressing "central problem." Our three primary lines of effort—increasing our military's lethality, strengthening our network of alliances and partnerships, and reforming DOD's business practices—remain the most effective avenues for addressing this challenge.

I thank Congress for its own evaluation via the NDS Commission. Having reviewed the findings of both our internal DOD assessment and of the Commission's report, I am confident we are aligned on the most critical matters. The few areas where we did not agree reflect the reality that finite resources require tough choices. DOD stands by these choices as necessary components of our strategic approach.

As our Department has aligned behind our Strategy, our competitors have not been complacent. They have accelerated their own military modernization efforts and vigorously pursued the development and fielding of advanced technologies with a clear intent: create an asymmetric military advantage against us, our allies, and our partners.

#### PRIORITY THREATS & POLICY OBJECTIVES

##### *The China Threat*

As this Committee recognizes, the Chinese Communist Party exports coercive influence far beyond its borders while internally wielding authoritarian governance over its own people. To achieve hegemony in the Indo-Pacific in the near term and shape a world consistent with its authoritarian model, China is: (1) aggressively modernizing its military, (2) systematically stealing science and technology and seeking military advantage through a strategy of Military-Civil fusion; (3) undermining the rules-based international order, which has benefited all countries, in-

cluding China, and (4) building an international network of coercion to further its economic and security objectives.

#### *Military Modernization*

The trajectory of China's military spending is clear. In just twenty years, China's official defense budget soared from roughly \$20 billion in 1998 to \$170 billion in 2018, with actual spending even higher. Just last week, China announced a projected 7.5 percent increase in defense spending in 2019. China devotes these funds to aggressive military modernization and advanced weaponry development, from nuclear and missile capabilities to space and cyber. Accounting for purchasing power and the significant portion of our military budget going to pay and benefits, today, China's defense spending approaches that of the United States.

China has made investments specifically intended to offset United States advantages, including robust anti-access/area-denial (A2/AD) networks, more lethal forces, and new strategic capabilities. If deployed to overwhelm United States or allied combat power at initial stages of a conflict, these capabilities could seek to achieve a "fait accompli" that would make reversing Chinese gains more difficult, militarily and politically. Implementation of our Strategy ensures we have the capabilities, posture, and employment of forces so this never comes to pass.

On the nuclear front, China is developing long-range bomber capabilities that, if successful, would make it one of only three nations in the world to possess a nuclear triad. In addition, China is building up its inventory of missiles, focusing on those intended to circumvent U.S. and allied defenses and deny the United States critical military access to the Indo-Pacific. Within the past five years alone, China has successfully tested hypersonic cruise and boost glide weapons concepts for these purposes.

In 2018, China conducted more space launches than any other nation. In choosing to develop counterspace and dual-use space capabilities and enhance space-based intelligence, surveillance and reconnaissance, China has demonstrated its ability to weaponize space, if desired. We, in turn, cannot ignore China's ability to target United States and allied space capabilities. We also cannot ignore China's ambitions in the cyber domain, which it recognizes as the battlefield's "nerve center." With all People's Liberation Army (PLA) cyber operations coordinated under one roof, China can operate in this contested domain without bureaucratic red tape to slow it down.

#### *Technology Theft*

The rate at which China is systematically stealing United States and allied technology for its own military gain is staggering. Reversing this dangerous trend—one which could impact our troops on the battlefield—means acknowledging reality: every Chinese company is at risk of being either a witting or unwitting accomplice in China's state-sponsored theft of other nations' military and civilian technology. To quote China's own cybersecurity law, private companies are required to "provide technical support and assistance to public security organs and national security organs," whether they want to or not. Any United States or allied company that works with Chinese companies, without proper safeguards, thus opens itself to theft as well.

To grasp the pervasiveness of the problem, look to the Federal Bureau of Investigation (FBI). There are open Chinese economic espionage or technology theft cases in nearly all FBI field offices. For years, the U.S. Department of Justice (DoJ) has indicted members of the Chinese state and military for stealing U.S. technology. In January, DoJ recognized China's escalating tactics and took a step further, indicting executives of Chinese telecommunications company Huawei for scheming to steal T-Mobile's trade secrets.

Huawei exemplifies the Chinese Communist Party's systemic, organized, and state-driven approach to achieve global leadership in advanced technology. With initiatives like the Digital Silk Road, Made in China 2025, and Thousand Talents Program in play, which spur companies and individuals to carry out its bidding, China aims to steal its way to a China-controlled global technological infrastructure, including a 5G network. China pursues large-scale acquisition of foreign companies in sensitive sectors and pressures companies into transferring technology. Finally, China's Military-Civil Fusion strategy seeks to translate cutting-edge technology into advanced weapons.

Here I must note: some United States companies have voiced ethical qualms about working with DOD to develop advanced technology, in some cases even terminating relationships—often while continuing to work with China. DOD takes ethical considerations extremely seriously when researching and developing emerging technologies, and our efforts improve performance and allow human beings to make bet-

ter decisions. China, on the other hand, repeatedly demonstrates little regard for international ethical rules and norms.

China's approach to technological advancement matters for our military advantage, and its ambitions threaten the security of critical United States capabilities and technological infrastructure, and thus our military operations, safety, and prosperity.

Let me be perfectly clear: the United States does not oppose competition, as long as it takes place on a fair and level playing field. However, we cannot accept the unfair and illegal actions of others who intend to tilt the playing field through predatory economics and underhanded tactics.

#### *Undermining the Rules-based International Order*

We all know China's population is comparable to the Americas and Western Europe's combined. But China is also geographically situated within arm's reach of 2.4 billion people, roughly a third of the earth's population, across Southeast Asia, Japan, and India. Make no mistake—China is extending that reach by increasing its overt military and coercive activities vis-à-vis its neighbors.

China's increasingly provocative behavior in the Indo-Pacific, particularly the South China Sea (SCS), should concern us all. Between 2013 and 2018, China increased its air and sea incursions into the SCS twelvefold. Within those five years, it also increased deployments of offensive and defensive weapons systems to the SCS by the same order of magnitude.

China's land reclamation and militarization far exceed that of other claimants combined in the South China Sea. Between 2013 and 2015 alone, China created more than 3,200 acres in the SCS, building features within its self-proclaimed 'nine dash line'—a claim the Permanent Court of Arbitration in The Hague ruled in 2016 has no legal basis. These constructed features are almost four times the size of Central Park in New York City and roughly five times the size of this Capitol Hill neighborhood. Imagine walking from this hearing room to the Marine Barracks at 8th and I over what used to be part of the Pacific Ocean.

Now also picture Chinese interference in freedom of navigation. Yet for this, we do not have to use our imaginations. China habitually threatens this freedom, using both conventional military force projection and "gray zone" or irregular warfare activities. For example, in September, Chinese military vessels came dangerously close to the USS *Decatur* off the coast of the Spratly Islands. China's force projection inside and outside the SCS disrespects and undermines our rules-based international order and threatens regional stability and security.

#### *International Network of Coercion*

Lastly, China is diligently building an international network of coercion through predatory economics to expand its sphere of influence. Sovereign nations around the globe are discovering the hard way that China's economic "friendship" via One Belt, One Road can come at a steep cost when promises of investment go unfulfilled and international standards and safeguards are ignored.

Let us look at just a few examples. Saddled with predatory Chinese loans, Sri Lanka granted China a ninety-nine-year lease and seventy percent stake in its deep-water port. The Maldives owes China roughly \$1.5 billion in debt—about thirty percent of its GDP—for construction costs. Pakistan owes China at least \$10 billion in debt for the construction of Gwadar Port and other projects.

In Africa, Djibouti owes China more than eighty percent of its GDP and, in 2017, became host to China's first overseas military base. In Latin America, Ecuador agreed to sell eighty to ninety percent of its exportable crude oil to China through 2024 in exchange for \$6.5 billion in Chinese loans. After leasing land tax-free to China for fifty years, Argentina is denied access and oversight to a Chinese satellite tracking station on its sovereign territory, unwittingly allowing the facility's use for military purposes.

The list of nations entrapped by China's predatory debt tactics runs long, and some have started to push back. Yet, under the guise of good-intentioned development, Beijing continues to leverage debt for economic or political concessions—a practice we expect will intensify as more nations prove unable to pay China back.

#### *Policy Objectives to Meet the China Threat*

Left unaddressed, China's success in unfairly tilting the playing field in its favor has serious implications for our own military advantage. While we do not seek to contain China, we expect China to play by the rules, meeting the same standards to which the United States and all other nations are held. We will cooperate with China wherever and whenever possible, but we also stand ready to compete where we must to ensure our military's competitive advantage for decades to come.

As German Minister of Defense Ursula von der Leyen said last month in Munich, “our partnerships are not built on domination. They do not create political and economic dependencies.” Our pursuit of many belts and many roads creates alternative options for nations unwilling to succumb to China’s increasingly coercive methods.

As such, DOD’s priority policy objectives are to outpace Chinese military modernization to deter future conflict, or win decisively should conflict occur; protect United States and partner research and development of advanced technology from rampant Chinese theft, and; maintain a free and open Indo-Pacific built on strong alliances and growing partnerships.

#### *The Russia Threat*

China is not the only nation attempting to undermine U.S. interests and security to alter the international order in its favor. Despite having an economy smaller than that of the state of Texas, Russia, against the economic odds, seeks a return to great power status. Though it has not reached that goal, Russia is playing a weak strategic hand well by: (1) aggressively modernizing its military; (2) projecting military might beyond its borders; (3) intimidating its neighbors, including exploiting their energy dependence for strategic gain, and; (4) undermining other nations’ sovereign democratic processes.

#### *Military Modernization*

Russia is aggressively modernizing its military to gain an asymmetric advantage over the United States and NATO. Russia plans to spend \$28 billion to upgrade and modernize each leg of its strategic nuclear triad by 2020, and has already spent more than ten percent of its total military budget every year since 2011 on nuclear modernization efforts. In March 2018, Russian President Vladimir Putin announced Russia’s development of six new strategic weapons systems—five of which are nuclear capable—including hypersonic systems able to maneuver at ten times the speed of sound and intended to circumvent U.S. missile defense capabilities. One of those hypersonic systems is expected to enter service this year.

In addition to modernizing its strategic weapons systems and delivery platforms, including its submarine fleet, Russia is building a large, diverse, and modern set of non-strategic systems, including the dual-capable SSC-8 cruise missile, which clearly violates the Intermediate-Range Nuclear Forces (INF) Treaty. Every NATO Ally agrees on this point and supports our decision to suspend United States Treaty obligations in response to Russia’s material breach. A treaty not followed by all parties cannot be an example of effective arms control. For any who doubt United States efforts to bring Russia back into compliance with the Treaty, I would emphasize: we held over thirty meetings with the Russians at every level of government for more than five years—across two administrations, one Democrat and one Republican.

Moving to space, Russian systems are intended to disrupt, degrade, and damage United States satellites in orbit. There is no question: Russia treats space as a warfighting domain to gain military advantage over the United States. Moscow has already fielded ground-based directed energy laser weapons and is developing air-based systems and additional novel counterspace capabilities to target our space-based missile defense sensors. Russia now has the third largest collection of operational satellites in the world, behind only us and China.

#### *Projecting Military Power*

On top of modernizing its military capabilities, Russia also projects its military might around the globe. In 2018, Russia conducted its largest strategic military exercise since 1981. Today Moscow deploys a variety of aviation and naval missions to the Pacific, the Arctic, the Mediterranean Sea, the Indian Ocean, and the western hemisphere, including the Caribbean. In December, Russia conducted landing and overflight operations in our own front yard, sending bombers to Venezuela. In the Middle East, it has continued support for Syria’s murderous regime with expeditionary operations and long-range strikes. These examples make clear Russia’s ambitions for a more globally dominant military footprint.

#### *Strategy of Intimidation*

In addition to projecting military power far beyond its borders, over the last decade Russia has attempted to incrementally push geographic boundaries with its neighbors. From its 2008 invasion and continued occupation of twenty percent of Georgian territory to its 2014 invasion and continued occupation of Crimea, Russia demonstrates blatant disregard for other nations’ sovereignty. Lest we forget, Russia still holds twenty-four Ukrainian crewmembers it captured last November, when it attacked three Ukrainian ships near the Sea of Azov in violation of international law.



Russia's escalating intimidation efforts are amplified by irregular warfare and "gray zone" tactics intended to sow confusion, conceal military movement, and limit accountability. By deploying mercenaries—like those of the Wagner Group to places like Crimea, Syria, Libya, and now Venezuela—instead of uniformed soldiers, Russia hopes its use of proxies will further muddy the already murky waters of conflict and limit international response to its actions. Russia's attempts at deception are not fooling anyone.

#### *Undermining Sovereign Processes*

Russia's duplicity also extends to the cyber domain, where it propagates coordinated disinformation campaigns to undermine sovereign democratic processes. In April 2018, Facebook estimated that roughly one million users followed a page operated by Russia's Internet Research Agency (IRA). Last year, Twitter identified more than 3,800 IRA accounts that had generated millions of tweets over a nine-year span. These accounts are intended to foster divisiveness in the West and undermine trust in democratic institutions.

Russian efforts extend beyond their bots and internet trolls—they conduct deliberate cyber operations against the United States and other sovereign nations. To name a few examples of Russian handiwork: it has targeted United States Government and critical systems to allow damage or disruption of U.S. civilian or military infrastructure during a crisis; launched distributed denial of service attacks against NATO, Ukraine, and German Government websites, and; released a potent cyber virus that caused billions of dollars in damage around the world.

In response, we are not complacent. DOD is getting after the problem, and we are achieving results, most notably in our recent successful efforts to stymie Russian disruption of our midterm elections. We are determining what other actions DOD and our Interagency partners must take to ensure the continued safety and integrity of our democratic institutions.

#### *Policy Objectives to Meet the Russia Threat*

As these examples make clear, Russia is intent on undermining United States military advantage to alter the existing balance of power in its favor. In order to thwart Russia's efforts to regain peer competitor status, DOD is focused on modernizing our military to enhance deterrence and prevent future conflict, while bolstering burden sharing to ensure the NATO Alliance remains credible and capable against Russian aggression.

We are also working diligently with the Interagency, our allies, and our partners to deter Russia's physical intimidation and contest its cyber aggression, information warfare, and "gray zone" tactics in Syria and beyond. That includes ensuring Russia does not control the international narrative, casting its malign intentions and actions under a cloak of subterfuge, disinformation, and malign propaganda. We are strengthening our ability to counter this deliberate deceit, both on our own and with our allies and partners.

#### *Regional Threats: North Korea & Iran*

As DOD modernizes to win competition with China and Russia, we also remain alert to regional threats, like those posed by the Iranian and North Korean regimes.

While President Trump and our diplomats negotiate for the denuclearization of North Korea, its collection of nuclear weapons and ballistic missiles continues to pose a threat to the United States Homeland, as well as our allies.

Iran, for its part, relentlessly seeks to expand its malign influence across the Middle East and beyond. By providing conventional manpower and support to the Syrian regime and Houthi rebels in Yemen, and offering support and financing to terrorist groups like Lebanese Hizbullah, Iran is entrenching and proliferating its clout across the region. In addition, Iran demonstrates reckless behavior in the maritime domain. Iranian leaders repeatedly threaten to close the Strait of Hormuz—the gateway for almost a third of all global sea-traded oil—to international shipping and allow Iranian-backed Houthis to conduct attacks on international shipping in the Bab al-Mandab.

Iran has also increased funding for its cyber efforts twelvefold under President Rouhani, as well as increased espionage and targeting of United States Government and commercial entities since withdrawing from the Joint Comprehensive Plan of Action. DOD also remains closely attuned to the threat of Iran pursuing nuclear weapon and advanced missile capabilities, including Iran's testing of space launch vehicles with technology virtually identical and interchangeable with that of ballistic missiles.

*Policy Objectives to Meet Regional Threats*

In support of the ongoing negotiations for the denuclearization of North Korea, DOD aims to ensure our diplomats continue to speak from a position of strength. Our alliances in the region remain ironclad, including with the Republic of Korea and Japan. Together we deter North Korean aggression and maintain our ability to protect the Homeland and win decisively should conflict ever occur.

To counter Iran's destabilizing influence across the Middle East, DOD seeks to deepen and expand alliances in the region and strengthen local partners' capabilities and capacity to manage and counteract threats. We also seek to ensure freedom of navigation for all, bolster resilience against destructive cyber-attacks, and prevent weapons of mass destruction (WMD) from falling into the hands of irresponsible actors.

*The Terrorism Threat*

Working by, with, and through an expansive network of international partners, we have made meaningful progress in thwarting terrorist designs against the U.S. Homeland and interests. Yet we do not discount the threats that continue to emanate from violent extremist organizations (VEOs), as they seek to conduct and inspire attacks, gain legitimacy by exerting control over territory, enjoy safe haven in under-governed countries, obtain access to WMD material, and proliferate their ideology to others across the globe.

Taking a step back from our hard-won successes against the Islamic State in Iraq and Syria (ISIS), we also recognize the global fight against radical Islamist terrorists is not over. From the 1980s to now, the number of nations, either unwittingly or willingly, providing safe haven to VEOs has increased eleven-fold. Today, radical Islamist terrorist movements are organized in more than two dozen countries, and the globe must contend with more than one hundred VEO-directed, enabled, or inspired attacks every year. VEOs continue to take advantage of instability in places like Yemen, Syria, Libya, Iraq, the Maghreb, Lake Chad, Somalia, and Afghanistan, preying on the conflict-ridden to grow their influence.

*Policy Objectives to Meet the Terrorism Threat*

Recognizing terrorism as a global threat, we must pursue global solutions that utilize the unique capabilities and capacities of our allies and partners, in addition to our own. Military might alone will not eliminate terrorist ideology or the threat of future terrorist attacks.

However, we can and are reducing the likelihood of an attack on our Homeland, our troops, and our interests by contributing to a whole-of-government and coalition approach. Together, we are removing terrorists' ability to control and hold territory; bolstering the internal security and stable governance of vulnerable states; ensuring the proper safeguarding of WMD material from terrorist hands; checking their ability to exploit emerging technologies, including unmanned systems; targeting VEO financial networks and countering terrorist ideology online to limit its spread to the greatest extent possible; and sharing intelligence to limit the risk of attack around the world.

WHAT DOD IS DOING ABOUT IT

To meet our policy objectives, DOD cannot simply keep pace with our competitors as they increase their regional and global influence, grow their military capabilities, and develop and field advanced technologies. We must—and will—significantly outpace them.

We have made tough choices that align finite resources with our strategic priorities, reducing some day-to-day operational requirements now so we are prepared to deter, compete, and win against strategic competitors in the future. Our work bringing the NDS to life is far from over, but we are demonstrating clear progress along our three lines of effort.

*Increasing Lethality*

In order to protect the Homeland and remain the most lethal military in the world, we have begun a paradigm shift towards a more balanced, distributed, survivable, and cost-imposing Joint Force. In 2018, we closely linked our combatant commands' operations to policy objectives and our Service plans to capability and capacity, with a focus on execution and performance. We are adjusting our posture, increasing lethality, improving operational readiness, and beginning to modernize and innovate at scale. These efforts allow us to better exploit adversary weakness, project power in contested environments, and expand our combat credible forward presence.

We have shifted our posture in key regions, taking initial steps to economize for sustainable missions in the Middle East and South Asia to prepare for the possible high-end fight of the future. In doing so, we maintain strategic predictability and implement operational unpredictability via the Dynamic Force Employment (DFE) model. This approach provides assurance to our allies and partners, while keeping our competitors and adversaries on their toes. We demonstrated DFE in action last year, when one of our carrier strike groups returned early from deployment unannounced and quickly redeployed to the North Atlantic—the first carrier strike group to conduct operations there since the 1990s.

We encourage and welcome all individuals who can meet our exacting requirements to join our military's ranks. A key element of strengthening our military and increasing lethality is ensuring our warfighters achieve established physical, mental, and security vetting standards. War is unforgiving, and our mission demands we remain a standards-based organization. In upholding systematically applied standards, we ensure the readiness of our Joint Force and cohesion of our units. One of those standards is deployability. Since June, we have lowered the percentage of non-deployable servicemembers from 6.4 to 5.4—that means roughly 21,000 fewer non-deployable servicemembers today than eight months ago.

DOD has also worked diligently to ensure our personnel have the capacity, training, and capabilities they need to achieve results. Last year, we accelerated delivery of more than 14,000 munitions and precision guidance kits to our warfighters, turned the corner on replenishing critical munitions stockpiles, and made strides to rapidly deploy cutting edge equipment to the warfighter. Our Close Combat Lethality Task Force continues to strengthen our infantry's lethality, survivability, resiliency, and readiness for close combat. Four out of five U.S. combat deaths occur in our infantry. Therefore, it is a strategic imperative to ensure those who confront war's grimmest realities never enter into a fair fight.

This work on personnel and munitions readiness feeds into complementary efforts to increase equipment readiness. In October 2018, we set an eighty percent readiness target for mission critical aviation platforms. In just a few months, almost every type, model, and series of aircraft targeted by that memorandum has demonstrated progress. This year, we will establish similarly ambitious readiness targets across the DOD enterprise. In addition, our Services have made impactful readiness gains. As one example, the Air Force's operational squadrons are twenty-three percent more ready today than in 2017, and we will have twenty-five percent more pilots able to carry out missions in fiscal year 2019 than in fiscal year 2016.

On modernization, we remain committed to a safe, secure, and effective nuclear deterrent. Nuclear deterrence has kept the peace over the last seventy years, and its importance has been reaffirmed by every Congress and every president since Harry Truman. Last year, DOD released our Nuclear Posture Review (NPR), which details the need for modern and tailored nuclear capabilities and capacity that meet the realities of our times. We are moving out on those efforts. With fiscal year 2019 funding, we are recapitalizing and modernizing our aging legacy forces, including our nuclear command, control, and communications (NC3), while pursuing prudent, modest adjustments to our arsenal, which will increase the flexibility of our response options.

Here it is worth re-stating—Russia is aggressively developing and modernizing a suite of strategic and non-strategic nuclear weapons. Not only does this add urgency to the modernization of our legacy forces, it underscores the importance of the supplemental capabilities called for in last year's NPR. Both the low-yield submarine-launched ballistic missile (SLBM) and the sea-launched cruise missile (SLCM) close what we believe to be troubling gaps in regional deterrence. These are not redundant capabilities. The low-yield SLBM, deployed in small numbers, will provide a highly tailored response to specific developments in Russia's forces and doctrine that may lead Russia to mistakenly believe it could potentially use a small number of low-yield nuclear weapons without risking a United States military response. A nuclear SLCM will provide a similar capability in response to serious developments and trends in Russia's nonstrategic nuclear forces. These supplemental capabilities enhance deterrence and stability.

Turning to emerging technology fields, DOD has identified ten key areas: hypersonics; fully networked C3; directed energy; cyber; space; quantum science; artificial intelligence (AI)/machine learning; microelectronics; autonomy; and biotechnology.

We have invested in basic research, rapid prototyping, and experimentation to mature technology that can be used at scale. We are also updating our warfighting doctrine as the character of warfare changes. Take AI for example—competitors are investing heavily in this field, redefining the future of warfare. Last year, DOD established the Joint AI Center (JAIC), and we released our AI Strategy just last

month. These efforts accelerate DOD's delivery and adoption of AI at the speed of relevance, while attracting and cultivating the best global talent.

In pursuit of stronger missile defense, DOD released our Missile Defense Review (MDR) in January, which recognizes the accelerating proliferation of advanced offensive missile capabilities around the world. The MDR articulates a comprehensive approach that combines deterrence, active and passive missile defense, and attack operations. We continue to maintain ground- and sea-based missile defenses while also developing new capabilities to counter new threats.

As the MDR illustrates, our military is not constrained by earth's geography. We are taking steps to secure unfettered access to and freedom to operate in space, in accordance with our international agreements and obligations. Reforming the organization of the military space enterprise is fundamental for protecting our roughly \$19 trillion economy and our position as the world's strongest military. Earlier this month, we submitted a legislative proposal to Congress, requesting authorization for a U.S. Space Force. If authorized, the Force would transform our approach to space, increasing our responsiveness in this warfighting domain. Establishing a sixth branch with dedicated military leadership will unify, focus, and accelerate the development of space doctrine, capabilities, and expertise to outpace future threats, institutionalize advocacy of space priorities, and further build space warfighting culture. I ask for your support of our proposal, so we can move out in this critical domain.

We recognize restoring military readiness, modernizing our Joint Force, and increasing lethality will not happen overnight, but as the above examples demonstrate, we are making meaningful progress.

#### *Strengthening Alliances and Partnerships*

Beyond DOD's efforts to improve readiness and lethality, we are expanding collaboration and cooperation outside the Department. DOD's participation in combined military exercises has increased by seventeen percent in the last two years, and our Foreign Military Sales have increased by more than sixty-five percent in the last three years. Across the globe, DOD has leveraged opportunities to expand and deepen our already unmatched network of allies and partners, while making real progress on burden sharing for international security.

Starting in the Indo-Pacific, our priority theater, we continue to pursue many belts and many roads by keeping our decades-old alliances strong and fostering growing partnerships. In all our actions, we demonstrate our commitment to a free and open region, marked by respect for the sovereignty and territorial integrity of all nations, big and small.

We are fortifying our bedrock alliances with Australia, Japan, the Republic of Korea, the Philippines, and Thailand while growing key partnerships across the Indo-Pacific. It is worth noting here that four out of the five nations in our Five Eyes intelligence-sharing network are also Pacific nations, further emphasizing the region's importance.

In 2018, the United States took historic strides with two key partners in particular, Vietnam and India. Our Navy conducted the first United States aircraft carrier visit to Vietnam since the Vietnam War, and we participated in the inaugural United States-India 2+2 Strategic Dialogue in New Delhi, showing growing trust between the world's oldest and largest democracies.

While our diplomats chart a path to the denuclearization of North Korea, DOD continues to enforce United Nations Security Council resolution sanctions against North Korean ship-to-ship transfers, alongside allies and partners. We have also improved integration of our missile defense assets on the Korean Peninsula to better protect United States Forces and allies.

In July 2018, we conducted the largest naval exercise in the world, the Rim of the Pacific or RIMPAC, alongside twenty-five other nations. That and our Southeast Asia Maritime Security Initiative have boosted interoperability and increased our allies and partners' ability to conduct maritime security and awareness operations on their own. Our efforts across the region have enabled our allies and partners to take a tougher stand against Chinese aggression in international waters. For example, this past year France, the United Kingdom, Japan, Canada, Australia, and New Zealand all increased their presence in the East and South China Seas, reiterating our collective stance to fly, sail, and operate wherever international law allows.

In Europe, the United States is fortifying relationships, realizing burden sharing gains, and developing a more lethal, combined capability. This year, NATO—the most successful Alliance in history—marks its seventieth anniversary as the bedrock of transatlantic security. NATO is poised to bolster deterrence through larger and more frequent exercises, mobility and infrastructure improvements, a revamped command structure, and increased force presence in territories most vulnerable to Russian aggression. We are rapidly pursuing our “Four Thirties Readiness Initia-

tive” by 2020: thirty mechanized battalions, thirty air squadrons, and thirty combat vessels ready to fight within thirty days or less.

Over the last two years, NATO has made significant burden sharing progress, both financially and operationally. Since 2017, our NATO Allies have increased their defense spending by \$41 billion. The nine percent increase from 2016–2018 represents the largest in a quarter century. By 2020, NATO projects Allies will increase defense spending by \$100 billion. These are impressive numbers. Yet NATO contributions do not all boil down to simple dollar amounts. The Alliance continues to provide valuable manpower, specialized capabilities, and territory that no other partnership in the world can match.

I now move to the impactful work we are doing by, with, and through our allies and partners across the Middle East and South Asia.

In Syria and Iraq, the United States, as part of the seventy-nine-member Defeat-ISIS Coalition, and our local partners have liberated more than thirty towns and cities from ISIS control since January 2017—that’s virtually all of the territory ISIS once held.

As we look ahead in Syria, we will continue to stand with those who fought and continue to fight alongside our Coalition, address Turkey’s security concerns along Syria’s northeast border, maintain the global Defeat-ISIS Coalition, and set conditions for continuing United States counterterrorism operations in the region. We fully support the government of Iraq in its fight against terrorism and will continue to enable the Iraqi Security Forces’ progress in securing liberated areas and thwarting ISIS attempts to mount a clandestine insurgency.

In Afghanistan, we are executing President Trump’s South Asia Strategy, R4+S (regionalize, realign, reinforce, reconcile, and sustain). In applying military pressure on the Taliban, we support Ambassador Zalmay Khalilzad and Secretary Pompeo’s ongoing negotiations, which are Afghanistan’s first chance for real peace in forty years. We are also applying maximum pressure on ISIS-Khorasan (ISIS-K) and other terrorist groups in Afghanistan, to stymie any threats to the United States Homeland.

Since 2016, our allies and partners have stepped up to create necessary conditions for negotiations. Afghan forces now lead one hundred percent of missions, with United States and coalition personnel performing train, advise, and assist roles. In 2018, international partners agreed to extend their roughly \$1 billion in annual financial sustainment of Afghan forces through 2024. NATO’s fulfillment of requirements in Afghanistan has increased more than fourteen percent since the introduction of President Trump’s South Asia Strategy, its highest level in the Mission’s history. Since 2016, the number of non-U.S. Coalition troops to NATO’s Resolute Support Mission has increased by more than thirty-five percent, and two new countries, Qatar and the United Arab Emirates, are formalizing their status as operational partners.

Defeating al Qaeda in the Arabian Peninsula (AQAP) and ISIS remains the United States’ top national security interest in Yemen. At the same time, we fully support UN Special Envoy Martin Griffiths’s efforts to bring all relevant parties of the civil war to the negotiating table. I am encouraged by the ceasefire in the strategically-important city and port of Hodeidah. Though not easy, these are necessary first steps on the path to lasting peace.

In Africa, we are helping partners build their security forces’ capacity to counter terrorist and other transnational threats, bolstering relationships to ensure U.S. influence and access against great power competition, enhancing our ability to conduct crisis response, and supporting whole-of-government efforts to advance stability and prosperity.

The last stop in our abbreviated walk around the world is closer to home—to our allies and partners in the western hemisphere and our efforts to protect our southern border. Over the last year, we have fostered strong military-to-military ties with our Canadian and Mexican neighbors, while bolstering relationships with Brazil, Argentina, Colombia, and Chile. We appreciate and applaud these nations’ contributions to international security, demonstrated notably last year when Chile served as the Combined Forces Maritime Component Commander at RIMPAC—the first time in the exercise’s history a non-English speaking nation has done so.

As we continue to monitor the situation in Venezuela, we are working closely with the Department of State, United States Agency for International Development, and regional partners to provide humanitarian assistance, while maintaining our posture to protect our national interests and citizens abroad.

On the southern border—last month, I visited the El Paso area to assess the security situation and DOD’s role in supporting our Department of Homeland Security partners.

As these myriad examples illustrate, our thriving, global constellation of alliances and partnerships provides an asymmetric advantage no competitor or adversary can match. We take that advantage seriously, and we continue to foster its growth at every opportunity.

#### *Implementing Reform*

Let me now turn inward—to reform of our internal business practices. Over the last year, we have made marked improvements to our fiscal transparency, instituting a wide range of reform initiatives that bolster efficiency, effectiveness, and performance.

We have focused reform in key areas, including healthcare, contract management, information technology (IT), acquisition, civilian resource management, and financial management. Let me provide a brief overview of our progress so far. Over the course of fiscal year 2017 and fiscal year 2018, we have saved \$4.7 billion from reform across our headquarters' activities—a down payment on more to come.

On healthcare, we realized savings of almost \$519 million in TRICARE reform, with \$3.4 billion in savings planned through fiscal year 2021. Our entire Fourth Estate has now participated in contract service requirement reviews to eliminate unnecessary contracts, resulting in \$492 million in programmed savings.

Within the IT field, we modernized our defense travel system, trimming our regulation by almost 1,000 pages. The reform allows for better industry competition and has saved nearly \$160 million to date. Within acquisition reform, our Services saved more than \$550 million in fiscal year 2017 and fiscal year 2018 by selling equipment to foreign partners and negotiating multi-year procurements over single year contracts.

Within financial management, DOD completed our first-ever consolidated financial statement audit in 2018, covering roughly \$2.7 trillion in assets. As of February 1, DOD had developed corrective action plans to address more than thirty-three percent of the total audit findings and recommendations, with many more corrective actions to come.

In addition to business reform, the Department has also made important structural reforms, including elevating U.S. Cyber Command to full combatant command status, standing up U.S. Army Futures Command, and finalizing our split of the Acquisition, Technology, and Logistics office into two separate offices: Acquisition and Sustainment (A&S) and Research and Engineering (R&E).

#### *The Way Ahead*

Our Department has been busy, but we are just getting started. I am encouraged by our initial progress. Focus and discipline are vital for our NDS's continued execution.

#### OUR FISCAL YEAR 2020 REQUEST: A STRATEGY-DRIVEN BUDGET

Our fiscal year 2018 funding stopped the erosion of our competitive edge by beginning to restore military readiness. Our fiscal year 2019 funding continued readiness gains and made key down payments on a more lethal military. Now our Department needs adequate, sustainable, and predictable funding to maintain momentum and expand our modernization and readiness efforts. Every line of our fiscal year 2020 request is designed to implement our Strategy. Therefore, every dollar of it—both in baseline funding and overseas contingency operations—is critical. I ask for Congress's support for on-time funding of our \$750 billion topline for National Defense, so we can continue to breathe life into the NDS.

Our strategy-driven budget drives further progress along our three lines of effort and brings our military modernization efforts to life at the speed of relevance. It enables critical shifts to compete, deter, and win in any high-end fight of the future, while preserving capabilities to support current operations. With this funding, we ensure America maintains our asymmetric military advantage with a more lethal, agile, and innovative Joint Force.

The fiscal year 2020 request includes the largest research, development, test, and evaluation (RDT&E) budget in DOD's history, when adjusted for inflation. That is \$104 billion in total requested funds for fiscal year 2020—\$9 billion more than what we will spend this fiscal year. We have made strategic choices to prioritize lethality for the high-end fight.

Across DOD, these choices move our capabilities from cost-accepting to cost-imposing, from the exquisite and purely survivable to the affordable and attritable. Through targeted investment, we will replace a federated approach with an enterprise one, enabling a more distributed, scaled path to innovation and modernization. This path prioritizes unmanned and machine capabilities, as well as the ability to “fight in the dark” without network dependency.

With that broader context in mind, I will now focus on four priority areas: (1) Investing in the contested space and cyber domains; (2) modernizing in traditional air, maritime, and land domains, as well as multi-domain enterprises; (3) innovating in emerging technology fields to strengthen our competitive edge, and; (4) building on readiness gains to meet requirements for our current operational commitments and future challenges.

#### *Space and Cyber Investments*

Our request recognizes the critically important role space will play in maintaining military superiority in the future. The \$14.1 billion dedicated to space will counteract the erosion of our competitive advantage by enhancing our existing space-based capabilities, like GPS, satellite communications, and missile warning, as well as increasing launch capacities. We will also stand up the U.S. Space Force Headquarters, U.S. Space Command, and Space Development Agency to best prepare DOD to assure freedom of operation in space, deter attacks, and when necessary, defeat space and counter space threats to the United States, our allies, and our partners.

We also note the cyber domain's crucial role, both now and in warfare's future. That is why we have requested \$9.6 billion to support offensive and defensive cyber-space operations, shore up network resiliency against adversaries, and improve our cyber posture. These efforts help ensure DOD has the information and communications technology capabilities necessary for implementing our NDS and realizing our mission.

#### *Traditional and Multi-Domain Investments*

The fiscal year 2020 budget will ensure the U.S. military maintains long-term competitive advantage on land, in the air, and on the sea. Across these three traditional domains, we are investing a total of \$107 billion for modernization.

In the air domain, this includes \$57.7 billion to increase the procurement and modernization of our fighter force. A balanced mix of fourth and fifth generation aircraft will effectively and affordably meet the entire spectrum of NDS missions, providing the stealth needed to gain air superiority, execute precision strikes, and conduct stand-in electronic attack against peer competitors in highly-contested environments, while also providing counter-air and strike in more permissive environments. We will also purchase additional tankers, Advanced Medium-Range Air-to-Air missiles, and Joint Air-Surface extended range missiles.

On land, we will invest \$14.6 billion to fund roughly 6,400 combat and tactical vehicles, including M-1 Abrams upgrades and Amphibious Combat Vehicles, as well as multiple combat systems that provide overmatch on the last two hundred meters of the battlefield.

In the maritime domain, we will increase and diversify our strike options, including offensive-armed unmanned surface and underwater vessels and advanced long-range missiles. Fiscal year 2020 funds will also accelerate fleet growth, delivering more ships faster, including cutting edge unmanned variants.

The fiscal year 2020 request also invests \$14 billion in modernizing and recapitalizing all three legs of our nuclear capabilities, to include the Ground-Based Strategic Deterrent system, *Columbia*-class ballistic missile submarine, Long-Range Standoff Weapon, B-21 bomber, life-extended Trident SLBM, and the F-35 dual-capable fighter aircraft; while also enhancing our missile warning and NC3 capabilities.

We also slate \$13.6 billion for missile defeat and defense modernization, increasing the capability and capacity of our ground-based defenses, Terminal High Altitude Area Defense, and Aegis Ballistic Missile Defense systems; enhancing our space-based missile warning and other capabilities to address hypersonic threats; and developing boost-phase missile defense systems, including directed energy and air-launched kinetic interceptors.

Also on the multi-domain front, we will invest \$3.4 billion for our Special Operations Forces. The fiscal year 2020 request refocuses on strategic competition by increasing funding for research and development, modernization, and expanded capabilities for the high-end fight, while maintaining irregular warfare as a core competency.

#### *Innovation and Advanced Technology Investments*

With more than \$7.4 billion directed toward DOD's development and fielding of technologies focused on the high-end fight, the fiscal year 2020 budget prioritizes funding across four key emerging areas: autonomy, AI/machine learning, hypersonics, and directed energy.

Let me expand on hypersonics for a moment as one example. Without the long-range, survivable, and fast strike capability of hypersonic weapons, it will be difficult for our military to maintain access to key regions or come to the defense of

allies and partners in a crisis or war. Yet, with the \$2.6 billion requested in fiscal year 2020, projected doubling of funding requests in coming years, and close inter-service cooperation, we are accelerating pursuit of options deliverable from land, sea, and air, with some capabilities expected to deploy to the warfighter three years earlier than previously planned.

*Sustainment and Readiness Investments*

This budget sustains our Joint Force and builds on critical readiness gains. We will invest almost \$125 billion in operational readiness and sustainment, including \$1.5 billion for advanced training facilities and ranges, \$2.6 billion for improving and expanding cyber operations training, and \$41.2 billion for further improving tactical aviation readiness.

In addition, the fiscal year 2020 budget will allow an increase to our total end-strength by roughly 7,700 servicemembers over the projected fiscal year 2019 level, as well as give our men and women in uniform a much-deserved 3.1 percent pay raise, the largest in a decade.

In concert with the funding priorities I have just outlined, we will continue to pursue opportunities that balance capacity and capability by realizing economies of scale in large equipment acquisitions, like aircraft carriers and the F-35 Joint Strike Fighter. As we do so, we will continue to assess the utility of our investments through a lifecycle lens.

CONCLUSION

With Congress's support and delivery of on-time funding at our requested topline, this budget ensures our military maintains the lethality, adaptability, and resiliency necessary to compete, deter, and win against any adversary in an increasingly dangerous world.

It is a privilege and honor to lead the most lethal military in the world. I thank those in uniform and their families for all they do, today and every day, to keep us safe, and I appreciate the critical role Congress plays to ensure our warfighters are ready to succeed on the battlefields of today and tomorrow.

The men and women of the Department of Defense stand ready, as always, to protect liberty and freedom.

Thank you.

Chairman INHOFE. Thank you, Secretary Shanahan.  
General Dunford.

**STATEMENT OF GENERAL JOSEPH F. DUNFORD, JR., USMC,  
CHAIRMAN OF THE JOINT CHIEFS OF STAFF**

General DUNFORD. Chairman Inhofe, Ranking Member Reed, distinguished Members of the Committee, thank you for opportunity to join Secretary Shanahan and Under Secretary Norquist here today. It remains my privilege to represent your soldiers, sailors, airmen, and marines.

While much of the discussion this morning is going to focus on the challenges we face, it's important I begin by assuring you that your Armed Forces can deter a nuclear attack, defend the Homeland, meet our alliance commitments, and effectively respond, should deterrence fail. I believe we have a competitive advantage against any potential adversary, defined as the ability to project power to fight and win at the time and place of our choosing.

But, as Members of this Committee know, 17 years of continuous combat and fiscal instability have affected our readiness and eroded our competitive advantage. As the Secretary highlighted, China and Russia have capitalized on our distraction and restraints by investing in capabilities specifically designed to challenge our traditional sources of strength. After careful study, they deployed capabilities intended to contest our freedom of movement across all domains and disrupt our ability to project power. With the help of Congress, starting in 2017, we began to restore our competitive ad-



vantage. Recent budgets have allowed us to build readiness and invest in new capabilities while meeting our current operational commitments. But, I think we all know we can't reverse decades of erosion in just a few years. This year's budget submission would allow us to continue restoring our competitive advantage by improving readiness and developing capabilities to enhance the lethality. It proposes investments in advanced capabilities across all domains—sea, air, land, space, and cyberspace. This year's budget also sustains investments in our nuclear enterprise to ensure a safe, secure, and effective strategic deterrent, the highest priority of the Department of Defense. We've also taken steps to more effectively employ the force we have today and build the force we have tomorrow. We've implemented fundamental changes in our global force management processes to prioritize and allocate resources in accordance with the National Defense Strategy while building readiness and the flexibility to respond to unforeseen contingencies. We've also refined our processes for developing and designing our future force. A joint, concept-driven, threat-informed approach, which leverages a wide body of analytic work, will allow us to deliberately evaluate and prioritize warfighting requirements. This also enables us to pair emerging technologies with innovative operating concepts.

In closing, I'd like thank the Committee for all you've done to support our men and women in uniform and their families. Together, we've honored our solemn obligation to never send our sons and daughters into a fair fight. With your continued support, we never will.

[The prepared statement of General Dunford follows:]

PREPARED STATEMENT BY GENERAL JOSEPH F. DUNFORD, JR., USMC

Chairman Inhofe, Ranking Member Reed, distinguished Members of this Committee, it is an honor to join Acting Secretary Shanahan and the Honorable David Norquist in testifying before you today. It remains my distinct privilege to represent the soldiers, sailors, airmen, and marines of the United States Armed Forces.

Today, I can assure the Committee that the United States military can defend the Homeland, meet our Alliance commitments, deter nuclear attack from any state actor, and effectively respond should deterrence fail. We have a competitive advantage against any adversary across all domains—air, sea, land, space, and cyber—and we can project power to advance the interests of the United States anywhere around the globe.

But that competitive advantage has eroded. This is the result of seventeen years of continuous combat against transregional violent extremism and the damaging effects of funding instability. China and Russia have capitalized on our distraction and our constraints. They have invested in capabilities specifically designed to challenge our traditional sources of strength and have sought to undermine the rules-based international order that brought prosperity and relative peace for the last seven decades.

With your help, starting in 2017, we arrested the erosion of our competitive advantage. Appropriations in fiscal years 2017–2019 allowed us to restore readiness and invest in new capabilities while meeting our ongoing commitments across the globe. However, we cannot undo decades of degradation in just a few years. This year's budget allows us to continue to restore our competitive advantage by enhancing our readiness and lethality.

STRATEGIC ENVIRONMENT

Today's strategic environment is extraordinarily complex and volatile. The National Defense Strategy (NDS) characterizes and prioritizes our strategic challenges with a "2+3" framework that names China and Russia as the primary challenges with which we must contend, along with North Korea, Iran, and violent extremism.

This framework provides a benchmark against which we can measure our capabilities. It is not intended to be predictive of future crises or armed conflicts; rather, it is an important tool for planning, managing risk, and developing capabilities. Our assumption is that if we build a Joint Force with the capabilities and capacities to meet these challenges, either individually or in some combination, we will be well-positioned to respond to whatever threats the future holds.

*China.* China has paired its rapid economic growth with substantial military investment as it strives for regional hegemony and global influence. By investing heavily in the space and cyber domains while expanding air and maritime capacity and militarizing disputed land formations, they are developing the ability to deny us access to the East and South China Seas. The intended effect is to weaken our alliance structure in the Pacific and allow Beijing to rewrite the norms, standards, and laws in the region. They are also advancing their interests globally through the One Belt One Road Initiative, creating exploitive economic relationships across Asia, Africa, and Latin America. These relationships can be leveraged to reduce our influence and the access we need to project military power.

*Russia.* Similarly, Russia has invested in asymmetrical capabilities where they perceive they have a competitive advantage. They are using information, cyber, and unconventional operations combined with economic and political influence to advance their interests while seeking to undermine the credibility of NATO. We have seen examples of their revanchist behavior in the invasion of Georgia and Crimea, their ongoing activity in the Donbas, and the recent seizure of Ukrainian vessels near the Sea of Azov. We also saw their efforts to undermine democracy in 2016, both in Europe and the United States.

*North Korea.* While we remain hopeful for a peaceful denuclearization of the Korean Peninsula, after two summits between President Trump and Kim Jong-Un, it is clear that we must remain ready for multiple contingencies. We are still dealing with a country that has nuclear weapons and ballistic missiles that threaten our Allies in the region and our Homeland. Regardless of the expressed intent of the North Korean leader, that capability exists and we must retain the force posture to deter and defend against the threat.

*Iran.* Iran continues to project malign influence and present challenges with missile, cyber, proxy, and maritime capabilities. We also continue to monitor Iran's nuclear capability. The regime aims to establish itself as the dominant regional power; their military development is designed to restrict our access to their sphere of influence while their activities threaten freedom of navigation along important commercial routes, destabilize the government of Iraq, exacerbate civil wars in Yemen and Syria, and support proxies inside of Lebanon and Syria.

*Violent Extremist Organizations.* While we have made significant progress against ISIS, al Qaeda, and affiliated groups, the threats to the United States and our Allies and partners remain. Violent extremism is a global, generational, society-level problem of which military operations can only manage the symptoms. In the meantime, we have implemented a fiscally, politically, and militarily sustainable counterterrorism campaign.

Our security, our prosperity, and the international system that makes them possible are threatened today by actors ranging from advanced and ascending militaries backed by nuclear arsenals to lone fighters inspired by radical ideologies. The Joint Force must respond by balancing the capabilities we need for today's operations with the depth, flexibility, and advanced technologies required to respond to the challenges of the future. If approved, the President's Budget 2020 (PB20) request will enable the Department to adapt the force we have today, while we design the force needed for tomorrow's challenges.

#### THE FORCE WE NEED TODAY

The Joint Military Net Assessment—a rigorous tool we use to evaluate the Joint Force's ability to meet its strategic objectives—identified challenges across all domains in the context of our near-peer competitors. Other assessments and strategic reviews have also highlighted the sustained investment we need to improve readiness, capabilities, and capacities in the Joint Force. The fiscal year 2020 budget provides funding for current operations and, building on budgets of recent years, continues to build readiness and improve lethality by modernizing existing capabilities and expanding capacity.

#### *Readiness.*

We have realized readiness improvements through fundamental changes in our global force management processes. As directed in the NDS—and in support of its 2+3 strategy—we have implemented Dynamic Force Employment (DFE). This is a

top-down process of prioritizing and allocating resources against our strategic priorities with bottom-up refinement from the geographic combatant commanders.

DFE allows us to position resources globally to mitigate strategic risk and be operationally unpredictable while remaining strategically predictable. This improves our ability to respond to unforeseen crises—as well as opportunities—and provide strategic flexibility for senior decision makers while maintaining readiness across the Joint Force.

Within this new framework for global force management, your men and women in uniform are operating across the globe every day to assure Allies and partners, deter adversaries, and assist local forces in combatting violent extremism at its sources. President's Budget 2020 provides them the resources they need to accomplish their missions and return home safely.

#### *Current Operations.*

*China.* United States Forces conduct freedom of navigation operations globally to challenge excessive maritime claims—including those made by China—and demonstrate our determination to operate wherever international law allows. In the South China Sea and elsewhere in the region, we also fly bomber missions, demonstrating a resilient global strike capability that checks Chinese ambition and assures our regional Allies and partners. Throughout the Pacific, our troops exercise and engage with partners to signal our commitment and counterbalance China's challenges to the rules-based order.

*Russia.* In Europe, the European Defense Initiative and associated posture adjustments and combined exercise programs represent the largest reinforcement of NATO's collective defense posture—and the largest demonstration of its interoperability—since the Cold War. United States personnel also contribute to NATO's integrated ballistic missile air defense in Europe. In both the Atlantic and Pacific, we conduct sustained air and sea operations to monitor Russian activities and deter any aggression.

*North Korea.* United States troops on the Korean Peninsula are postured and trained to deter North Korean aggression, provocation, and coercion. Their current priority is supporting the State Department-led maximum pressure campaign to achieve the full, final, and verifiable denuclearization of the Peninsula. In concert with like-minded nations, we have expanded our sea and air operations to deter and disrupt illicit ship-to-ship transfers of refined petroleum and other materials restricted by UN Security Council Resolutions.

*Iran.* United States forces conduct freedom of navigation operations in the Strait of Hormuz. We continue our commitment to the stability of the government of Iraq, and our efforts to build the capacity of our regional partners. In these and other ways, the Joint Force complements United States diplomatic and economic efforts to counter Iranian malign influence in the Middle East.

*VEOs.* The United States has assembled a global coalition to counter violent extremist organizations—leveraging a relatively small footprint of U.S. Forces to enable local partners throughout the world. The immediate priority is achieving the enduring defeat of ISIS in Iraq and Syria through Operation Inherent Resolve. We are also working by, with, and through partners in every region to cut the “connective tissue” of foreign fighters, resources, and the ideological narrative that enable violent extremists to operate transregionally.

*Iraq and Syria.* United States troops remain engaged in the D-ISIS campaign. As the campaign transitions from clearing ISIS-held territory to a focus on stabilizing the region, activities such as training local security forces, enabling local governance, and conducting counterterrorism operations will help prevent a power vacuum in Northeast Syria and a resurgence of ISIS. We are working with our Coalition partners to ensure we meet Turkish security concerns as well as protect those that fought with us against ISIS.

*Afghanistan.* Along with our Allies and coalition partners, we are setting the military conditions to fully support an Afghan-led, Afghan-owned peace process. Coalition forces train, advise, and assist Afghanistan National Security Forces, as well as provide critical aviation support, intelligence, and other capabilities to make them a more effective fighting force.

In addition to readiness gains from improved force management, DOD budgets in recent years helped arrest the decline of unit readiness across the Joint Force. In fiscal year 2018 and fiscal year 2019, we increased the quality and quantity of unit training, improved personnel deployment availability, increased stocks of key munitions, streamlined aviation depot processes, and added capacity to address shortfalls in maintenance and sustainment functions. President's Budget 2020 enables us to continue on this path, but a decade of neglect will require years to correct. A full

restoration of our readiness will require sustained, sufficient, and predictable funding into the future.

#### A MODERN AND MORE LETHAL FORCE FOR TOMORROW

The NDS calls for a more lethal force that expands the competitive space to meet critical challenges and key operational problems. The President's Budget 2020 request invests in a more lethal force by funding efforts to modernize current capabilities and expand warfighting capacity.

A primary modernization priority is our aging nuclear enterprise. A large-scale nuclear attack poses an existential threat to the United States. U.S. nuclear forces are the indispensable means of addressing this threat, making nuclear deterrence the highest priority mission of the Joint Force. The 2018 Nuclear Posture Review established the elements of the nuclear modernization program—a program that is necessary, prudent, and affordable given the nature and evolution of the threats we face. President's Budget 2020 fully funds that program.

President's Budget 2020 also enhances joint warfighting capacity by fielding the capabilities we need to project power. In the air, continued procurement of 5th generation fighter aircraft allows us greater flexibility to respond globally today and in the future. At sea, recapitalizing the naval fleet with modern and lethal platforms sustains undersea, surface, naval aviation, and fleet logistic advantages while increasing investments in unmanned, autonomous maritime capabilities. On the ground, enhancement of long-range precision fires, development of the next generation combat vehicle, and investments in close combat systems ensure our soldiers and marines' overmatch on the battlefield.

Space continues to be a priority area for modernization and innovation. In response to the evolution of threats to U.S. assets in space, we will establish the U.S. Space Force Headquarters, U.S. Space Command, and Space Development Agency. To deter our adversaries, we are pursuing organizational constructs, systems, and capabilities that will produce a more lethal, resilient, and agile Joint Force. Additionally, this budget request includes substantial investments in Missile Warning, launch platforms, Space Situational Awareness, Space Control, and enhancements to Position, Navigation, and Timing.

In the cyber domain, President's Budget 2020 allows the Joint Force to further develop and employ the necessary tools to defend DOD infrastructure, compete below the level of armed conflict, and operate as part of broader joint operations. This budget request increases our investments in required capabilities to operate effectively in cyberspace and maintain our competitive advantage against near-peer adversaries.

While improving lethality in the near term, we will continue to develop and design a future Joint Force that can fight and win against any adversary on any battlefield of tomorrow. A joint concept-driven, threat-informed approach to capability development—leveraging wargames, exercises, and experimentation—allows us to more deliberately evaluate needs of the current force and prioritize future requirements. Our refined approach to Force Development and Design allows senior leaders to pair emerging technologies with optimal organizational constructs and innovative operating concepts to plan and execute joint operations now and in the future.

No investment is more important to the effectiveness of our future force than the development and education of our future leaders. The nation's ability to compete, deter, and win requires leaders who have the vision, intellect, and critical thinking skills to employ, develop, and design the future Joint Force. With a special emphasis on revitalization of the War Colleges, our leader development program is designed to fully support the development of these strategic thinkers and future senior leaders of the U.S. Armed Forces.

#### CONCLUSION

This is my fourth and final appearance before this Committee in support of the Department's annual budget request. I thank you for the great honor of representing your soldiers, sailors, airmen, and marines.

More importantly, I would like to thank the Committee for all you have done to support our troops, as well as their families. In visits to the Joint Force at bases and posts, stateside and around the world, I continue to be amazed by their spirit and dedication to the mission. Through the support of the Congress and the people you represent, our servicemembers in uniform will prevail in our current conflicts and be prepared to confront the threats the United States will surely face in the future.

Together, we have honored our solemn obligation to never send our sons and daughters into a fair fight. With your continued support for sustained, sufficient, and predictable funding, we never will.

Chairman INHOFE. Yeah. Thank you, General.

What we're going to do is have a round of 5-minute questions. We are very well attended this morning, so I ask people to try to keep within their time. I will do the same thing.

To kick it off, we talked about the blueprint that we're using. I'd like to ask each witness a question about this.

Secretary Shanahan, you said that the Department of Defense would realign the resources in the budget to implement this program. Now, in order to do that, can you quickly run over any of the programs or systems or missions that have been either reduced or accelerated to accommodate this?

Secretary SHANAHAN. Thank you, Mr. Chairman. I would highlight, in this year's budget, three major structural changes, in terms of being able to accelerate. The first is space. The Space Force, itself, is intended to accelerate, dramatically, our capabilities to defend. Second, missiles. Probably the best characterization of that is our efforts on hypersonics. Third, a significant investment in cyber capabilities. When we think about reductions, I think the Army is the best illustration of that in their modernization plans as they look to make reductions across their portfolio to, I'll say, about 100 different programs.

Chairman INHOFE. Okay. I appreciate that.

General Dunford, similar question. The National Defense Strategy Commission listed several capability gaps, vis-à-vis China and Russia, such as long-range fires, additional air defense units, and others that I mentioned in my over statement. Which of these capability gaps do you think the 2020 budget addresses?

General DUNFORD. Chairman, thank you.

The budget actually addresses all the challenges you identified. What I can assure is that the National Defense Strategy really has been the basis for our prioritization for capability development. We did careful analysis of China and Russia, in particular, the capabilities developed over the last few years to limit our ability to operate freely in space, cyberspace, land, sea, and air. The capabilities that we have identified in this year's budget are really designed to allow us to project power when and where necessary to advance our interests in that context of that emerging threat from China and Russia.

Chairman INHOFE. All right. I appreciate that.

Now, I am concerned about one other area. Neither one of you is personally responsible for this, but I'm a little disturbed by the idea that we're going to be taking the USS *Truman* out of the system and I wonder how this is going to work in just our sheer numbers. Now, we have a law that says we have to maintain 11 carriers. We would also look at this and realize that 10 would equal what's necessary to conduct a major war. How do we get to the number we're supposed to have if we don't follow through with the midlife of the *Truman*? Now, recognizing that would take up to, I think, 2024. But, nonetheless, it's going to take longer if we start—depending upon the multiple buy that we're talking about, particu-

larly of a vehicle that still—the elevator still doesn’t work and carry the ordinance.

So, what’s your thought about that? How are we going to, number one, comply with the law that we have—in fact, Mr. Norquist, this might be a good question for you, because you’re into these issues, also—and still not follow through with our original plans with the *Harry Truman*?

Anybody.

Secretary SHANAHAN. Why don’t I lead off?

First of all, I think the *Truman* decision represents some of the strategic choices we’ve made in this year’s budget. It was a very difficult decision for us. Carriers represent, now and in the future, critical force structure for the Navy. The *Truman* decision was made in concert—it was an integrated decision with our two-carrier buy. Let me walk through the benefits of the decision and then potential off-ramps so that we don’t find ourselves in a difficult situation.

So, the first is that, with this decision of the two-carrier buy and to not refuel the *Truman*, our lethality of our carriers and capability increases with the new carriers. The second is, until mid-2020s, we maintain the level of 11 carriers. The third is—and part of the calculus here—was to maintain employment. In fact, with this decision, we grow employment in the industrial base. We needed to make sure, not only that our shipyards maintained their employment—there’s actually growth—but also the supply chain. The last is that the funds that we freed up from making these decisions are invested in the future force. The decision for two carriers saved \$4 billion.

Chairman INHOFE. Yeah.

Secretary SHANAHAN. Not refueling the *Truman* saves \$3.4 billion over the Future Years Defense Program (FYDP)——

Chairman INHOFE. Okay. Yeah, we’re going to run out of time, and I’m going to set the example of not allowing us to run out of time. But, I still am not happy with the results of that. My mental numbers don’t agree with that. I think it’s a very important thing. I personally brought this up before Wicker gets here.

[Laughter.]

Secretary SHANAHAN. Yeah.

Chairman INHOFE. All right.

Senator Reed.

Senator REED. Thank you, Mr. Chairman.

Thank you all, gentlemen, for your testimony.

Mr. Secretary, on February 18th, you sent a letter to Secretary Nielsen stating that you had, in your words, “not yet decided whether the use of Section 2808 is necessary.” That would be the section under the emergency that would authorize access to military construction (MILCON) funds. You’ve asked for information from the Secretary, to include a list of proposed border construction projects that would improve the—again, your words—“effectiveness and efficiency of DOD personnel supporting these Customs and Border Patrol.” Have you received a response yet from Secretary Nielsen?

Secretary SHANAHAN. No, I have not. I expect it this week.

Senator REED. Again, I—in the context of something that is supposed to be an emergency, this seems to be a pretty casual sort of approach to the issue. But, beside that, at this point, then, you don't know what projects Deputy Assistant Secretary (DAS) is requesting, and whether or not those projects would be appropriate under 2808.

Secretary SHANAHAN. Yeah, the projects we've received, or the updates from Department of Homeland Security (DHS) to date, are on—with regards to their 2019 appropriations, they're for the expenditure of forfeiture of Treasury funds and then needs as they—

Senator REED. Those are all programs that are automatic. You've already put those—do—I'm talking about the 2808, which would require not only the emergency declaration, but also a judgment whether—of their military utility.

Mr. Chairman—General Dunford, you have the obligation to advise the Secretary on the military utility of these projects with—if they're being incorporated. What criteria do you intend to use?

General DUNFORD. Thanks, Senator Reed.

The criteria I intend to use is, we'll look carefully at the mission that our soldiers, sailors, marines have been assigned, and some airmen, as well. We'll look at how these projects support, directly, the mission of those individuals.

Senator REED. Thank you. The Secretary will make the ultimate decision, but based upon your recommendation.

General DUNFORD. Senator, I'll be one of the inputs, and I'll provide military advice to the Secretary on the relationship between the resources, the projects, and the mission.

Senator REED. If it comes to pass, then, you'll have to delay certain military construction projects we've authorized and appropriated. Do you have a list of those projects yet, Mr. Secretary?

Secretary SHANAHAN. Senator, I don't have a final list of those projects.

Senator REED. Well, obviously, I think it would be important to all of us to understand which projects would be sacrificed, even in the short run. So, I would encourage you to get that list.

[The information referred to follows:]

Secretary SHANAHAN. See Appendix A, fact sheet for the list of projects.

Senator REED. In the emergency request, there's \$3.6 billion for, essentially, backfilling those projects which have already been authorized and appropriated, which is, I think, an unusual way to fund military construction projects. But, then there's an additional \$3.6 billion that's just been set aside for "the wall," competing with other potential military projects. That's emergency funding. Do you think that's appropriate?

Secretary SHANAHAN. It was appropriate, given the planning, when we were putting together, to provision for the next year. I'll ask Secretary Norquist to comment about how we came up with the planning.

Secretary NORQUIST. Sure. One of the things we wanted to be certain to do is to not disrupt future military construction projects. So, if 2808 extends, which it will, into fiscal year 2020, it just gets—at least it's 12 months. If it's longer, we don't want that to

disrupt other projects. So, we put in funding so that it would be available and not to be able to—in order to be able to protect the other military construction projects.

Senator REED. But, essentially, what you're doing is creating appropriations dedicated, at this point, to building a wall, which has not, I think, been authorized or appropriated by the Congress. That 3.6 extra funding, you know is going to the wall. It might be a backfill or a—or a circuitous way, but it's essentially for the wall. Is that correct?

Secretary NORQUIST. Right. It's in the request. Therefore, would need to be both authorized and appropriated to——

Senator REED. Okay. So——

Secretary NORQUIST.—take effect. Absolutely, sir.

Senator REED. So, that, in our process, we are authorizing—you're asking us literally to authorize funding for the wall.

Secretary NORQUIST. Yeah.

Senator REED. Thank you.

Just a quick question, because I want to follow the Chairman's guidelines. You mentioned \$2 billion in the emergency request for hurricane reconstruction. The Marine Corps has indicated to me, as late as yesterday, that it's about \$3.7 billion. Tyndall Air Force Base is—\$5 billion. So, it would seem to me, if you're trying to address the real needs of the Department of Defense, that, instead of using 3.6 or \$7 billion for the wall, that could be used immediately for repairs at Camp Lejeune and Tyndall Air Force Base.

Secretary NORQUIST. So, what you have is—yes, there are significant requirements for both of those two bases. One of the things we're looking at is, particularly, the military construction projects. The planning and design lead means that some of them can be executed in 2020, so we have \$2 billion in for that, some of them won't be able to be executed till 2021 or later. We're trying to balance that and address those. But, we're happy to work with you on those requirements.

Senator REED. Respecting the Chairman, I——

Chairman INHOFE. Okay, thank you, Senator Reed.

Senator Fischer.

Senator FISCHER. Thank you, Mr. Chairman.

General Dunford, do you believe a “no first use” policy improves our ability to deter conflict? Would it be your best military advice to adopt such a policy?

General DUNFORD. Well, thank you, Senator. I think the current policy is one that complicates an adversary's decisionmaking process, and I wouldn't recommend any change to simplify an adversary's decisionmaking calculus. I also can envision several circumstances where we would not want to remove that option from the President in the future. I could certainly talk about that in a classified venue. But, I absolutely believe the current policy is the right policy.

Senator FISCHER. Thank you.

As you know, those who favor reducing the size of our nuclear forces, they often argue that a non-nuclear capability can be substituted for nuclear weapons without diminishing our ability to credibly hold targets at risk, deter adversaries, and assure our allies. A report released last September by the Global Zero Group re-



peatedly makes this argument and claims that cyberweapons, in particular, can be substituted for nuclear weapons. Do you think cyber operations, their effects and their ability to deter hostile activity, is comparable to nuclear weapons, or are these extremely different capabilities? Is this idea of direct substitution unwise?

General DUNFORD. Senator, I don't believe that cyber capabilities can be substituted for nuclear capabilities. I think we need to be very careful to maintain a safe, effective, and credible nuclear deterrent on its own.

We, as you know, have looked at this through more than three or four administrations in a row. We've carefully looked at, What does the Nation need to do what I described in my opening statement as the most important mission in the Department of Defense, and that is to deter a nuclear war? We've concluded that the current construct of a triad with a robust nuclear command-and-control capability is the most effective way to deter a nuclear war. It is also the most effective way to raise the threshold for the use of nuclear weapons by any potential adversary.

Senator FISCHER. You mentioned that, in order to maintain that safe deterrent, we must follow the advice of all previous administrations, both Republican and Democrat, all previous military leaders, that we maintain that triad?

General DUNFORD. Yes, Senator. I have participated in two Nuclear Posture Reviews since I've been in this assignment and been exposed to the wide body of analytic work that was behind those two Nuclear Posture Reviews that came to the very same conclusion in two different administrations. It's very consistent with the military advice that I provided on both occasions.

Senator FISCHER. Thank you.

Moving to a different topic. Late last year, General, you characterized the situation in Afghanistan as a stalemate. In the time since, we've seen some indications that negotiations with the Taliban are showing signs of progress. Do you believe the South Asia Strategy is working? What is your view of the current security situation?

General DUNFORD. Oh, thanks, Senator.

First, I think we're all cautiously optimistic that there is, for the first time, serious inroads made into reconciliation. Ambassador Zal Khalilzad just completed a round of negotiations with the Taliban. He's back in Washington, DC. I'll have an opportunity to speak to him later today, and I think we'll see him tomorrow morning. We're encouraged. I can tell you, on behalf of Secretary Shanahan, everything that we are doing now in the military space, led by General Miller on the ground, is in support of Ambassador Khalilzad's efforts.

I think, on the ground, by and large, the general strategic situation has not changed, but General Miller has incorporated elements of the strategy to increase the pressure on Taliban leadership. We do believe that some of that pressure has contributed to the fact that the Taliban are now at the peace table for the first time since the war began.

Senator FISCHER. What conditions on the ground do you believe are necessary if we're going to be able to see any kind of progress

in discussions that we have with the Taliban? Can you be specific in this setting?

General DUNFORD. You know, first, to put pressure on the Taliban, we need to continue to provide enabling capability to the Afghan forces. That's been in the form of train, advise, and assist. We have the right leaders at the right place to assist the Afghans. We're also providing combat-enabling capability—aviation, intelligence, logistics support—as well. Then, most importantly, though, Senator, on the ground is a counterterrorism capability, remembering that the reason why we're in Afghanistan is to prevent attacks against the American people in the Homeland. The combination of support for the Afghans to allow them to put pressure on the Taliban also creates the conditions for us to have an effective counterterrorism presence in South Asia to secure the American people.

Senator FISCHER. Thank you. I think it's important to always consider conditions on the ground and always keep in mind what our goal and mission is.

Thank you, sir.

Chairman INHOFE. Thank you, Senator Fischer.

Senator Shanahan—I'm sorry—

Senator SHAHEEN. Shaheen.

Chairman INHOFE.—Shaheen.

[Laughter.]

Chairman INHOFE. There we go.

Senator SHAHEEN. Thank you, Mr. Chairman. I have been on this Committee for about 8 years now.

[Laughter.]

Chairman INHOFE. That's right.

Senator REED. His Irish—

Senator SHAHEEN. Yeah, actually—that's right. It's—

Senator REED. His Irish—

Senator SHAHEEN.—St. Patrick's Day is coming up, so for that I'll be "Shan."

Thank you, gentlemen, for being here.

Secretary Shanahan, I must say I was quite concerned this morning when I read The New York Times story that the Department of Defense is pushing back against the Environmental Protection Agency (EPA), which is trying to set tougher standards for Per- and Polyfluoroalkyl Substances (PFAS) chemicals. I will just show you. The article was in the Times, and the headline here says, "Pentagon Pushes for Weaker Standards on Chemicals Contaminating Drinking Water." You and I first had a chance to talk about PFAS chemicals and how they're affecting the former Pease Air Force Base in 2017. I told you about the hundreds of people, children, who had been drinking water, and those chemicals now have shown up. No one knows what the long-term health impacts of drinking that water is.

There are 401 known military facilities in the United States that the Pentagon has admitted have PFAS contamination. This Committee worked, 2 years ago, to authorize the first-ever health study on PFAS chemicals. I'm just—I'm very concerned about the fact that the Department of Defense would be trying to reduce the standard that the EPA is setting to try and ensure that drinking

water is safe, not just for the civilians around our military installations, but also for our members of the military. I must say, the Air Force has been very responsive at Pease and Portsmouth. Under the previous Secretary, Deborah James, and the current Secretary, Heather Wilson, they have come up, they have put in remediation efforts. I think this health study that has been started is going to be critical in answering questions for people. But, I don't understand how you and the Department of Defense could be trying to reduce the standards that affect drinking water for literally millions of people around the country.

Secretary SHANAHAN. Senator, I'm not familiar with the article this morning. You have my assurance that I'll take a look at what the actual situation is, in terms of the standards.

What I am accountable and responsible for is the safety and security of our men and women. You have my assurance that we will continue to do that. I will look into this matter. I take these matters personally, very, very seriously, just as we had talked before. I am the advocate to take care of those matters, so let me take that for the record, and I will follow up with you directly to explain the situation and what we're doing to take responsibility.

[The information referred to follows:]

Secretary SHANAHAN. The Department of Defense (DOD) supports the use of the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA) long-established, risk-based approach to determine when groundwater cleanup is needed. The Department is not seeking a different or weaker cleanup standard. Using the Environmental Protection Agency (EPA) risk assessment process supporting this statute, the unacceptable risk to human health for cleanup of groundwater with perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) is approximately 380 parts per trillion (ppt). DOD uses EPA's risk assessment guidance to determine whether to add the concentrations of PFOS and PFOA together to determine CERCLA responsibilities. Additionally, there is a Lifetime Health Advisory (LHA) of 70 ppt for PFOS and PFOA. The LHA applies to drinking water, but also considers all PFOS/PFOA exposures over a lifetime. Therefore, the LHA is not a cleanup level.

Senator SHAHEEN. Well, I appreciate that. Can you confirm or deny whether DOD has urged a lowering of the standard that the EPA is trying to put in place?

Secretary SHANAHAN. I can't speak to that specific. I will, very quickly, find—get an answer back to you.

Senator SHAHEEN. I appreciate that. I think that's something that is important for the entire Committee to know, because, as you know, installations across the country are affected, and a lot of people's—and we don't yet really know what the long-term health impacts are. So, getting those answers is very important.

Can I ask—and I'm not sure who, quite, to direct this question to, but, General Dunford, you said that you were going to be weighing in on any projects that were put on a list—any MILCON projects put on the list to consider delaying because of the President's effort to put more money into a border wall. Can you tell me what objective criteria that you're looking at in trying to come up with those projects?

General DUNFORD. Senator, the Secretary will get inputs on the impact of the projects from the service secretaries and the service chiefs. What I will do is talk about the appropriateness of those projects and how they relate to the performance of our mission along the border so the Secretary will get a wide variety of inputs.

Each of the service secretaries, I know, will share their assessment of those impact of those projects to the Secretary.

Senator SHAHEEN. But, a number of those projects would not affect the border, would they?

General DUNFORD. No—

Senator SHAHEEN. I mean, we have a—MILCON projects at the Portsmouth Naval Shipyard that are very important, I think, to our national security, that don't affect the border directly.

General DUNFORD. Yeah, sorry, Senator, if I conflated two issues. There is the list of projects, and then the service—that may be used to free money up for projects along the border—the service secretaries and the service chiefs will provide input to the Secretary on the impact of those projects to the services and, as you point out, bases and installations, maybe, where those projects would have been executed. What I will do, when the decision is made to support the border with infrastructure, is assess the relationship of that infrastructure to the DOD mission. There are two separate processes that affect—

Senator SHAHEEN. Thank you.

General DUNFORD.—infrastructure and projects.

Senator SHAHEEN. Thank you.

Chairman INHOFE. Thank you, Senator Shaheen.

Senator Cotton.

Senator COTTON. General Dunford, how many troops, roughly, do we have on the border today?

General DUNFORD. Senator, we have approximately 4,000 in a title 10 status, and we have approximately 2,000 in a title 32 status.

Senator COTTON. How many do we have in the demilitarized zone (DMZ) on the Korean Peninsula?

General DUNFORD. We have a total of 28,500 in Korea.

Senator COTTON. They're all pretty close to the DMZ, but we have a lot that are right up on the DMZ, too, correct?

General DUNFORD. We do, Senator.

Senator COTTON. How many do we have today in the Baltics and Poland nations that border Russia?

General DUNFORD. We have several hundred. Then, of course, in Poland we have a constant rotational presence that can be up in the thousands. We have brigade combat teams that rotate into Poland for training. I was there visiting them in December, and, at that point, we had probably about 3,000 forces inside of Poland at that time.

Senator COTTON. Okay. So, we have lots of troops around the world on other countries' borders. Does it cause you any disquiet that we have troops on our own border?

General DUNFORD. It does not cause me disquiet that we have troops on the border, Senator.

Senator COTTON. Thank you.

Let's turn to the budget. The budget has a very large request for the overseas contingency fund, \$174 billion. I think that's probably about a hundred-billion more now than what we've spent this year. That, obviously, is a big patch to try to get around the Budget Control Act (BCA) of 2011. There's a lot of people on Capitol Hill who

are not going to like that. But, let's think about it, first, from a military standpoint.

General Dunford, what does it mean for modernization if the opposition to such a large overseas contingency fund results in a 1-year continuing resolution?

General DUNFORD. Well, Senator, my understanding this year would be that we would not have a continuing resolution, that we would go back to BCA levels. I'm not given to hyperbole—

Senator COTTON. So, let's say it's a continuing resolution that suspends the BCA levels. So, because of the dispute over the overseas contingencies fund, the Congress can't reach a budget-cap agreement, and therefore, we have to have a 1-year continuing resolution that suspends the caps.

General DUNFORD. Yeah, one of the challenges that we've had, Senator, over the last few years is, the fact that we have not had a budget—last year, we did, but the fact that we have routinely not had a budget at the beginning of the year has delayed new-starts, and it's been incredibly inefficient in how we prioritize and allocate resources throughout the year. The three adjectives I use—and I think they're all important—is, predictable, sustained, and adequate levels of funding. If we had the entire fiscal year, we can be the good stewards that you should hold us accountable for being.

Senator COTTON. Secretary Shanahan, is a dollar of spending in the overseas contingency fund equal to a dollar of spending in the base budget?

Secretary SHANAHAN. Senator, yes, it is.

Senator COTTON. Could you elaborate on that a little bit more?

Secretary SHANAHAN. When I think about the top line and how we built the top line, it was a requirements-built budget. So, every dollar in the budget is based off a derived requirement. So, how we package the money doesn't change how we built the budget. So, the color is indifferent to what it is we would put the money towards.

Senator COTTON. If the Congress could reach a budget-cap deal, though, and have that money in the base budget, would that be better off for the Department of Defense?

Secretary SHANAHAN. Be much better off.

Senator COTTON. Can you explain why that would be better off?

Secretary SHANAHAN. Well, for a number of reasons. I think and I'll ask David to comment on this, but it's in the out years. When the base budget gives us the predictability and the stability the Chairman just spoke to, that not only gives us, internally, the stability to do our planning, but also our partners in the industrial base, their investment and their planning and their sizing, they have confidence that that continuity of money will continue. It—

Senator COTTON. Yeah, if we could—that's probably a good question for the Comptroller. Could you just explain the efficiency of spending a dollar in the base budget versus a dollar in the OCO budget, especially in the out years?

Secretary NORQUIST. So, in the regular year, they follow the same congressional oversight; they get spent the same way. It's a presentation difference. To be clear to the members, we have presented the budget so that that which has historically been OCO is distinctly presented from the OCO for base, because we want to understand—to be able to do analysis, you need to be able to compare.

But, when you go to the out years, what people look at is, What numbers can we expect in the out years? It is easier to project, and we have done that in the past. You'll see, in some of our presentations, a different base-and-OCO mix in the out years when you get to the point where all that is OCO is the contingency versus the OCO for base and others. But, it helps with planning.

Senator COTTON. Yeah. I say the reason we're in this bind is a law against which I have inveighed for many years, the 2011 Budget Control Act. I hope that we can get another, and final, 2-year cap deal. I do worry, though, that we may be heading in the direction of a full-year continuing resolution. I would hate to see that for all our men and women in uniform out on the front lines.

Thank you, gentlemen.

Chairman INHOFE. Thank you, Senator Cotton.

Senator HIRONO.

Senator HIRONO. I thought Senator Blumenthal was here before me, so I'll—

Chairman INHOFE. Senator—

Senator HIRONO.—defer to him first.

Chairman INHOFE. Okay.

Senator Blumenthal.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

Senator REED. Take the ball and run.

Chairman INHOFE. Go.

Senator BLUMENTHAL. Good morning, gentlemen. Thank you very much for your service. Appreciate your being here, and your candid and forthright answers.

President Trump's budget has been criticized in many ways. In my view, it gets a lot wrong, but it got very right the commitment to undersea warfare and building three submarines, *Virginia*-class attack submarines, a year in fiscal year 2020. I want to thank you and your entire team for their commitment to that issue of paramount importance to our future Navy and our national defense. It is an area where we have an asymmetric advantage that must be preserved. There are others that are also important, cyber and air superiority and space, for all the reasons that you know. But, I just want to highlight that area.

I want to ask a question that is unrelated to the defense budget, but is very much on the minds of many of us, relating to the Boeing 737 MAX 8. I know it's not a topic of interest today before this proceeding, but it is a topic of interest to work that you've done in the past. I'd like to know whether you have spoken about the Boeing 737 MAX 8 to anyone in the administration, in the Department of Transportation, or in the White House.

Secretary SHANAHAN. Senator, I've not spoken to anyone regarding the 737 MAX.

Senator BLUMENTHAL. Have you been briefed at all on any of the problems relating to it?

Secretary SHANAHAN. No, sir, I have not.

Senator BLUMENTHAL. Let me ask you, Are you in favor of an investigation that would look into why these defects that caused crashes were not known earlier or were not acted upon earlier?

Secretary SHANAHAN. Senator, I firmly believe we should let the regulators investigate the incidents. I would just say, my heart

goes out, and my condolences, to the families and the employees involved in the Lion Air incident and the Ethiopian Airline incident.

Senator BLUMENTHAL. The independent watchdog, Citizens for Responsibility and Ethics in Washington, recently asked the Department of Defense Inspector General to investigate whether you have broken any ethics rules by promoting Boeing while you served as Deputy Secretary of Defense. Do you support such an investigation?

Secretary SHANAHAN. Yes, I do.

Senator BLUMENTHAL. I welcome your support for that investigation.

Other government watchdog groups have looked at records indicating that the Department of Defense spent almost \$140,000 at Trump-branded properties in the first 8 months of the Trump presidency. More than a third of those payments were made at Mar-a-Lago. Some of the payments overlapped with presidential trips, but others do not. All the payments—you may be familiar with the emoluments lawsuit that I and other members of Congress have brought—would violate that domestic emoluments clause, potentially, which prevents the President from receiving money from the Federal Government, or any other payments and benefits, without consent of Congress. Are you aware of those expenditures by the Department of Defense?

Secretary SHANAHAN. No, I'm not, but I'll ask Secretary Norquist.

Secretary NORQUIST. I'm not aware of those.

Senator BLUMENTHAL. Could you give us, in writing, a—an accounting of those expenditures by the Department of Defense at Trump-branded properties?

Secretary NORQUIST. I'll take that for the record, Senator.

[The information referred to follows:]

Secretary SHANAHAN. The Department of Defense has spent a total of \$147,607.38 at Trump-branded properties since the inauguration. These were all government travel credit card purchases by individual employees and members of the military. It is not Department of Defense policy to recommend that its personnel patronize any particular hotel or restaurant. Individual travelers are largely free market players in choosing these services. Individual travelers are personally responsible for paying the amounts due on their government travel credit cards and are provided a per diem lodging allotment and a meals and incidentals expense allotment with which to make these payments.

Senator BLUMENTHAL. Thank you.

As the Acting Secretary of the Department of Defense, I have been alarmed by reports that indicate a pattern of retaliation against some of the Pentagon reporters, and restricted press access to some of the top DOD officials. Are you aware of those restrictions? Do you think they're appropriate?

Secretary SHANAHAN. I'm not aware of any restrictions. In fact, I think there's probably, since I've assumed these responsibilities, much more interaction and engagement with the press.

Senator BLUMENTHAL. Well, if you could—since my time is expired, if you could let me know of any restrictions that have been imposed?

Secretary SHANAHAN. Yeah.

Senator BLUMENTHAL. For the record, if you would take that question.

Thank you.

Secretary SHANAHAN. Absolutely.  
[The information referred to follows:]

Secretary SHANAHAN. There have been no press restrictions put in place at the Pentagon and that will not change under my leadership. My team and I are committed to upholding this promise.

Chairman INHOFE. Thank you, Senator Blumenthal.  
Senator Sullivan.

Senator SULLIVAN. Thank you, Mr. President—or, thank you, Mr. Chairman.

[Laughter.]

Senator SULLIVAN. A lot of Irish mistakes going on here this morning.

[Laughter.]

Senator SULLIVAN. Maybe we're getting close to St. Patrick's Day or something.

I want to thank you, all you gentlemen, for your service.

Under Secretary Norquist, I know Senator Perdue's going to ask a lot about the audit, but I think that was really good work that you were doing.

General Dunford, I just want to thank you. You know, I know that there has been an announcement of a new Chairman, but certainly we view you as the Chairman who's done an exceptional job, not just as Chairman, but in your entire career. I know you've got a lot of work to do left, but I do want to do a shout-out to your exceptional service to our Nation.

Mr. Secretary, I want to ask a couple of questions that relate to the President's recent visit to Alaska. He was there, coming back from North Korea. Billy Mitchell, who's the father of the U.S. Air Force, in a congressional hearing similar to this right before World War II, called Alaska "the most strategic place in the world." The President kind of echoed Billy Mitchell's comments when he was in Alaska visiting with our troops. He said, "Since the second World War, our intrepid servicemen in Alaska have proudly stood as the top cover for North America. You are a powerful warning to the world to never strike American soil. You are a warning that everybody knows about and nobody wants to mess with." He went on to say—he was at Joint Base Elmendorf Richardson (JBER)—"Next year, the 11th Air Force, headquartered right here at JBER, will receive the first of 54 brand-new F-35 fighters. You are getting very special planes, and you're getting a lot of them. That'll make Alaska the home to very 100 fifth-gen fighters. No place on the planet Earth will have that much combat fighter power. It's because of our strategic location."

The President then went on to talk about Alaska's critical role in missile defense, "We are also deploying more than 20 ground-based interceptors at Fort Greely, which will further strengthen our missile defense system. So important. Our missile defense system is being rebuilt very substantially, and we're going to have the latest and greatest here very soon." So, that was the President, 2 weeks ago, in Alaska.

Do you agree with these statements by the President, Mr. Secretary?

Secretary SHANAHAN. Senator, I do.



Senator SULLIVAN. You called North Korea a pressing concern. Like the President indicated by his remarks, do you believe that the rapid deployment of advanced missile defense for America is critical to our readiness, defending from North Korea missile attacks?

Secretary SHANAHAN. Extremely critical.

Senator SULLIVAN. How about the rapid deployment of 100 fifth-gen fighters that can be defending our troops in Korea, because of Alaska's strategic location, within 5 hours?

Secretary SHANAHAN. Deployment and sustainment of them is vital.

Senator SULLIVAN. Thank you.

Let me ask, on the issue of allies, Do you agree that China and Russia have been trying for years to split us from our traditional allies? NATO, Japan, Korea. Hasn't that been a strategic goal of them—of those countries?

Secretary SHANAHAN. Well, China, in particular, but we see this constantly with Russia and NATO, particularly in the Balkans. I'd ask the Chairman, maybe, to comment on the recent activity in the Balkans.

Senator SULLIVAN. Well, let me just—

General Dunford, do you see that as a strategic goal of the Chinese and the Russians, to split us from our allies?

General DUNFORD. It's been a very consistent pattern of behavior to split us from our allies. More specifically, to create doubt, in the minds of our allies, that we can meet our alliance commitments.

Senator SULLIVAN. So, I appreciate what the President's been trying to do, particularly to get our NATO allies to 2 percent, but there have been press reports about a cost-plus-50-percent approach. Mr. Secretary, do you know how much the Koreans paid for the new Camp Humphreys on the Korean Peninsula?

Secretary SHANAHAN. I do. Slightly less than a billion dollars.

Senator SULLIVAN. So, they paid \$9.8 billion out of a new facility cost, \$10.8 billion. Isn't that correct?

Secretary SHANAHAN. Yes.

Senator SULLIVAN. Ninety-three percent of a U.S. Army base.

Secretary SHANAHAN. Right.

Senator SULLIVAN. Have you been to Camp Humphreys?

Secretary SHANAHAN. No, I haven't.

Senator SULLIVAN. You should go there. It's an outstanding facility.

I'm sure you've been, General.

General DUNFORD. I have, Senator.

Senator SULLIVAN. So, 93 percent, United States Army base on Korean soil, paid for by the Koreans. Do we really think—and maybe those statements—maybe the press reports aren't true—cost-plus-50—are we driving our allies away from us in the way that Putin and Xi Jinping are probably cheering right now?

Secretary SHANAHAN. Yeah, Senator, we don't do cost-plus-50 percent.

Senator SULLIVAN. So, those reports in the press, all over the press—

Secretary SHANAHAN. They're—

Senator SULLIVAN.—are incorrect?

Secretary SHANAHAN. They're erroneous. We're not going to run a business and we're not going to run a charity. The important part is that people pay their fair share. Payment comes in lots of different forms. Could be contributions, like in Afghanistan. But, at the end of the day, people need to carry their fair share. Not everyone can contribute. But, it is not about cost-plus-50 percent.

Senator SULLIVAN. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Sullivan.

Senator HIRONO.

Senator HIRONO. Thank you, Mr. Chairman.

Secretary Shanahan, the recently released Missile Defense Review (MDR) directed a study on operationalizing the Aegis Ashore site of the Pacific Missile Range Facility (PMRF), on Kauai. You and I discussed this. I have some significant concerns about what operationalizing the site would do to PMR's ability to meet its testing mission, which I assume you agree is important. You can—

Secretary SHANAHAN. Yeah. No, absolutely, Senator, and—

Senator HIRONO. Thank you.

Secretary SHANAHAN. The—

Senator HIRONO. I'll get to the question.

Secretary SHANAHAN. All right.

Senator HIRONO.—as well as the impact of removing that testing capacity from PMRF. So, briefly, could you tell us how operationalizing the Aegis Ashore site in Kauai would add to our ability to defend Hawaii from missile threats, especially as the major missile threat to Hawaii would be an intercontinental ballistic missile (ICBM), and the Aegis Ashore is not set up to counter ICBMs?

Secretary SHANAHAN. My understanding of the request in the MDR is that it's a study to assess taking the test assets and operationalizing them. As you well point out, the ground-based midcourse defense system that is resident in Alaska defends Hawaii. I believe that the study will look at what are other threats that may be posed to Hawaii, and how there might be a layered defense. But, as you pointed out, the test range there is vital capability and capacity for developing our missile defense systems.

Senator HIRONO. So, I want to make sure that my concerns are in the record. For Secretary Shanahan and General Dunford, 2 weeks ago before this Committee, General O'Shaughnessy, the Northern Command Commander, testified that the current situation at our southern border is, to quote him, "not a military threat." Do you agree, Secretary Shanahan, that the situation on the southern border is not a military threat?

Secretary SHANAHAN. Senator, you're referring to General O'Shaughnessy's testimony?

Senator HIRONO. Yes.

Secretary SHANAHAN. Yeah. What I recall from his testimony is, he said that it is not a military threat. He said border security is national security.

Senator HIRONO. I understand that. But, he said specifically that it's not a military threat. I'm asking you whether you agree with him that—

Secretary SHANAHAN. I—

Senator HIRONO.—it's not a military threat.

Secretary SHANAHAN. I agree with him.

Senator HIRONO. General Dunford?

General DUNFORD. I agree. It's a security challenge, not a military threat.

Senator HIRONO. So, you testified, Secretary—Mr. Secretary, that there are 6,000 troops currently deployed at our southern border. Can you tell us how long they're going to be there?

Secretary SHANAHAN. I'd say 30 or 40 percent of them will be departing in the next month or so when they complete some of their work. I believe we'll probably draw down to between 3,000 and 4,000.

Senator HIRONO. Is this something that the President is indicating to you, or can he say that, "I want you all to remain at the border"?

Secretary SHANAHAN. No, this was part of the tasking from the Department of Homeland Security. Based on their request to us—

Senator HIRONO. From the President.

Secretary SHANAHAN. From the Department.

Senator HIRONO. Yes.

Let me get on to a matter that is of great concern to some—to a lot of us, actually. Secretary Shanahan, in your response to Senator Inhofe's question about refueling the *Truman*, you stated that growing the workforce in the shipyard is a priority, and the move to not refuel the *Truman* would save \$3.4 billion over 5 years. How does canceling 3 years of shipyard work grow the workforce there?

Secretary SHANAHAN. Yeah. The workforce—when we look at what is in the shipyard, so the combination of submarines, new carriers, and then maintenance, all that is done in the same shipyards, and that workforce moves from project to project. So, when we look at the total employment, the actual total employment goes up over the period of time in which we're building the two carriers.

Senator HIRONO. Frankly, as I talk with some of the people from the shipyards, I'm not so sure that that is the case. It'll cost about \$3.4 billion to refuel the *Truman*, which, by the way, by not refueling, we're only getting about 50 percent of the Truman's service life. At the same time, there's \$3.6 billion in the emergency fund which you acknowledge is going to be set aside—you want us to authorize setting that aside for the wall. So, doesn't it make sense—maybe I should ask this of General Dunford—that we should use the money from the emergency funding that you're requesting us to set aside for the wall for something—i.e., the refueling of the *Truman*—that actually fits with the NDS and that your combatant commanders want?

General Dunford, would you like to respond?

General DUNFORD. Senator, I would. I'm not trying to be evasive, but I think my responsibility is to identify for the Secretary the priorities within our top line, not to identify what the top line is, and not to identify how the money within the total top line ought to be allocated.

Senator HIRONO. Well, I would say probably if you all had your druthers, if you could get some money to refuel the *Truman*, you would do so, wouldn't you?

General DUNFORD. Again, if I look at it through the military dimension alone, that would be true, but I have to acknowledge that the Secretary and the President have broader responsibilities than I do.

Senator HIRONO. Yes, like building a vanity wall.

Thank you.

Chairman INHOFE. Okay. Senator Perdue.

Senator PERDUE. Thank you, Mr. Chair.

Thank you, gentlemen, for being with us today.

Mr. Secretary Shanahan, in 1990, Congress passed a law that required the administration to produce an audit of the Department of Defense. I want to give you guys kudos for producing the first-ever audit of the Department of Defense last year, in November. Thank you for that. Can you give us an update on that? Give us a little idea of what the Department is learning from that audit. I know we don't have a clean audit yet. Secretary Norquist may want to comment on that. But, I'd like to get a brief update about what we're learning, what kind of opportunities we have for efficiencies and a better use of capital in the military.

Secretary SHANAHAN. Thank you, Senator.

First of all, the audit was to look at \$2.7 trillion worth of assets. So, this was the largest audit ever conducted, probably in the history of mankind. We were asked, Would we ever do this? Because it had never been done. We made the commitment to this Committee that it would be accomplished. We always knew that there would be discoveries. But, audits really aren't about doing the audits, it's finding the problems, as you've pointed out. We specifically focused on identifying certain problems that are vital to operating the Department. Some of them are financial in benefit, as you described, efficiencies, but others are identifying cyber shortfalls. So, we used the audit to find efficiencies, vulnerabilities from cyber, as well as where there is noncompliance.

The best part of the audit is, we've identified those items, and now we're incorporating all the corrective actions, we're building the muscle movement and the habits to continuously address those findings and make ourselves better.

Dave, would you like to talk about the efficiencies?

Secretary NORQUIST. Sure. So, I think one of the things you point is, before we started the audit, there was sort of two potential misconceptions. One is, it was going to be a paperwork exercise, and we'd learn nothing. Or the other is, we'd open the floors and discover pots of gold hidden underneath. Of course, part of the value of getting through is, you move past those to discover the tangible value. Let me just give a couple of specific examples:

The first is inventory. We discovered there are certain facilities where what they thought they had in inventory did not match what they had in inventory. If your responsibility is spare parts for airplanes, the accuracy of that inventory matters. So, for example, at Hill Air Force Base, uninstalled missile motors, they don't just check the quantity, they check the condition. They were labeled as unserviceable. When you visit them and look at them, they're actually usable. So, you wouldn't have needed to order more. That saved us \$53 million.

Other places, you go to Osan and Kadina, 14,000 munitions, \$2.2 billion, 100 percent accounted for, not a single exception.

What we learned is, there are some places that are doing this quite well, and there are others where we need to either help them fix their process or give them better attention. But, the commanders in the field recognize the direct correct—connection to mission and readiness. So, I had expected a lot of pushback once the audit findings came in, that this was just paperwork, but they saw the tangible value. I think, as we move forward, the accuracy of the data, adopting more businesslike practices, will be tremendously helpful for the Department.

Senator PERDUE. Thank you. How long will it take us to get a clean audit, in your estimate?

Secretary NORQUIST. I don't know how long the Department, because the Department's opinion will be the last of the organizations. But, I think, over the next couple of years, you'll see either the working capital fund of the Army or the Marine Corps start to get to clean opinions, and then you'll be able to differentiate between which of the organizations missing progress and who needs an extra hearing.

Senator PERDUE. Thank you.

Chairman Dunford, today we have about 5,000 troops, I think, directly in Iraq. Is that correct?

General DUNFORD. That's correct, Senator.

Senator PERDUE. So, General Thomas recently before this Committee—the combatant commander of SOCOM—said, and I quote, “Our Iraqi partners have embraced their sovereign responsibility in terms of defending their terrain.” What are we doing—and also, we hear about this potential vote in the Parliament in Iraq about asking United States Forces to leave Iraq. Then, just this week, we had President Rouhani visiting Prime Minister Modi. Can you talk to us a little bit about what assumptions we have in this budget with regard to our presence in Iraq? How do you see our continuing role there in Iraq?

General DUNFORD. Senator, this budget includes an enduring presence in Iraq, slightly less than the forces that are on the ground right now. What's important is that we do that in partnership with the Iraqi Government. So, as the Iraqi Government settles, and they're prepared to enter into a conversation about what our reliable partnership will be moved forward, then our Secretary of State and Secretary of Defense will work out the exact numbers to meet the requirements that the Iraqi Security Forces will still have to ensure the lasting defeat of ISIS, which is—of course, our collective focus.

Senator PERDUE. Thank you, sir.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Perdue.

Senator King.

Senator KING. Thank you, Mr. Chairman.

I'm somewhat saddened to have so much of this hearing taken up with issues about the wall, because I and all Members of this Committee have been very bipartisan. We've always been very supportive of the military. But, there are some questions I feel that I have to ask.

Secretary Shanahan, you testified earlier, in answer to Senator Reed's question, that you don't know which military construction expenditures are going to be canceled in favor of this \$3.6 billion. Is that correct?

Secretary SHANAHAN. Senator, that's correct.

Senator KING. Why is that correct? You've had a month. I find it very hard to believe that there's not a list.

Secretary SHANAHAN. Yeah.

Senator KING. Are you testifying there's no list, there's no information you can give us about which construction projects are on the chopping block?

Secretary SHANAHAN. Yeah. So, what I can tell you are what projects aren't on the chopping block. So, for example—

Senator KING. Have you assured Members of the Senate—individual members, that there are not projects in their States that are under consideration?

Secretary SHANAHAN. No, I have not.

Senator KING. You have not made any assurances to any member of the Senate.

Secretary SHANAHAN. I have had questions as to whether projects—this has been a blanket statement that's been made. There are no projects in this fiscal year that will be canceled. That has been a—and anything associated with family housing or barracks.

Senator KING. But, wasn't the appropriations, the \$3.6 billion—I mean, that's part of a larger appropriation for military construction that's been through this Congress, been through the Appropriation Committee—didn't it list projects?

Secretary SHANAHAN. No, it doesn't.

David?

Secretary NORQUIST. So, what he's talking about is—the projects, when we go to prioritize, when we have the guidance from DHS's request, and the Secretary makes a decision—we'll look at those that are unobligated, meaning the contracts haven't been awarded. If you look at the—

Senator KING. But, those are projects that have been identified. This is—

Secretary NORQUIST. Absolutely.

Senator KING. You weren't just say, "We'll give you \$50 billion for military construction."

Secretary NORQUIST. Correct. The projects individually identified by the Congress and the committees, correct.

Senator KING. But, you're telling me that the Department has not identified which of those projects are going to be canceled in—or deferred in order to spend this \$3.6 billion on a wall.

Secretary NORQUIST. We don't know which projects will be deferred. I don't know if the Secretary's decision will be \$3.6 billion. He has to determine that it's relevant—

Senator KING. It's your testimony, Mr. Secretary, that you have not had conversations with Members of the Senate to assure them about the safety of projects in their States.

Secretary SHANAHAN. Well, let me be clear on this so it's—I have told members there are projects and this is writ large—there are

no projects scheduled to be obligated in this fiscal year that will be canceled. That's the only information I've shared.

Senator KING. Well, I'm confused. I mean, either projects are going to be canceled to find \$3.6 billion, or they're not. Please explain, Mr. Norquist.

Secretary NORQUIST. Sure. The projects in military construction have up to 5 years to be awarded. So, if you receive funding for a project in 2018 or 2019, it might not get awarded till 2020 or 2021.

Senator KING. So, you're focusing on the word "awarded," but I'm focusing on the fact that these are identified projects in the appropriation. Are they not?

Secretary NORQUIST. Correct. But, if—

Senator KING. Mr. Chair—Secretary, are you saying that there are no identified projects in the appropriation for this year that are going to be defunded or deferred because of this 3.6? I mean, this 3.6 is coming from somewhere.

Secretary NORQUIST. So, okay—so, I think you're talking past each other. There's a difference between the 2019 appropriations bill versus projects that are scheduled to be awarded, meaning the contract is going to be funded and the construction would begin in 2019. Those projects have up until the year 2023 or so to be awarded. The reason we put the \$3.6 billion in the request is so that money would be available and allow those projects to continue. In many cases—

Senator KING. All right. Let me put it another way. I know of projects in New England that were funded in this bill. Can I be assured that they're safe, they're not going to be deferred or canceled to find this 3.6? I mean, it sounds—something's not computing here. The 3.6 is coming from somewhere. It's coming from projects that were authorized and appropriated by this Congress. You won't tell me what they are.

Secretary NORQUIST. The 3.6 will come from projects—well, assuming the Secretary signs off—I don't know the number of the requirement yet—but, assuming the Secretary signs off, the 3.6 would, in fact, come from projects previously authorized and appropriated by Congress. We would look to not—we would not touch those that dealt with family housing or military construction. We would prioritize—

Senator KING. I'm going to ask my question once, Mr.—

Secretary NORQUIST. Sure.

Senator KING.—Secretary. Have you spoken to any Members of the Senate to assure them that projects in their State are not going to be affected by this policy?

Secretary SHANAHAN. No, I have not, Senator.

Senator KING. Thank you.

Mr. Chairman, I'm very concerned about this. I don't think we're getting full information. I intend to follow up.

Thank you.

Chairman INHOFE. Thank you, Senator King.

Senator McSally.

Senator MCSALLY. Thank you, Mr. Chair.

I do want to follow up on that, as we did have a conversation, and there are four projects in Arizona that are appropriated in fiscal year 2019, and you broadly said those fiscal year 2019 projects,

across all the country, will not be impacted by this, just to be clear. Correct, Mr. Secretary?

Secretary SHANAHAN. That is correct.

Senator MCSALLY. Thank you.

Senator KING. How—

Senator MCSALLY. I just wanted to clear that up.

Senator KING. How does that square with what he just told me?

Senator MCSALLY. Well, you rebound if you get more time, sir, but I've got some other questions to ask. I just wanted to clear that up, since it seemed that may cause some confusion about some conversations that we had.

I want to get to a different topic. In 2017, there were 6,769 sexual assaults reported across our entire military, likely thousands of others that were not reported. These blue-on-blue crimes are unacceptable. They're harming our warriors, and they're degrading good order and discipline and military readiness. Many steps have been taken by the military over the last years, and this body. Over 100 legislative actions. But, it's not enough. There are thousands of our warriors in military readiness that's been harmed by these crimes. I believe commanders must be educated, equipped, and held accountable, and still be responsible for the decisions, the culture, and the discipline regarding sexual assault. However, something needs to change. "Insanity" is doing the same thing over and over again, expecting a different result. Perhaps we need to take a fresh look at this issue.

I've spent a lot of time thinking about this, and more so over the last week. We have weeks, now, before the NDAA will be marked up before this Committee. I am fully locked on, like a missile, on this target. I want to be working with you and the military services to take a fresh look at this. I've asked the Secretary of the Air Force and the Chief of Staff to start with a summit with the Air Force. But, it's not just the Air Force, it's across our military services.

So, can I get your commitment that we are going to partner on this, and we're going to take a fresh look and tackle this over the next 45 days together, which includes being responsive to my questions, maybe forming a team of experts and resources to be able to really dial in as to what's working, what's not working, across the spectrum of prevention and response and prosecution? We can tackle this together, come up with some ideas, impact on the NDAA, culminating with a tank meeting with all the leaders there, with myself, and solve this thing together. Can I get your commitment you'll work me—with me on that?

Secretary SHANAHAN. Senator, you have my commitment.

Senator MCSALLY. Thank you.

Chairman Dunford?

General DUNFORD. Absolutely, Senator.

Senator MCSALLY. Okay, great. Let's follow up immediately on that. I appreciate it.

I want to shift to a different topic. I was over on the Korean Peninsula, less than a year ago, visiting the troops, and I will tell you, I am so proud of them and their ability to fight tonight, and everything that's been done by our military and the services to make sure that we were using all elements of national power to



crank up the pressure with a deterrent capability to keep the pressure on North Korea for the negotiations and to thwart the threat that they are.

I want to get some clarity, Secretary Shanahan, on exercises. As we know, military exercises, every single day. I mean, every day, you—you're going out with your squadron, your unit, and you are making sure that you're ready to fight tonight. But, people rotate in and out over there every year. So, large-scale crisis-response exercises are critical for us to have that decisionmaking process for key leaders at the highest level. So, can you just clarify where we are with military exercises on the Peninsula, and what the decisionmaking process was on that?

Secretary SHANAHAN. Right. So, Senator, the exercises that we have on the Peninsula, which are ongoing as we speak, and the Minister of Defense for South Korea, ROKs [the Republic of Korea], will come see me at the end of this month, and we'll discuss progress and the findings of those exercises. They were redesigned this year for three things: support the peace process, the expanded responsibilities of the South Koreans, in terms of operational control, and to—

Senator MCSALLY. Okay.

Secretary SHANAHAN.—maintain foundational readiness. Underlying all of this is maintaining the readiness we need if we're called to fight tonight.

Senator MCSALLY. Right.

Secretary SHANAHAN. We've sustained that readiness.

Senator MCSALLY. Okay. So, are you—can you say that, with the adjustment—I understand turning the volume down so it's not being so provocative, but those higher-level operational crisis exercises, the command-post level and beyond, decisionmaking for new leaders, is really important—

Secretary SHANAHAN. Right.

Senator MCSALLY.—especially as they rotate so quickly over there. Are—can you assure us that there will be no degradation in the readiness—

Secretary SHANAHAN. Right.

Senator MCSALLY.—to fight tonight, based on adjustments to the exercises?

Secretary SHANAHAN. I have had personal conversations with General Abrams, and I can assure you there will not be degradation. We will have the capability we need.

Senator MCSALLY. Okay. Thank you.

Thank you, Mr. Chair.

Chairman INHOFE. Senator Peters.

Senator PETERS. Thank you, Mr. Chairman.

Thank you, to our witnesses today.

Before—Assistant—or Secretary Shanahan, before I ask you a few questions, I just want to go back and get a little bit more clarification from some of the answers that I've heard to Senator King and Senator Hirono.

I noticed, in the budget, there is a line for \$9.2 billion for emergency—

Secretary SHANAHAN. Right.

Senator PETERS.—for fiscal year 2020. Is that \$9.2 billion that you're asking Congress to appropriate related to the emergency declaration that the President has made?

Secretary SHANAHAN. \$7.2 billion of it is, and \$2 billion is for hurricane.

Senator PETERS. So, you're asking Congress to appoint—or to appropriate \$7 billion to deal with what the President has declared an emergency. I want to be clear about that.

Secretary SHANAHAN. Correct.

Senator PETERS. So, the Senate, as you know, will be voting later today on a resolution of disapproval relating to this emergency declaration. Is it safe to say you would revise the request for national emergency funding if a majority of the House and the Senate disapproves of the emergency declaration?

Secretary SHANAHAN. I will stick to the budget that we've submitted.

Senator PETERS. But, if we don't approve an emergency declaration, why would you come and ask us for money for an emergency declaration?

Secretary SHANAHAN. I will work with this Congress to get the right top line.

Senator PETERS. So, you will look at that and revise it, if necessary, if we disapprove it.

Secretary SHANAHAN. I'll work with the Committee and I'll work with the Congress to get the right top line.

Senator PETERS. Could you describe the Department's response to the request for assistance that DHS sent a few weeks ago, and perhaps provide some characterization of the specifics in that request for us? I also serve on the Homeland Security Committee. I think it would be helpful to know.

Secretary SHANAHAN. Right. Which request for assistance is this?

Senator PETERS. On the southern border.

Secretary SHANAHAN. It's just—is this—yeah, there's been a number of them.

Senator PETERS. Could you give me—could you characterize what the—what they have been asking for and what—your response?

Secretary SHANAHAN. Right. I'll—do you want to—

General DUNFORD. Sure.

Secretary SHANAHAN. Okay.

General DUNFORD. Senator, I'll take that, if you don't mind. The—

Senator PETERS. Yes.

General DUNFORD.—the most recent request requested our engineers to reinforce some of the infrastructure along the border. We also have some soldiers that are supporting the detect-and-monitor mission by manning cameras that allow Customs and Border Protection to see what activity is ongoing around the border. Those are the two primary tasks. That's, of course, in addition to the National Guard sustain mission, which provides rotary-wing aircraft for surveillance, some logistics support, some planning support, and some intelligence along the border.

Senator PETERS. Thank you.

Secretary Shanahan, at your confirmation hearing for the position of Deputy Secretary, I asked you about what was previously

known as the “third offset” that essentially was using technology to improve military tactics and strategy. We had a further conversation about that in my office, and I appreciate that. Your predecessor as Deputy Secretary, Bob Work, championed the initiative and sought out ways to use technology to create and maintain an advantage over our competitors, very similar to what was envisioned in the National Defense Strategy.

Well, now that you’ve been inside the Department, I’m going to ask this question again. Now, as an insider—before, I asked that, prior to your appointment—what is your view on how technology’s going to impact warfare? In particular, give me a sense of how you view the most disruptive technologies to some of our legacy weapon systems that are pretty much ingrained in DOD culture, also tend to be incredibly expensive. But, as we’re thinking about this budget going forward, that could change very dramatically. Give me your sense and how that is reflected in this budget.

Secretary SHANAHAN. Absolutely. To Bob Work’s credit on the third offset, that was the underpinning for many of the concepts that we’re requesting funding for this year. So, in terms of the four major disruptive capabilities, they are space, missiles, cyber, and autonomy. So, take, for example, missiles on—in answering your question: low cost, cost-imposing, and attritable versus very expensive, manned assets. Same can be said for cyber, all the effects that you can create with cyber. When we think about the trade in cost, terms of being able to deploy forces, versus effects—significant cost imposition. Space, you know, when we think about having unfettered access to the world, outer space provides us that environment.

Senator PETERS. So, when you’re talking about some—I—my time is running low, but you’re talking about some of this disruptive and autonomy. So, when you think about legacy systems of pilots and airplanes and aircraft carriers, things of that nature, all of those things we should be looking at—

Secretary SHANAHAN. Absolutely. I mean, when we think about the challenge to find pilots, that challenge goes away. When we think about surface/subsurface and the capability to build for lower cost, hide and suspend for longer periods of time, these are real enablers. The cost to support them is significantly less.

Senator PETERS. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Peters.

Senator Blackburn.

Senator BLACKBURN. Thank you, Mr. Chairman.

Thank you all for being with us today.

Mr. Shanahan, I want to move a little bit of a different direction as we talk about budget and priorities. I’m from Tennessee. I spent 16 years in the House and represented a district that was home to Fort Campbell and many of the enlisted men and women that are there, the 101st, 160th, 5th Division, and have really developed a good working relationship with those families and the enlisted, and also with command teams that have been there that have done such a terrific job. We have some of those that have served at Fort Campbell that are members of our team. So, we hear a good bit from them, and hear about their concerns. I join Senator Cotton in being tremendously concerned about the Budget Control Act from

2011, with the sequester that was placed on our military. That has not served us well. My hope is that we're going to be able to solve that situation and address some of the problems that it has brought forward.

But, one of the things I hear from, especially, our Special Operations guys is their desire to make certain that 5G technologies are available to them, and that those networks are secure. I appreciate that in your testimony you mentioned three of your priorities as cyber, hypersonics, and space. We have had our COCOM [combatant command] hearings and have talked some about the placement of these technologies so that we're fighting 21st-century warfare and that we're not just focused on today.

I'll tell you, one of the things that I've heard a little bit of scuttlebutt about that causes me some concern is that maybe some of the fighter pilots from Air Force are not that excited about having a Space Force that would function there as Air Force. So, I want to give you a couple of minutes to talk about Space Force, how you see it standing up, how you expect to deploy it, how you intend to protect the funding for that so that we are looking forward as well as tending to today.

Secretary SHANAHAN. Thank you, Senator.

The—with 2 minutes, I'll go as quickly as I can.

Senator BLACKBURN. Good.

Secretary SHANAHAN. I'll summarize it this way. Our Nation, our \$19 trillion economy, and our military, we're carrying too much risk, given the vulnerability we have in space now that space is a contested domain. The Space Force represents a chance to accelerate our ability to respond to that threat environment. The Space Force really gets after three items in order for us to reduce that risk:

The first is, the assets that are in space were never designed to be resilient and deal with the threats that exist today. It's a bit like, "You can't pick your parents." We need to design new capability and put it up on orbit as quickly as possible. Space Force recommends a Space Development Agency (SDA), which really gets at cutting the redtape to do development and tapping into commercial space technology, save costs, save time.

The second is, stand up the Space Command, much like we've done Cyber Command, so that we can focus, have dedicated focus to provide the rules of engagement, authorities, and the tools to defend our assets.

The third is, bring together and train. Make space a dedicated profession, where we can provide this cadre of professionals the right training so that they have the ability to have a career that leads to——

Senator BLACKBURN. Well done in a summary. Now give me 15 seconds on great-power competitiveness with China in this arena.

Secretary SHANAHAN. I think we've been ignoring the problem too long.

Senator BLACKBURN. Well done.

Yield back.

Chairman INHOFE. Thank you, Senator Blackburn.

Senator Warren.

Senator WARREN. Thank you, Mr. Chairman.

Thank you, to our witnesses, for being here.

So, the administration has submitted a national defense budget request for \$750 billion for next year. That is a pretty big number even by the Department's own standards. In fact, the budget rules govern how much money is available for defense spending, is set at \$576 billion, which is still a huge sum. But, you're requesting \$174 billion more than the amount that is allowed by law; \$165 billion for the overseas contingency operations, OCO, and another \$9 billion for emergency funds for the wall. Now, some of the things in the DOD budget request seem to me to point in the right direction—more investments in research, for example. We need to have a much larger conversation about whether these budget caps make sense, and how defense and nondefense priorities should stack up. But, right now, I just want to dig into how you got your numbers so all of the nondefense budget experts out there can understand the tricks the administration is using to justify skyrocketing defense spending.

Secretary Shanahan, the Department proposes to get around the budget rules by requesting that 165 billion extra dollars in the OCO account. The amount in the OCO account is not counted toward statutory budget caps. Is that correct?

Secretary SHANAHAN. Yes.

Senator WARREN. Okay. So, let's dig in a bit, then, on OCO. As the cost to fight the war in Iraq and Afghanistan began to increase in the early 2000s, Congress had to pass emergency supplemental appropriations every year. So, in 2009, President Obama established OCO so that they can set aside funds for this and other related operations. Because those funds are for emergencies, they don't count toward the overall limits in defense spending, as you just said. This year's OCO request is a 140 percent increase from the \$69 billion you requested for OCO in last year's budget. So, tell me, did the cost of supporting our overseas operations suddenly increase by 140 percent last year?

Secretary SHANAHAN. Senator, they did not.

Senator WARREN. They did not. Okay. In fact, the last time OCO account was even close to the amount you've proposed for next year was in 2010, when we had approximately 100,000 troops deployed in Afghanistan and another 50 to 100,000 troops in Iraq. Today, we have about 21,000 troops in Iraq, Afghanistan, and Syria, combined, a number that's largely unchanged from last year. So, let me ask another question. Since last year, has the Department deployed a large number of troops to fight a war someplace other than Iraq, Syria, or Afghanistan?

Secretary SHANAHAN. Senator, no, we have not.

Senator WARREN. Okay. So, the actual cost of supporting operations overseas did not increase by 140 percent, and we haven't launched a war someplace else, triggering that kind of emergency. Yet, you're asking for \$165 billion for, quote, "overseas contingency operations." I just want to be absolutely clear so the taxpayer understands. You're requesting funding in OCO to fund activities that have nothing to do with the reason that OCO was established. Is that correct?

Secretary SHANAHAN. What we've done this year is, we've taken our base budget from last year, per the Chairman's blueprint, grown our budget 3 percent in real growth.

Senator WARREN. Okay. I appreciate it. But, you can just answer my question.

Secretary SHANAHAN. Yeah.

Senator WARREN. That is——

Secretary SHANAHAN. The——

Senator WARREN. You're requesting funding in OCO to fund activities that have nothing to do with the reason that OCO was established. Is that right?

Secretary NORQUIST. So, Senator, to make it transparent, if you go through the budget material, we've got it in two groups. One is what you think of as traditional OCO, and the other is clearly labeled "OCO for base." That's the distinction you're——

Senator WARREN. So, I——

Secretary NORQUIST.—looking for.

Senator WARREN. You can call it whatever you want. We know why OCO was established. My question is, Are you asking for this increase for the reasons that OCO was originally established? It's an easy question.

Secretary SHANAHAN. No——

Senator WARREN. Secretary Shanahan?

Secretary SHANAHAN. No, we're asking for a \$750 billion top line, and we want to work with this Committee to get the appropriation and authorizations proper.

Senator WARREN. You're asking for an increase in OCO for purposes that OCO was not established. In fact, your own staff said so yesterday. They said you're asking at least for \$98 billion for things that have nothing to do with contingency operations. I'm not quite sure why you can't say that.

What we're really talking about here is the establishment of a slush fund to hide what's happening with defense spending and get it out from underneath the statutory caps. I think it's time to stop this business of more, more, more——

Secretary SHANAHAN. Yeah.

Senator WARREN.—for the military.

Secretary SHANAHAN. Sure.

Senator WARREN. Establishing a slush fund like this, and saying, "Oh, because we put it in two different accounts"——

Secretary SHANAHAN. Yeah.

Senator WARREN.—somehow changes the fact is just not true. We just need to be honest with the American people about how much we're spending here.

Secretary SHANAHAN. Senator, we have provided, in our justification books, 100-percent transparency. There is no slush fund. We can take the money and tie it back to the National Defense Strategy and what we need to defend America.

Senator WARREN. I have——

Chairman INHOFE. Thank you, Senator——

Senator WARREN.—no doubt that you see this——

Chairman INHOFE.—Warren.

Senator WARREN.—is more, more, more.

Chairman INHOFE. Senator Hawley.

Senator HAWLEY. Thank you, Mr. Chairman.

Thank you, gentlemen, for being here.

Let me start by saying that—first, a note just about Fort Leonard Wood. I'm looking forward to seeing the budget justification books next week so we can see the details here about the budget, itself. I'm anticipating it will include an increase for the Army's Chemical School at Fort Leonard Wood, in Missouri, my home State. These are professional soldiers, of course, who train and respond to an adversary's use of chemical weapons on the battlefield. Four of the five threats, I'm struck, called out in the National Defense Strategy have a chemical weapons capability. By investing in places like Fort Leonard Wood, we ultimately, of course, save lives on the battlefield. So, I'm very proud of the work that they do, and look forward the Department's continuing support for their important mission.

Let me just shift and ask about our challenge in emerging technologies, cyber, and space; in particular, China's investment in those areas, and our eroding advantage. I was struck, Mr. Secretary, by a comment that you make in your written testimony. You say, "Some U.S. companies have voiced ethical qualms about working with DOD to develop advanced technology. In some cases, even terminating relationships, often while continuing to work with China." What are we talking about, here?

Secretary SHANAHAN. I think we're talking about Google and their support to China, and their lack of support to the Department of Defense.

Senator HAWLEY. So, Google has refused to work with the Department of Defense, actually was under contract, weren't they, with the Department of Defense? Tell us about that.

Secretary SHANAHAN. Well, they haven't refused, they just have said they're not going to continue to do business with the Department of Defense on certain contracts.

Senator HAWLEY. But, they are doing business in China in a way that benefits, you're saying, our Chinese competitors.

Secretary SHANAHAN. Correct.

Senator HAWLEY. Say more about that.

Secretary SHANAHAN. Well, the interesting thing—and this is why China is—this is such an important issue for our country. You have this—the fusion of commercial business with military is significant, \$5 trillion of their economy is state-owned enterprises, so the technology that is developed in the civil world transfers to the military world. It's a direct pipeline. Not only is there a transfer, there's also systemic theft of U.S. technology that also facilitates even faster development of emerging technology.

Senator HAWLEY. So, I just want to make sure that I understand exactly what you're saying. You're telling me that Google, an American company, supposedly, is refusing to work with the Department of Defense, but is doing work with China, in China, in a way that at least indirectly benefits the Chinese Government. Is that correct?

Secretary SHANAHAN. I haven't heard the word "refuse," but there's a lack of willingness to support DOD programs.

Senator HAWLEY. General, you're nodding your head. Do you want to weigh in on this?

General DUNFORD. No, Senator. I'm nodding a head on exactly the point that you made, that the work that Google is doing in China is indirectly benefiting the Chinese military. I've been very public on this issue, as well. In fact, the way I described it to our industry partners is, "Look, we're the good guys, and the values that we represent, in the system that we represent, is the one that will allow, and has allowed, you to thrive." That's the way I've characterized it. So, I was just nodding that what the Secretary was articulating is the general sense of all of us as leaders. We watch with great concern when industry partners work in China, knowing that there is that indirect benefit. Frankly, indirect may be not a full characterization of the way it really is. It's more of a direct benefit to the Chinese military.

Senator HAWLEY. I just want to underscore this for the record so that we are absolutely, perfectly, 100-percent clear, here, that Google, an American company based in this country—again, supposedly an American company—is doing work in China that directly or indirectly benefits the Chinese Government at a time of increased peer competition with this country. We are in a struggle with the Chinese Government over whether or not they're going to become a regional, and maybe global, hegemon with values very different from ours, certainly values that do not favor freedom in the world, and we have an American company that does not want to do work with our Defense Department, which is, you know, one thing, but they are happy to help the Chinese, at least—the Chinese Government, that is—the Chinese military—at least indirectly. I think that's just extraordinary.

In my time remaining, Mr. Secretary, tell us what, from your perspective, we need to do to maintain our competitive advantage on AI and these emerging technologies. What do we need to see, going forward?

Secretary SHANAHAN. We need to—well, two things. One, we need to continue to invest. This year's budget doubles our investment in artificial intelligence. Then the string that you're really pulling on, the talent is in this country. We need to use the talent in this country. The talent in this country needs to support our great-power competition.

Senator HAWLEY. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hawley.

Senator DUCKWORTH.

Senator DUCKWORTH. Thank you, Mr. Chairman.

Mr. Shanahan, I'd like to follow up with the line of questioning from my colleague from Arizona, Senator McSally. You know, I think there's no doubt we'll continue to see tensions in North Korea, on the Korean Peninsula, after the latest breakdown in talks between the President and Chairman Kim. How do you plan to use your position as Acting Secretary of Defense to reassure our allies in the region? We know our great friends, the Republic of Korea and Japan, have a much more tense and complicated relationship with each other. For example, there were questions about them sharing non-combatant evacuation plans (NEO) plans with one another. What do you plan to do to work on bridging that gap?

Secretary SHANAHAN. Thank you for that question, Senator.



That gap could be bridged at—well, I'll say, at three different levels. There's a relationship level. I have relationships with the Defense Minister for Japan as well as the Republic of Korea. So, it's important that I play a role in keeping the two countries together there. Exercises that we'll do together. Technology that we'll develop together, particularly in the area of missile defense. As you well know, a sizable investment by the government of Japan is to put Aegis Ashore as well as develop other, I'll say, defensive capabilities in the event of an escalating situation on the Peninsula.

Senator DUCKWORTH. So, you had answered Senator McSally, saying that there would be—not be any degradation of our relationship and readiness as it pertains to military exercises. But, are you changing the nature of those exercises to, for example, simply being tabletop exercises or just computer exercises, as opposed to how they've been conducted in the past?

General DUNFORD. Senator, if you don't mind me taking that question.

Senator DUCKWORTH. Yes, of course.

General DUNFORD. The way I would describe it—and you're quite familiar with this—what we have changed—and I want to be clear—is, we've changed the method of training to focus on the mission-essential tasks that each of the levels of command needs to be proficient in. What we haven't changed is the outcome and the readiness to fight tonight. So, the way you characterize it is, in part, true, that some of our large-scale exercises are done, now, with simulation Command Post Exercise (CPX) and so forth. What's really important to highlight is that, at the battalion and the squadron level and below, there's been no changes to training and the ability of our men and women on the Peninsula to train in the integration of combined arms. We've made adjustments to our large-scale exercises. What we've done is—very quickly, I'll just try to highlight—we've shifted from certifying our readiness, based on the conduct of an exercise, to a much more complex system, that General Abrams and Admiral Davidson have developed, which identified all the mission-essential tasks for every level of command in making sure that we have a proven method of developing proficiency.

Another thing I can assure you is that, as soon as General Abrams and Admiral Davidson have any concerns about their ability to maintain readiness—and right now we're executing their plan—they know that they come right back to the Secretary and I, and we will work with the Koreans to make adjustments. But, I can assure you, from a military perspective right now, I am quite confident in our 2019 training plan, and confident that that will deliver the level of readiness that we have historically done—accomplished in large-scale exercises.

Senator DUCKWORTH. So, you're saying that, for brigade and below, or battalion and below, there's no change as far as the leaders that see what's happening?

General DUNFORD. That is correct. That's an important point, Senator. That is correct.

Senator DUCKWORTH. So, above brigade, that's where the changes—

General DUNFORD. That's where the—

Senator DUCKWORTH.—have taken place.

General DUNFORD.—changes are. In some cases, it's dialing down the volume of the exercises. As you know well, those exercises had two purposes; one was deterrence, one was proficiency. I'm confident right now that our exercise program does deliver the latter, proficiency in our mission-essential tasks.

Senator DUCKWORTH. Have those exercises taken into account the role of logistics in sustaining any type of a fight that we would have to engage in? I do think that we focus on what's happening on the Peninsula, but sustaining that fight long-term and then getting whatever we need, resources, there is a real challenge. The Pacific—I don't think people realize how vast the Pacific Ocean is.

General DUNFORD. Right.

Senator DUCKWORTH. Can you speak a little bit to the logistical challenges?

General DUNFORD. Senator, I can. In fact, this past year, we did what we call a Korea Readiness Review, and we played out the first 60 days of a Korean conflict, to include the detailed logistics planning that was necessary to support operations for the first 60 days. We, needless to say, learned a lot during that exercise, but our exercises absolutely include the logistics factors associated with our ability to conduct operations.

Senator DUCKWORTH. Thank you.

Our National Defense Strategy outlines a shift in primary focus from countering violent extremism to great-power competition. As Acting Secretary, Mr. Shanahan, what's, specifically, do you plan to do in areas perhaps less obviously impacted by either of these priorities? For example, SOUTHCOM or AFRICOM.

Secretary SHANAHAN. SOUTHCOM and AFRICOM are critical, in terms of defeating ISIS, dealing with regional threats. The Chairman, in his role as the integrated global campaign planner, we make sure that the risk in those areas, and the resources required to manage, are properly delivered, both to SOUTHCOM and AFRICOM.

Senator DUCKWORTH. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you.

Senator Cramer.

Senator CRAMER. Thank you, Mr. Chairman.

Thanks, to all of you, for your service and for your candor today.

Now, as I listened to Senator Fischer talk about and ask about nuclear modernization, I wanted to follow up on that. Then I heard Senator Blackburn talk about Space Force, and I wanted to follow up on that. So, I'm going to try to combine the two as quickly as I can, because I think there are some similarities.

I'll start with you, Secretary Shanahan. You know, many of the critics of nuclear modernization imply or state emphatically that we can't afford that, that it's unaffordable, that, in fact, we have to choose, in essence, between nuclear or conventional modernization. Yet, as I look at the budget, historically, and as I look at the budget, going forward, I see, for the most part, a peaking of modernization costs for the nuclear force at under 6 and a half percent in year 2029. Can we afford not to do it? I mean, it seems to me that that's a pretty efficient use of deterrence dollars, and I would

just like to hear you elaborate a little bit on whether we can afford it.

Secretary SHANAHAN. I'll ask David to talk about the affordability, but, as our competitors are building up their nuclear capabilities—this is setting aside budget—as our competitors are building up their nuclear capability, or modernizing, we should not unilaterally disarm. I think we have to start there.

Terms of timing of the budget, David, maybe you could speak to that.

Secretary NORQUIST. Sir, the—Senator, the numbers you used are correct. The peak is about 6 and a half percent. When you realize that in—normal maintenance runs 3 percent. Right? That's—that increase, for the amount of peace and stability that that deterrent provides us against what is probably the most catastrophic threat we can face, I think is a reasonable and sound approach, and something that you'd want to be very careful about changing, because of the stability that it provides globally and for the safety of the American people.

Senator CRAMER. Okay. So, then let's move to space, because I think I have a similar line of questioning as it relates to the affordability of it. I understand concerns. I could—it's easy to see why somebody that has a particular system within the Air Force might feel threatened by a competing—you know, competing for limited dollars. Secretary Shanahan, I think you've referenced it, at least to some degree, and I'd like to have you elaborate even a little more on the efficiencies that can be found. Clearly, space is a realm that we're competing in. Clearly, you're—we need to probably ramp up some of our capabilities there. As you pointed out earlier, you know, we need—we don't—we can't pick our parents. The resiliency isn't what it needs to be. Yet, maybe you could speak to—and maybe this would be a good one for the Comptroller, as well—to the efficiencies that will be found in the process of creating a Space Force as a sixth branch.

Secretary SHANAHAN. I think, on the efficiency side—and I've had conversations with Senator Reed on this subject, and many in Congress are experts in this area—we can't build a bureaucracy. In standing up the Space Force, we have a chance to build it from the bottom up. I think we'll build a bureaucracy if we build it from the top down. So, it's an opportunity to build it correctly.

The biggest effort needs to be at retiring the risk. We're too vulnerable, and, you know, it's a little bit like the nuclear conversation. I actually think it's going to cost us less. I mean, we've—I've had lots of arguments about whether that's true or not. I think, in—at the end of the day—I mean, what we hear quite a bit is, "This is change versus the status quo." This is a fundamental structural change. But, in that structural change, we'll get after reducing our vulnerability, and I really believe, the end of the day, have more capability and more money, terms of, we won't have spent as much.

Senator CRAMER. Well, and maybe speak a little bit to the realigning of existing space programs as part of that efficiency, if that makes sense.

Secretary SHANAHAN. Yeah. No, absolutely.

The—you know, when we talk about standing up a new service—this is a very small service. You know, you think about 15,000 to, you know, 18,000 people, so it's really not about a large group being consolidated. This is really talking about, How do you consolidate development efforts within the Department? So, how do we take what's being done—you know, the Army's going to undertake a brand-new modernization program. How do we combine that with work going on in the Air Force, with what's going on in the Navy, and then integrate it into all the combatant commands? This is really about doing it at a DOD level. These are, like, once-in-a-generation opportunities. Since we must address the contested environment, and we're going to make significant changes, why not do it at an integrated level for the Department instead of, you know, in each service?

Senator CRAMER. Well, your answers were as efficient as I expect the Space Force to be. Thank you very much.

Secretary SHANAHAN. Thank you.

Chairman INHOFE. Thank you.

The Minority Leader had a question, and has a scheduling problem, so let's go ahead and recognize him——

Senator REED. Thank you.

Chairman INHOFE.—and then we'll get to the rest of them, if that's acceptable.

Senator REED. Thank you, Mr. Chairman. You're very gracious. I appreciate it.

I'm trying to clarify the debate that Senator King initiated about projects at risk. I'm going to take the really, really dangerous path for a social scientist to try to break it down into simple numbers, particularly dealing with an engineer and a numbers person. Bear with me.

Let's say X equals the authorized MILCON for the last 5 years. That's the universe. Y equals the unobligated MILCON projects after September 30th of this year. X minus Y, or Z, equals those projects that are at risk of being captured for the wall, with some limited exceptions. No public housing, et cetera. You know what that Z is right now. You have the list. Is that correct, Mr. Shanahan? You have the ability to create the list.

Secretary SHANAHAN. Let me make sure I understand what Z is. I'm going to look at my friend, here.

Senator REED. Okay.

[Laughter.]

Secretary SHANAHAN. So, Z is——

Senator REED. Z——

Secretary SHANAHAN. We know what that universe of projects is.

Secretary NORQUIST. The—if the question is, What is the universe of either unobligated projects or unobligated projects after a certain date? Those are things that can be generated, yes.

Senator REED. Exactly. Those projects, with the exceptions you've mentioned—family housing and some others—are all subject to being taken away to fund this wall. They might not all be taken, but they are the projects at risk, correct?

Secretary SHANAHAN. That's the pool.

Senator REED. I would like that list today, Mr. Secretary.

[The information referred to follows:]

See Appendix A on page 560.

Secretary SHANAHAN. Sure.

Senator REED. Thank you very much.

Secretary SHANAHAN. Absolutely.

Senator REED. So, we'll be waiting. I'll be—my fingers—

Secretary SHANAHAN. Right.

Senator REED.—and we'll have that list. So we'll—everyone will know is at—what project they have to worry about—

Secretary SHANAHAN. Sure.

Senator REED.—going forward.

Secretary SHANAHAN. Okay.

Senator REED. Is that it?

Secretary SHANAHAN. Yeah. Thank you for the clarification.

Senator REED. That's a deal?

Secretary SHANAHAN. Yeah. That's a deal.

Senator REED. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator.

Senator Heinrich.

Senator HEINRICH. Can I assume that there are congressionally appropriated fiscal year 2019 projects that received military construction funding that are going to be in that list?

Secretary NORQUIST. Because of 5-year monies, yes.

Senator HEINRICH. Yeah. I can't tell you, Mr. Chairman, how inappropriate I think that is. Congress has the power of the purse. This is wrong. This is abusive. We should do something about it, all of us, because I guarantee you, if you let this happen, it will happen under the next President and the next President, and you won't always like how this money gets spent.

Acting Secretary, how much do you know about PFAS?

Secretary SHANAHAN. Well, I understand the nature of the chemical. So, when we talk about it being a fire retardant and being used over—extensively and militarily and commercially, and the issue of it being in the water supply.

Senator HEINRICH. So, have you had a chance to read the article in The New York Times this morning with the headline, "Pentagon Pushes for Weaker Standards on Chemicals Contaminating Drinking Water"?

Secretary SHANAHAN. Yeah, I haven't had a—

Senator HEINRICH. Okay.

Secretary SHANAHAN.—chance to read the paper.

Senator HEINRICH. I would ask that you read that.

Secretary SHANAHAN. Sure.

Senator HEINRICH. I hope it's highly inaccurate.

Secretary SHANAHAN. Okay.

Senator HEINRICH. The second clause in the first sentence says that the Pentagon is pushing the Trump administration to adopt a weaker standard for groundwater pollution.

Secretary SHANAHAN. Yeah.

Senator HEINRICH. Are you aware of any conversations going on in the Pentagon that would push for a standard that was not set by the best-available science?

Secretary SHANAHAN. Right. I—I'm not aware of any conversation. I shared with Senator Shaheen that I would follow up with

her, also, on this matter after I have a chance to investigate. I'll do the same with you.

Senator HEINRICH. I would deeply appreciate that.

The right way to do this is to follow the science.

Secretary SHANAHAN. Right.

Senator HEINRICH. The right way to do this is not to set a standard based on trying to limit liability.

Secretary SHANAHAN. Right.

Senator HEINRICH. I know that there is—we're going to have a big pricetag attached to this. There is no question about that. But, we're also going to have a very big human cost associated with this. I'll just give you one example.

Highland Dairy Farm was forced to close its doors in New Mexico after 25 years. That's a local business. For months, because of this contamination, they had to dump 12,000 to 15,000 gallons of milk per day. That's enough to give a carton at lunch to 240,000 kids. That is one example of how this is impacting the communities that have been enthusiastic about hosting our Air Force and other military establishments.

We are going to need to get in front of this. I don't think it has received adequate attention from the Pentagon. So, I look forward to working with you on that. But, we're at the front end of this, and there's going to be a lot of work that's going to have to go into trying to make this right for these communities.

I very much agree that our competitors are rapidly fielding new capabilities in the space domain, and that we need to move with a greater sense of urgency. I welcome the increased prioritization the Department has put on this area, and your focus on that. In terms of R&D as we stand up a Space Development Agency, one of the things I want to make sure we're not doing is reorganizing the existing pieces or reinventing the wheel. Things like the Space Rapid Capabilities Office, the Space Vehicles Directorate, the Advanced Systems Directorate, and many others, all are—play a critical role in researching, developing, and fielding our Nation's space systems. So, I would just urge you, as you look at that, and urge Secretary Wilson, Dr. Fred Kennedy, Dr. Mike Griffin, all to fully utilize the existing R&D assets as you stand up SDA so that we're not losing a few years of reorganization to make the whole system work better.

If you have any thoughts on that, I'd love to hear them.

Secretary SHANAHAN. No, I—when I think of the Space Development Agency, what I don't want it to be is a reorganization. The number-one element of the Space Development Agency that we need to take advantage of is large-scale systems engineering. How do we put together a national team so that we can do this at scale? There is incredible technology in the Air Force. We don't lack for talent. That is not our issue. We don't lack for money. The architecture that's required to be able to do this quickly so that we don't have to do it three or four times is really the problem we have to get after.

Senator HEINRICH. Thank you, Chair.

Chairman INHOFE. Thank you, Senator Heinrich.

Senator Jones.

Senator JONES. Thank you, Mr. Chairman.

Thank you all for being here today, and for the service provided to this country, and, to all those behind you, for their service, as well.

You know, as we approach these hearings, we hear a lot about the threat assessments and our nuclear capabilities and our hardware. Often, we overlook, sometimes, the very human element of this. As you probably are aware, this Committee's had a couple of hearings about some serious—I think, very serious ongoing health and safety problems with privatized housing on our military bases. Some of those have occurred in my State, at Maxwell Air Force Base and at Fort Rucker. I did not notice any language in either of your statements on this particular topic. Not surprising. I'm not criticizing that. But, I would be interested in hearing your thoughts on these issues and whether or not any of these issues are going to be resolved through the budget that you're proposing this year. I'll ask the—Secretary Shanahan and General Dunford—

Secretary SHANAHAN. Yeah. So, maybe I'll just start out with—it's an embarrassment where we are, so I'm not going to defend anything. It's a leadership failure. Once we get past that, it's, What are we going to do about it? I've had considerable interactions with the service secretaries, and they've assured me, for the time being, they'd like to run with the lead to address the problem. But, the conversations I've had with them are like this, "It's okay if we identify the problem. Let's make sure we put the resources that are required to be responsive in place." That's what I intend to follow up on. The second piece is, we can't fall into this hole again. What is the enduring issue? But, for the families that are in these—the servicemembers and their families, we need to rapidly address the problem. Let's make sure the resources are put in place.

Senator JONES. General?

General DUNFORD. Senator, first, I agree with the characterization of the problem, the Secretary's comments about the sense of embarrassment about the conditions that we found recently in family housing. The Secretary talked about it from a resource perspective. I can assure you that the leadership in the Department has gripped this issue, and the services have done things, like make sure that a leader goes and visits each and every individual's home so that we have a personal hands-on view of the conditions under which our men and women are living.

When the Secretary talks about a leadership challenge, it's very simple what happened. We contracted out for family housing, some years ago, and a gap grew between leadership and the contractor. That should not be the case. Leadership should be decisively engaged in the overseeing of those contracts, and, more importantly, should be decisively engaged in the challenges that our men and women have in family housing.

So, there is a resource issue that you spoke about, there is a human element to it, which is the men and women in those houses, but there's also the important leadership point that the Secretary mentioned, and that is, making sure that our leaders are, in fact, decisively engaged in all aspects of our men and women's lives; in particular, the housing.

Senator JONES. Great. Thank you both.

The resources—I'm assuming you're talking about our military and the various leaders on the bases getting to the bottom of this and trying to correct it. But, I'm hoping that the resources to actually correct these problems are going to be borne by these companies who are making the profits.

Secretary SHANAHAN. That's my concern, is—we'll identify the issues, and then we'll say we'll fix them, and it'll take too long. We need to fix them quickly. If it means getting extra resources, these companies, they need to find a way to do that.

Senator JONES. All right. Thank you. There's nothing in the budget, though, that we—that we're looking at to budget to actually fix the resources, as opposed to first looking to the contractors. Is that—would that be fair?

Secretary NORQUIST. We are, first, looking to the contractors to do it. We have resources in the budget, should the Committee want to address additional things, but the contractors are the one responsible for delivering the service at the rate they were funded.

Senator JONES. All right, great.

Secretary Shanahan, I'm really interested in additional funding in the budget for hypersonics and directed-energy programs. A lot of that work is going on in my State, up in Huntsville. Are you anticipating any new programs or more funding for existing programs in those areas?

Secretary SHANAHAN. Well, this budget has a sizable increase in hypersonics, and then we continue to double down on directed energy. Most of the focus in directed energy is to get a form factor so we can operationally deploy these concepts. But, you'll continue to see more and more funding going towards these technologies.

Senator JONES. Great. Well, thank you very much.

Mr. Chairman, thank you very much for the time.

Chairman INHOFE. Thank you, Senator Jones.

Senator WICKER.

Senator WICKER. Thank you very much.

General Dunford, thank you so much for being here, and thanks for dropping by and chatting with us the other day at my office.

Let me ask you about LHAs and LPDs. There's pressure to build a fleet better able to face Chinese and Russian precision missiles. The Navy, therefore, appears to be reducing its investment in warships, like LPDs, big-deck amphibs, and aircraft carriers, to free up money for more offensive weaponry on smaller surface ships, submarines, and aircraft. Additionally, moving the build of the new amphibious ships into the future would likely delay the Navy's ability to reach its goal of 38 amphibious ships from the current level of 32.

General, does the Marine Corps still have a stated need for 38 amphibious ships, as indicated in the Navy's force-structure assessment? How many amphibs do we have in the inventory today? Do you foresee eliminating Marine Corps core mission of amphibious operations at any point in the near future?

General DUNFORD. Senator, the requirement you identified, of 38, is still the requirement. I went back, after our conversation, to just check to make sure what the facts were. The requirement is 38. The 355-ship program of record that was submitted last year, I think they're working minor adjustments, but there's still a car-



dinal direction of the Navy. The issue with the amphib ships inside of this program was an issue of sequencing. They—the Navy put a higher priority on other platforms during this period of time, but did not walk away from the requirement or the long-term plan to have those ships in place.

Senator WICKER. Now, in terms of facing the Chinese and Russian threat, just inform the public, through the mechanism of this hearing, how the amphib fits into that.

General DUNFORD. Senator, it's critical for us to be able to project power in the context of China, and to seize—one of the traditional missions of the Marine Corps is seizing advanced naval bases. If you look at the island chains and so forth in the Pacific as platforms from which we can project power, that would be an historical mission the Marine Corps has, and one that is very relevant in the China scenario.

Senator WICKER. Projecting power with marines being transported by these amphib.

General DUNFORD. That is correct, Senator.

Senator WICKER. Right.

Secretary SHANAHAN, last year Congress appropriated considerable funds toward both LHA-9 and LPD-31, yet those two ships were not funded in this year's budget request. We just heard General Dunford's answer. So, why did the Department withhold funding for LHA-9 and LPD-31 in this year's budget? If both these ships are going to be built at some point, wouldn't you agree that we should fund them in the most cost-effective manner? Were both the Navy and Marine Corps in agreement with this decision to delay funding of the LHA-9 and LPD-31?

Secretary SHANAHAN. Yeah. Senator, what I recall, in the development of the plan, there was a—it was a sequencing, not a requirement, issue, in terms of—General, you know the—in terms of the—providing the availability. Yeah.

General DUNFORD. You know, Senator, the issue—when they looked at all the money that was available to the Navy, and they looked at the shipbuilding plan, they prioritized other platforms within this program over those two amphibious ships, and they moved those two amphibious ships outside the program without adjusting the requirement.

Senator WICKER. Okay. So, the requirement's there, but the subpart of my question about the efficiency of building them in the most cost-effective and efficient manner, would you—either of you care to comment on that? Wouldn't it make sense to do it in the most efficient manner?

Secretary SHANAHAN. It would.

Senator WICKER. What has been proposed is not necessarily that, is it?

Secretary SHANAHAN. I can't speak to the specific—

Senator WICKER. Could you, General Dunford?

General DUNFORD. Not with regard to what the difference would be in the cost of the ship or the efficiency within the program, as opposed to outside the program. I can't talk to that, Senator. But, we can get back to you on that specific question.

[The information referred to follows:]

General DUNFORD. This was answered directly with Senator Wicker's MLA on 18 March via phone call with CDR Hagerty, OCJCS/LA.

Senator WICKER. Okay.

Thank you very much. Appreciate it.

Chairman INHOFE. Thank you, Senator Wicker.

Senator—yeah, Senator Manchin. I believe—yeah, he was here first. Yeah. Senator Manchin.

Senator MANCHIN. Thank you, Mr. Chairman.

Thank all of you. I'm so sorry. We get—sometimes we get short-changed here and we have to go to different meetings. I'm handling an Energy meeting now. But, I just wanted to thank you all so much.

So, Secretary Shanahan, as you know, State-owned National Guard facilities that cause PFAS contamination do not have access to defense environmental restoration dollars like Active Duty bases do. Senator Gillibrand had a situation similar to what I had in Martinsburg. I think you're familiar with both of those. So, I think my question would be—National Guard units use the same fire-fighting foam that the Active components use. The training is often the same. It makes no sense for the National Guard to not have access to these dollars. So, would you be supportive of a similar amendment this year if we could get access to them?

Secretary SHANAHAN. Yes, I would.

Senator MANCHIN. Okay. You've been brought up to speed on that.

Secretary SHANAHAN. I'm not totally up to speed on that particular—

Senator MANCHIN. We'd love to—if we could—you tell us who to designate in your—on your staff, and we'd love to bring you up to speed, because it would be very helpful, because it's really been detrimental to the community.

The President's budget request is something I wanted to go over. A combination of emergency funds as well as other budget shell games. You gave us an \$8.6 billion—I think you all might have touched on this. What we're looking at is a holistic approach of how we're able to secure our border and, really, the immigration challenges we have. Do you all know how many of the—maybe you have this—as far as the DACA—some DACA children that are involved in military, do you have any idea? It would be helpful to us if we could find out how many of these young people are participating in defending our country that are asking to be considered as being available to be a citizen of our country. I think it would be quite appropriate for us to be able to know that.

[The information referred to follows:]

Secretary SHANAHAN. Based on security concerns, the Department of Defense (DOD) discontinued the MAVNI Pilot Program in 2016. However, DOD has continued to access existing MAVNI recruits already in the pipeline determined to be "vital to the national interest" for military service. Under MAVNI there were approximately 834 Deferred Action Childhood Arrival (DACA) recipients recruited.

Senator MANCHIN. Again, a big thing with me, when Senator—God rest his soul—Senator McCain was here, is the audit. You might have touched on this, and my question might have been asked. If there's something on the audit that you can give me an update on where we are and what your intentions are and how we

can get a complete audit of the Department of Defense, would be very, very, very helpful.

Secretary NORQUIST. Senator, I'm always happy to give an update on the audit for you.

Senator MANCHIN. Okay.

Secretary NORQUIST. So, we've started the second. We've completed the first-year audit. We received over 2,300 findings. We have corrective action plans that each of the services are developing to address those. The major areas of focus this year are, particularly, inventory, information technology, and real property. Those services will be executing those. The auditors have already started the second audit. They don't wait. They come right back and begin the next year. They'll be testing the progress on those and we'll—I think we do twice-a-year updates to the Committee staff, and we expect the reports to be completed and delivered to us, on the second-year audit, on November 15th.

Senator MANCHIN. The other thing I need to know and have more information, whoever would be responsible for, is the procurement, how we are—the procurements we handle, the changes that have been made in procuring, you know, all the different types of anecdotes and jokes have been made about how we buy things and what we pay for things, and things of that sort. I'd like to be able to go back to the citizens of West Virginia and say that we are investing the money properly. They have total support—they have given total support for the military. They want to make sure that we're using the resources in the most prudent way.

Secretary SHANAHAN. Senator, we'd be happy to put together for you to be able to share: here's how we've been saving money, here's where we've been saving money, here are our plans to save even more.

[The information referred to follows:]

Secretary SHANAHAN. The Department has identified \$7.7 billion within five areas of business operations to include: contract management, healthcare management, acquisition, information technology and business systems, and logistics and supply chain management. Reform efforts within the Department's five areas of business operations are focused on delivering optimized enterprise business operations to assure the success of the National Defense Strategy. Reform results (savings and investments) have been aligned to six reform levers and discretely accounted for within the budget. These levers are: better alignment of resources, business process improvements, business system improvements, divestments, policy reforms, and weapons system acquisition. The attached table is a summary of the \$7.7 billion savings accounted for in fiscal year 2020, by reform lever.

President's Budget FY 2020 Reforms		\$M
Reform Lever	Reform Examples within Lever	FY 2020
Better Alignment of Resources	Bottom Up Review	
Better Alignment of Resources	Next Generation Air Dominance (NGAD)	
Better Alignment of Resources	DHP Underexecution	
<b>Better Alignment of Resources Total</b>		<b>2,144</b>
Business Process Improvements	Contract Efficiencies	
Business Process Improvements	Process to Improve Expenditure Efficiency (PIEE)	
Business Process Improvements	IT Reform Issue Team	
<b>Business Process Improvements Total</b>		<b>2,310</b>
Business System Improvement	Automation & Equipment Improvements	
<b>Business System Improvement Total</b>		<b>251</b>
Divestments	Equipment Divestiture	
Divestments	Program Divestments or QTY Reductions	
<b>Divestments Total</b>		<b>2,949</b>
Policy Reform	Civilian Reduction/Realignment	
<b>Policy Reform Total</b>		<b>178</b>
Weapon System Acquisition Process	Contracting Improvements	
<b>Weapon System Acquisition Process Total</b>		<b>(101)</b>
<b>Grand Total</b>		<b>7,731</b>

Note: The Weapon System Acquisition Process amount includes a multi-year procurement reform savings of \$95M, and a Contracting Improvements cost of \$196M for a total investment of \$101M.

Senator MANCHIN. The other thing, Secretary Shanahan, is on the F-15X, if you could explain to me a little bit about that. If the experts in air combat in the Air Force identify a need for the F-15X, then what does OSD know that the Air Force doesn't about the future threat environment?

Secretary SHANAHAN. Oh, yeah, let me address that. So, my responsibility in pulling together the budget is to make sure we identify what are the threats and campaigns that we need to structure, develop, do force design and force development. The services, the joint staff, and the cost assessment and performance evaluation organizations then do the analysis. So, I can ask the Chairman on what the recommendation, in terms of mix of tactical aircraft.

General DUNFORD. Senator, I spoke at length with the Chief of Staff of the Air Force and others on this issue. So, I can give you the framework for making the decision.

Senator MANCHIN. Sure.

General DUNFORD. First, the primary aircraft of the future for the Air Force is the F-35. They're not walking back off that program or the importance of the F-35 program. But, as they looked over the next several years, they had two problems. They had, one, capability represented by the fifth-generation aircraft, the F-35, and then they had capacity issue, both numbers of aircraft plus the amount of ordnance that could be carried by those aircraft. Then they had the F-15C, which was aging out in the 2027-2028 period. So, within the next 5 or 10 years, the best solution was to go to the F-15—it's called EX—platform to backfill the F-15. Eventually, we'll get to an all-F-35 program. But, from both a cost perspective and a capacity perspective, this particular mix of aircraft, for the near term, was determined to be the right mix of aircraft. So, again, not walking off the fifth generation, but the near term, need that combination of a fourth generation and a fifth generation to generate capacity. I would add that the F-15X is slightly less expensive from—for procurement than the F-35, but it's more than 50 percent cheaper to operate over time, and it has twice as many hours, in terms of how long it lasts.

Chairman INHOFE. Thank you, Senator Manchin.  
Senator Kaine.

Senator KAINE. Thank you, Mr. Chair.

Thank you, to the witnesses, for your testimony and service.

I was late to the hearing today because Secretary Esper asked me to accompany him to Fort Belvoir to visit with military families about the housing issues. I've got to tell you, I did a visit on Norfolk Naval Base last Friday, so my expectations were pretty darn low, but I'm just stunned after talking to these families. The physical condition of their units—mold, water damage; poor, shoddy construction; poor, shoddy repairs—the lack of responsiveness, that they can't get response from the housing companies, that they're told, when they go to chain of command, "We don't do this anymore. We don't have any responsibility," that, when they do get a response, the quality of the repair work done both by the maintenance connected with the companies or contractors they come up with is atrocious.

But, then what I really heard about today was the number of people who are getting sick. Hospitalizations, families being forced to move out of units for significant amount of time as their units are being repaired so that they can be habitable, carbon monoxide, CO2 monitors going off, and people being told, "It's fine, you can move back in," but not being told what was wrong that was causing there to be CO2. A 10-year-old girl, mother just told me this at—within the last hour, missed 45 days of school last year—that's one-quarter of the school year—because of respiratory problems caused by mold in the unit.

I know that you're focused on this, but I just got to say, as the father of a marine, as somebody who is in a State that's heavily military, it was just absolutely depressing, the physical conditions. We've got to have both housing companies that will improve and a military that will fix. I have been pointing out, nobody enlisted to be a tenant of Lincoln housing. They enlisted to be a marine or an airman or -woman, or a soldier or a sailor. So, it's the military that's got to fix it.

I want to focus on the emergency issue. Secretary Shanahan, my reading of title 10, section 2808, is that the President can continue to use unobligated MILCON dollars for the duration of the emergency. So, having declared an emergency, unless Congress rebuts that, as long as the President says they're in an emergency, we basically are put—tapping the spigot into the MILCON budget for this budget year and future budget years until the emergency is declared over. Is that your understanding of the section?

Secretary SHANAHAN. Yeah, my understanding is, as long as there's a declaration of emergency, that is an authority that goes along with the declaration.

Senator KAINE. So, I just want to make plain to everybody what we're voting on this afternoon. We're voting on an emergency declaration that, until this President says there's not an emergency, it is a spigot tapped into the MILCON budget that can allow not only 2019 funds, but 2020 funds, 2021, future funds, to be pulled out of the MILCON budget, at the President's discretion—in my view, counter to the appropriations powers of Congress.

Secretary Shanahan, I wrote you a letter on February 15 asking you for information about MILCON projects—unobligated MILCON projects that could be affected by the President's emergency dec-

laration. My understanding is, the Committee staff has been repeatedly in contact with your office on the same thing. I was not here, but I understand that you committed to Senator Reed that you will get him that list today. Is that correct?

Secretary SHANAHAN. That is correct.

Senator KAINE. Okay. I got to tell you, I feel completely sandbagged.

Secretary SHANAHAN. Yeah.

Senator KAINE. The service secretaries have had that list. They've had the list. The service secretaries have been willing to share the list of their unobligated MILCON projects. So, you're going to send it to us today, after the vote on the emergency declaration?

Secretary SHANAHAN. Yeah.

Senator KAINE. Members of the Senate are entitled to know from where these MILCON monies will be pulled.

Secretary SHANAHAN. Right.

Senator KAINE. The fact that you come here today and say you'll now give it to us, right after the vote this afternoon? Your service secretaries and chiefs have had these lists, and, when we've asked them to send them to the Committee, they've said, "We can't, without the permission of the SECDEF." So, were they only available in the last half-hour?

Secretary SHANAHAN. No, the—well, first of all, Senator, I think the situation is being misrepresented. There has not been a deliberate attempt to withhold any information to this Committee.

Senator KAINE. Let me state this to you. The staff has been reaching out to the service secretaries and saying, "Send us the list of unobligated MILCON projects."

Secretary SHANAHAN. Right.

Senator KAINE. They have been told that they cannot do that—

Secretary SHANAHAN. Yeah.

Senator KAINE.—it has to come through the OSD.

Secretary SHANAHAN. Right. Right.

Senator KAINE. You're now going to produce that list today, after we have a vote at 1:45? This information is highly relevant to the Senators who are voting on this emergency declaration, because the question is, Should a President be able to declare a nonmilitary emergency—that's the what the military has testified—and then ransack the Pentagon budget for \$6.1 billion? I think we're entitled to know where the money might come from, especially since you've just said this is a multiyear declaration that opens up a spigot into the MILCON budget. I don't think you giving us that list today, after the vote—

Secretary SHANAHAN. Right.

Senator KAINE.—when we've been asking for it for a month, is a good-faith response to the requests of this Committee.

Secretary SHANAHAN. Yeah.

Senator KAINE. Now, tell me if I'm misrepresenting what's going on.

Secretary SHANAHAN. Throughout this process of the emergency declaration—and I just have to say, this is not something we do every day—from the very start, we have worked to be 100-percent transparent with Congress. 100 percent.

Senator KAINE. I agree you don't do an emergency declaration every day, but, every day, you have a list of unobligated MILCON projects, don't you?

Secretary SHANAHAN. Well, I think the list—we've always had a list of—that's how we keep book—I mean, it's not like we don't have a list of projects.

Senator KAINE. But, why wouldn't you—why wouldn't you—why wouldn't your services share those with the Committee—

Secretary SHANAHAN. Right.

Senator KAINE.—after continuing requests from the Committee?

Chairman INHOFE. Senator Kaine, your time is long expired. I know the passion that you feel right now, but we are adjourned.

Senator KING. Chairman, I had a couple of follow up questions.

Chairman INHOFE. Well, I know you did.

Senator KING. Are we adjourned?

Chairman INHOFE. You know, I have to say this about Senator King. I say this in front of all my—well, they're gone now. Of all the members, Democrat and Republican, you are the one who has been the most responsible, you've been to every single meeting. No one else can say that. I—even though it would be a violation of what we're going to do, if you want to have—I'll withdraw that just long enough for you to do one question. Only because it's you. Got it?

[Laughter.]

Senator KING. All right. One comment and one question.

The comment is, I want to complement Mr. Norquist for the work that he's done. I failed to do that before. Doing—working through the audit process for the Defense Department is a herculean task, and you were—embarked on it well and truly, and I compliment you on that. I qualify that a little bit by the invention of the phrase today “OCO for base.” That's like “rabbit for bicycle.” I mean, those two things aren't really consistent.

My followup question, Mr. Secretary. Based upon all this discussion—and I'm honestly confused. My father used to say, “You—the Pentagon is the only building in America you can drive straight toward and it keeps getting further away.”

[Laughter.]

Senator KING. I feel a little bit like that today.

Is it your testimony that 2019 military construction projects that were authorized and appropriated for are off the table, or are they only off the table if they're obligated before September 30th?

Secretary SHANAHAN. Right.

Senator KING. Fairly straightforward question.

Mr. Norquist, perhaps you can answer.

Secretary NORQUIST. Senator, it's the award day. What we are looking at in prioritizing is contracts that award later. So, if you—

Senator KING. So, if a—there's a project in the 2019 bill that hasn't been awarded, it's on the—it's potentially on the chopping block. Is that correct?

Secretary NORQUIST. That is correct.

Senator KING. Thank you.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you very much.

We are adjourned.  
 [Whereupon, at 11:51 a.m., the Committee adjourned.]  
 [Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR JAMES INHOFE

CYBERCOM AND NSA "DUAL HAT" RELATIONSHIP

1. Senator INHOFE. Secretary Shanahan, what are your views about maintaining or ending the "dual hat" relationship whereby the Commander of U.S. Cyber Command also serves as the director of the National Security Agency?

Secretary SHANAHAN. The Department is not at a decision point. Because of recent election-related operations and the publication of the new DOD Cyber Strategy, I deferred making a recommendation to the President in order to ensure operational lessons learned are accounted for and incorporated into the decision calculus.

QUESTIONS SUBMITTED BY SENATOR MIKE ROUNDS

SPACE DEVELOPMENT AGENCY

2. Senator ROUNDS. Secretary Shanahan, how will the Space Development Agency perform better than other currently established organizations?

Secretary SHANAHAN. Our adversaries are developing and deploying threats against our legacy space systems faster than we can field new capabilities. I established the Space Development Agency (SDA) as an expressly threat-driven organization, intended to define and create the Department's comprehensive next-generation space architecture. SDA will not wait for a validated requirement; instead, the agency will work closely with the warfighter and intelligence communities to quickly identify and evaluate existing and emerging threats, then proceed to design, build, and launch an ensemble of space-based capabilities to address those threats in less than 24 months. To meet such a compressed development schedule, the SDA will heavily leverage commercial space technologies and systems (i.e., satellites, payloads, ground control hardware and software, and user equipment). Additional tranches of capability will follow on 24-month upgrade cycles. This approach to rapid, agile acquisition has not been attempted on an architectural scale and will only be achievable by partnering with, and drawing from, the burgeoning commercial space sector.

3. Senator ROUNDS. Secretary Shanahan, what special authorities or exemptions will the Space Development Agency use that other space acquisition organizations cannot also be provided?

Secretary SHANAHAN. The Director, Space Development Agency (SDA) has the delegated authority to act the SDA's Senior Procurement Executive; is designated the Component Acquisition Executive (CAE) including exercise of Middle Tier Acquisition authority; has the authority to enter into transactions other than contracts, cooperative agreements, and grants carrying out basic, applied, and advanced research projects as well as certain prototype projects; will exercise available special hiring authorities including direct hire via limited-term appointments for highly qualified experts (HQE) and non-competitive short-term hires; will exercise approval authority over assignment of military personnel selected for duty at SDA, rate such personnel, and approve their rating chains; and will exercise original classification authority. While these authorities can and should be provided to other agencies (to enhance their operational tempo), the SDA is unique in that it was established explicitly to build out the next-generation national security space architecture, rapidly and efficiently. SDA will work to leverage commercially-derived capabilities (e.g., launch services, user radios and antennas, mass-produced satellites and payloads) to disincentive risk aversion and incorporate innovative upgrades in every generation of new capability. Legacy organizations have operated in a risk-averse environment for decades, and their policies reflect this. Starting a new organization, with a culture dedicated to speed, will drive the development of new tools on far shorter timelines than would otherwise be possible.

4. Senator ROUNDS. Secretary Shanahan, how does the Space Development Agency prevent duplication of effort amongst organizations?

Secretary SHANAHAN. Space Development Agency (SDA) will work with its partner organizations to ensure that its development efforts are complementary to their



work and not duplicative. SDA will be laser-focused on building a comprehensive, next-generation space architecture that addresses the DOD's Space Vision, comprised of eight essential capabilities described in the Department's August 2018 Report on Organizational and Management Structure for the National Security Space Components of the Department of Defense. These capabilities include:

1. Persistent global surveillance for advanced missile targeting,
2. Indications, warning, targeting, and tracking for defense against advanced missile threats,
3. Alternate positioning, navigation, and timing (PNT) for a GPS-denied environment,
4. Global and near-real time space situational awareness,
5. Development of deterrent capability,
6. Responsive, resilient, common ground-based space support infrastructure (e.g., ground stations and launch capability),
7. Cross-domain, networked, node-independent battle management command, control, and communications (BMC3), including nuclear command, control, and communications (NC3), and
8. Highly-scaled, low-latency, persistent, artificial-intelligence-enabled global surveillance.

These are critical, unmet capabilities. Were we to apply historical practices and procedures, acquiring and fielding space systems to address these capabilities might require a decade or more, during which time our adversaries will have developed and deployed new countermeasures against those systems. We no longer have the luxury to respond on timelines of this length. SDA will work to develop a unified architecture comprised of legacy capabilities (servicing primarily validated requirements) as well as an agile, responsive, next-generation architecture intended to pivot as necessary to meet new threats as they arise. This will greatly facilitate our ability to conduct future military operations against peer competitors at campaign scale.

5. Senator ROUNDS. Secretary Shanahan, has the DOD Cost Analysis and Program Evaluation office completed their analyses on whether projected Space Development Agency projects will be better than current plans?

Secretary SHANAHAN. Cost Analysis and Program Evaluation (CAPE) has completed its analysis of Space Development Agency (SDA) projects funded in Fiscal Year 2020 President's Budget Request. CAPE is analyzing SDA's proposed further projects as part of its broader review of the Department's portfolio of future space capabilities. This review will complete this summer, and the results will inform the fiscal year 2021 President's Budget Request.

6. Senator ROUNDS. Secretary Shanahan, who will establish the priorities of the Space Development Agency?

Secretary SHANAHAN. Currently, priorities for the Space Development Agency (SDA) will be established and executed by Director, SDA. These priorities will be informed by the Space Development Executive Board (SDEB) for SDA-related strategic policy, plans, program priorities, and investment areas and by the SDA Warfighter Council (WFC) on current and assessed multi-domain threats to national security for which next-generation space capabilities that would support the joint fight and on architectural vulnerabilities and potential adversarial attack surfaces.

#### QUESTIONS SUBMITTED BY SENATOR THOM TILLIS

##### CAMP LEJEUNE RECOVERY

7. Senator TILLIS. Secretary Shanahan, how much risk are we assuming by delaying and under resourcing recovery at Camp Lejeune and Cherry Point?

Secretary SHANAHAN. The operational and training impacts from the initial hurricane damage remain. Projects to repair or replace damaged headquarters facilities, railroad tracks, beach erosion, and roadways have been planned and designed. Since there is limited funding, most facilities scheduled for repair have been dried out, cleaned, and temporarily re-roofed. Trailers have been provided to house personnel that were displaced from the severely damaged buildings that could no longer be occupied. With the 2019 hurricane season starting June 1, the current conditions of many of the buildings on both bases creates high risk. Temporary repairs—such as tarps and plastic sheathing—will not withstand hurricane force winds and rains created throughout the upcoming seasonal change. Similarly, the temporary trailers are also not fabricated for these conditions.

8. Senator TILLIS. Secretary Shanahan, how long is it going to take to rebuild those bases?

Secretary SHANAHAN. If funded, repair and replacement construction projects will take approximately three years to fully complete.

9. Senator TILLIS. Secretary Shanahan, at the start of this hurricane season on June 1st, will our facilities and assets there be particularly vulnerable due to the state of reconstruction?

Secretary SHANAHAN. The buildings that were damaged during Hurricane Florence and were temporarily repaired (e.g. those that received a tarp roof) will be the most vulnerable to further damage. Additionally, Camp Lejeune's Onslow Beach and the roadways and railroad trestles could be further degraded.

10. Senator TILLIS. Secretary Shanahan, how long are we going to have to wait until Camp Lejeune regains baseline functionality?

Secretary SHANAHAN. In order to regain full functionality, all buildings and infrastructure will need to be either repaired or replaced. Once funding is provided, it will take approximately three years to fully complete.

#### CAMP LEJEUNE RESILIENCY

11. Senator TILLIS. Secretary Shanahan, how vulnerable are our Marine Corps facilities and assets in North Carolina to another disaster such as Hurricane Florence or Hurricane Matthew?

Secretary SHANAHAN. Most of the newer buildings were not significantly damaged during Hurricane Florence. Where possible, we are designing the repair projects to include these new standards and building materials in order to maximize resilience. Removing and replacing asphalt shingle roofs with standing seam metal roofs will be a main design change. The more durable metal roofs last longer and are able to withstand hurricane force winds and rain.

12. Senator TILLIS. Secretary Shanahan, what needs to be done to ensure that those installations are survivable and resilient in the future?

Secretary SHANAHAN. In addition to improving design standards and selecting the most durable building materials, as noted above, it is also important to fund preventive maintenance and select the best site to prevent flooding and seismic damage. These important factors are combined with the Commandant's Infrastructure Reset strategy, which reduces the facilities footprint and optimizes the resources necessary to ensure our installations remain a key enabler to generating and sustaining combat readiness.

As a matter of course, the Department's resilience initiatives address risks from its "all hazards" approach, allowing our installations to support critical missions regardless of the threat, including weather, climate, natural events, or direct attack (either physical or cyber). While climate is often the focus, the reality is our installations must be resilient in the face of a variety of threats and conditions. The Department views these threats to installations holistically and responds with a balanced approach. The Department considers resilience throughout the installation planning and basing processes. This includes consideration of resilience risks in installation master planning, training and exercises, management of natural resources, design and construction standards, utility systems/service, emergency management operations, and supporting analytical tools. DOD is including the forecasts for rising sea levels in planning future flood zones and elevations along coastal installations, as well as developing a tool for forecasting changes to major precipitation for inland areas.

---

#### QUESTIONS SUBMITTED BY SENATOR JACK REED

##### VULNERABLE INSTALLATIONS—CLIMATE CHANGE

13. Senator REED. Secretary Shanahan, the Department ignored a requirement in law for each service to submit their top ten list of most vulnerable installations to climate-related events, required by section 335 of the fiscal year 2018 NDAA. Despite the Commandant of the Marine Corps testifying to this Committee that Camp Lejeune will need billions of dollars to rebuild in the wake of Hurricane Florence, the section 335 report that was submitted failed to even mention the Marine Corps once. It also ignored the billions of dollars likely required to rebuild Tyndall Air Force Base. Do you commit to sending us the top ten lists that were required by section 335 of the fiscal year 2018 NDAA within a week?

Secretary SHANAHAN. The top ten list of most vulnerable mission assurance priority installations per Military Department is attached. The Marine Corps has no installations on the Mission Assurance Priority Installation list for reasons that we can share with Congress on a classified basis.

General DUNFORD. I defer to OUSD (A-S) to provide the appropriate response to this question.

#### OSD PERSONNEL CAPS

Section 143 of title 10, United States Code, limits the number of military, civilian, and detailed personnel supporting the Office of the Secretary of Defense (OSD) to 3,767. According to the report produced by the National Defense Strategy Commission, "Civilian voices have been relatively muted on issues at the center of U.S. defense and national security policy, undermining the concept of civilian control."

14. Senator REED. Secretary Shanahan, in your assessment, has the personnel cap on OSD constrained the ability of your office to execute its required responsibilities, including those mandated by Congress?

Secretary SHANAHAN. Secretary Shanahan, the Department is executing its required responsibilities within the personnel caps set forth in 10 USC 143. The manpower limit does constrain the ability to address new missions and emerging / expanding requirements in the future.

15. Senator REED. Secretary Shanahan, would a revision of this personnel cap facilitate more effective management and oversight of the Department of Defense?

Secretary SHANAHAN. The elimination of headquarters manpower caps in lieu of a more appropriate single constraint (e.g., cost limit) would greatly improve the flexibility of the Department to manage the total workforce. The policy of the Department, in line with 10 USC 129 and 129a, is to manage our workforce to requirement and cost. The constraints imposed by military and civilian limits inadvertently drives solutions toward contract support which may not be appropriate or the most cost effective solution. Additionally, any constraining provision would need to be adjusted periodically to account for emerging statutory or high priority requirements. However, the most pressing constraints for Office of the Secretary of Defense(OSD) manpower are the cost limits imposed by section 346(b) of the fiscal year 2016 NDAA (for fiscal year 2020) and section 931 of the fiscal year 2019 NDAA (for fiscal year 2021) and the contract support limit imposed by section 865 of the fiscal year 2017 NDAA (for all fiscal years through fiscal year 2023). These cost limits on OSD are impacting our ability to address new missions and emerging/expanding requirements.

16. Senator REED. Secretary Shanahan, are there specific OSD responsibilities that would benefit from an upward adjustment of the OSD personnel cap? If so, please provide some examples.

Secretary SHANAHAN. Yes, there are several emerging requirements that could benefit from an upward adjustment. The Department recently added resources to the Office of the Secretary of Defense(OSD) for establishment of the Secretariat for Special Operations (SSO) (supporting the Assistant Secretary of Defense (Special Operations & Low-Intensity Conflict)'s oversight of United States Special Operations Command), realignment of the Defense Innovation Unit to the USD(R&E), Military Health System Transformation, establishment of the Personnel Vetting Transformation Office (PVTTO), and establishment of the Joint Artificial Intelligence Center (among other increases). While these additions are being managed under the statutory caps (both manpower and cost), it is coming at a cost to other high priority areas in OSD because of the need to direct cuts to keep under the limits.

17. Senator REED. Secretary Shanahan, what other civilian personnel constraints would you recommend Congress reevaluate so to allow the Department greater flexibility to recruit, retain, and manage its civilian workforce more effectively?

Secretary SHANAHAN. I appreciate Congress' recognition of the Department of Defense's need for increased flexibilities to attract, hire, and retain its civilian workforce. The multitude of stand-alone civilian hiring and pay authorities granted by Congress has been effective; however, the Department seeks to implement a civilian personnel system that is simple and streamlined to improve our ability to focus on strategic workforce needs and efficiently acquire and retain the right talent. I recommend Congress consider streamlining existing authorities to reduce complexity and grant additional flexibility to enable the Department to respond rapidly to meet emerging mission needs with proven hiring and pay methodologies.

## QUESTIONS SUBMITTED BY SENATOR JEANNE SHAHEEN

## RUSSIAN ELECTION INTERFERENCE

18. Senator SHAHEEN. Secretary Shanahan and General Dunford, is the Department of Defense looking at potential Russian interference in the upcoming election in Ukraine and the European Union as a sign of new innovative techniques they may use toward the United States elections?

Secretary SHANAHAN. As part of the “defend forward” concept elaborated in the 2018 DOD Cyber Strategy, the Department of Defense is paying close attention to democratic elections overseas to monitor for new techniques that adversaries might utilize in future U.S. elections. The Department is also working closely with a number of partners and allies to learn lessons from recent elections, to improve partner’s abilities to defend their own networks, and to conduct combined Defensive Cyber Operations on partner networks.

General DUNFORD. [Deleted.]

## KC-46

19. Senator SHAHEEN. Secretary Shanahan, General Dunford and Secretary Norquist, earlier this month, I asked General Lyons, commander of TRANSCOM, about the delivery delays of the KC-46 and he expressed concerns about the additional costs to maintain at least 28 KC-135’s beyond their currently scheduled retirement. Do you share General Lyons’ concerns about the additional cost these delays will have on the Air Force?

General DUNFORD. Any additional cost incurred to maintain legacy tanker aircraft beyond their planned retirement dates is concerning. The KC-46A delivery schedule and the Air Force’s planned legacy tanker aircraft retirement dates are coordinated to provide the joint force with sufficient tanker aircraft capability and capacity throughout the transition time.

Secretary SHANAHAN, and Secretary NORQUIST. Yes. The Department is concerned about any additional costs that may be incurred to maintain the legacy tanker aircraft beyond their planned retirement dates. This includes both the KC-10 aircraft as well as the KC-135 aircraft. The KC-46A remains a key Departmental acquisition program and delivery of these aircraft is critical to ensure timely retirements of the legacy fleet. The Department plans to retire KC-10 aircraft beginning in 2020 with the KC-135 aircraft beginning in 2022 and we will continue to review the transition from legacy aircraft to KC-46 in order to minimize the need to sustain legacy platforms.

## PFAS CONTAMINATION

20. Senator SHAHEEN. Secretary Shanahan, has is the Department of Defense advocated for interim actively pursuing groundwater clean-up recommendations for perfluorooctanoic acid (PFOA) or perfluorooctanesulfonic acid (PFOS) standards substantially higher than those suggested by the Environmental Protection Agency as suggested by The New York Times article published on March 14? Does the Department of Defense support groundwater cleanup recommendations for PFOA and PFOS higher than EPA’s lifetime health advisory levels for these two chemicals? What is the contamination concentration the Department of Defense believes to be appropriate to trigger groundwater cleanup and remediation of PFOA and PFOS? Is it the position of the Department of Defense that concentration levels of PFOA and PFOS should be counted separately when determining whether cleanup of these two chemicals should begin?

Secretary SHANAHAN. The Department of Defense (DOD) supports the use of the Comprehensive Environmental Response, Compensation, and Liability Act’s (CERCLA) long-established, risk-based approach to determine when groundwater cleanup is needed. Using the Environmental Protection Agency (EPA) risk assessment process supporting this statute, the unacceptable risk to human health for cleanup of groundwater with perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) is approximately 380 parts per trillion (ppt). DOD uses EPA’s risk assessment guidance to determine whether to add the concentrations of PFOS and PFOA together to determine CERCLA responsibilities. Additionally, there is a Lifetime Health Advisory (LHA) of 70 ppt for PFOS and PFOA. The LHA applies to drinking water, but also considers all PFOS/PFOA exposures over a lifetime. Therefore, the LHA is not a cleanup level.

## QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

## ETHICS

21. Senator BLUMENTHAL. Secretary Shanahan, have you ever discussed any Boeing matters while serving as Deputy Secretary, or Acting Secretary of Defense?

Secretary SHANAHAN. I have recused myself for the duration of my service in the Department of Defense from participating personally and substantially in matters in which the Boeing Company is a party. I have provided written guidance to my staff, which is posted on a public website (<https://www.esd.whs.mil/FOID/Proactive-Disclosures/>), to ensure my staff identifies matters involving Boeing. My staff and I consult with and follow the advice of ethics counsel. I remain committed to abiding by the letter and spirit of my ethics agreement, and my previous promises to this Committee.

22. Senator BLUMENTHAL. Secretary Shanahan, have you ever discussed the advantages of Boeing products, or disparage Boeing competitors during your time at the Pentagon?

Secretary SHANAHAN. I have recused myself for the duration of my service in the Department of Defense from participating personally and substantially in matters in which the Boeing Company is a party. I have provided written guidance to my staff, which is posted on a public website (<https://www.esd.whs.mil/FOID/Proactive-Disclosures/>), to ensure my staff identifies matters involving Boeing. My staff and I consult with and follow the advice of ethics counsel. I remain committed to abiding by the letter and spirit of my ethics agreement, and my previous promises to this Committee.

## PRESIDENT TRUMP PROPERTIES

23. Senator BLUMENTHAL. Secretary Shanahan, how much money has DOD spent at Trump properties since the inauguration?

Secretary SHANAHAN. The Department of Defense has spent a total of \$147,607.38 at Trump-branded properties since the inauguration. These were all government travel credit card purchases by individual employees and members of the military. It is not Department of Defense policy to recommend that its personnel patronize any particular hotel or restaurant. Individual travelers are largely free market players in choosing these services. Individual travelers are personally responsible for paying the amounts due on their government travel credit cards and are provided a per diem lodging allotment and a meals and incidentals expense allotment with which to make these payments.

24. Senator BLUMENTHAL. Secretary Shanahan, how much money has DOD spent on military aircraft flights for the President to travel to Mar-a-Lago and other Trump properties?

Secretary SHANAHAN. The costs, flying hours and sorties associated with operating the presidential airplane for President Trump are comparable to what the program has spent every year for the past 5 years. Air Force financial management does not track the cost of each trip the President makes and cannot break out trips to Trump properties versus other presidential trips. The attached spreadsheet details costs per flying hour and sorties associated with the presidential aircraft for each calendar year since 2014.

### Costs, Flying Hours, and Sorties for Presidential Aircraft

VC-25 cost per hour metrics	2014	2015	2016	2017	2018
TY Reimbursement Rate CPFH (actuals)*	\$298,482	\$104,657	\$149,528	\$295,115	\$186,000
TY Operational CPFH**	\$486,957	\$220,771	\$359,733	\$500,478	\$348,979
TY Ownership CPFH***	\$491,889	\$222,031	\$599,462	\$627,824	\$394,776
REMIS Hours - Total	448	680	477	555	482
REMIS Sorties - Total	160	233	143	215	179

Source: AFCAP FY18Q4 data using AFTOC data

AFCAP/FMCYS does not have number of hours or sorties associated specifically with Mar-a-Lago or other Trump properties

#### Notes on various metrics

\*Reimbursement rates are calculated based on Financial Management Regulation guidance. They focus on cost of flying an additional hour and thus exclude many fixed costs. Reimbursement rates for DoD orgs includes fuel, spare parts, and contractor logistics support costs. The reimbursement rates here show actual cost in 2018 for this content, not the forecasted reimbursement rates used for billings. They are included here in the event that a metric based on marginal costs of another hour are desired.

\*\*Operational costs include all costs except hardware modification costs.

Operational costs include manpower, all unit operations costs (including fuel), all maintenance costs, sustaining support, software changes, and indirect costs assignable to VC-25. Operational costs are a superset of reimbursable rates.

\*\*\*Ownership costs are a superset of operational costs. They include all operational costs plus h/w modification costs.

25. Senator BLUMENTHAL. Secretary Shanahan, since 2016, have you personally spent any money at any Trump properties? Have any of your family members stayed at any Trump hotels?

Secretary SHANAHAN. I am not immediately aware of any family business transactions at Trump hotels, but I am confident my financial disclosures are all in accordance with Office of Government Ethics' regulations and standards of ethical conduct.

#### ANSWERING TO PRESIDENT TRUMP

26. Senator BLUMENTHAL. Secretary Shanahan, as Acting Secretary of Defense, do you feel that you are accountable to the President of the United States, or to the American people?

Secretary SHANAHAN. As Acting Secretary of Defense, I serve the American people as the principal assistant to the President in all matters relating to the Department of Defense and am subject to the direction of the President in accordance with the law.

27. Senator BLUMENTHAL. Secretary Shanahan, Attorney General Sessions and Secretary of State Tillerson were both fired for not following the wishes of the President when doing so would run counter to departmental policy or law. Do you commit to following the law, and upholding the Constitution, even if doing so would result in your dismissal?

Secretary SHANAHAN. Yes.

28. Senator BLUMENTHAL. Secretary Shanahan, as you are well aware, Secretary Mattis resigned in a letter to Trump that expressed his personal disagreement with President Trump's policies. How would you respond if you are given an order that you felt was not in the best interests of American national security or military personnel?

Secretary SHANAHAN. I will endeavor to provide the President the best advice I can on all matters pertaining to the Department in accordance with the law.

#### PRESS ACCESS AND RETALIATION AGAINST REPORTERS

29. Senator BLUMENTHAL. Secretary Shanahan, how often do you think is appropriate for the Pentagon to host a press conference? How often should the Secretary of Defense address the media?

Secretary SHANAHAN. I believe it is our duty to provide timely and accurate information to the American people, and I am committed to ensuring the Department regularly engages with the press. In addition to the Assistant to the Secretary of Defense for Public Affairs, who speaks with members of the press daily in both formal and informal settings, the Department of Defense has a team of public affairs professionals who are subject matter experts on their portfolios. The media have direct access to this team and they are available to the media on a daily basis, including nights, weekends, and holidays. As issues arrive, I address the media with timely information, and I frequently engage with the press during my regular activities as well as on official trips.

30. Senator BLUMENTHAL. Secretary Shanahan, do you commit to ensuring that media outlets will have full access to the Pentagon?

Secretary SHANAHAN. In keeping with the First Amendment, I am committed to ensuring that media outlets have and will continue to be granted full access to the Pentagon. Unlike many government agencies, the Department of Defense provides media representatives with unescorted access to our headquarters. We continue to issue Pentagon press badges that authorize such access, and our press corps has 24-hour access to our team of public affairs professionals. We respond to queries posed by members of the press from around the world on a daily basis. In addition, we continue to develop and publish transcripts for all public events such as briefings, honor cordons, and other open-press events involving our senior leaders. Media representatives are invited to travel with our leadership, including myself, within logistical limits. This includes my recent trip to the U.S. Central Command Area of Responsibility. Procedures for media access to the Pentagon remain the same as previous years. More information can be found on [defense.gov](https://www.defense.gov) via this direct link: <https://www.defense.gov/Newsroom/For-the-Media/>

31. Senator BLUMENTHAL. Secretary Shanahan, do you commit to preventing any retaliation against reporters who publish unfavorable stories?

Secretary SHANAHAN. My team and I am committed to preventing any forms of retaliation against reporters.

32. Senator BLUMENTHAL. Secretary Shanahan, if you do discover that press access is being restricted, and reporters are facing retaliation, what steps will you take to remedy this activity?

Secretary SHANAHAN. There have been no press restrictions put in place at the Pentagon and that will not change under my leadership. My team and I are committed to upholding this promise.

F-35

33. Senator BLUMENTHAL. Secretary Shanahan, why does this budget request cut the Marine Corps F-35Bs?

Secretary SHANAHAN. In its President's Budget (PB) for Fiscal Year 2020 submission, the Marine Corps chose to rebalance its aviation portfolio, deferring several F-35B aircraft into future Low Rate Initial Production contracts in order to balance concurrency management while taking advantage of emerging future technologies. The Marine Corps increased its procurement of F-35Cs over the Future Years Defense Program to 28 F-35Cs (up from 19 F-35s in PB19) to ensure the service would be able to transition its F-35C squadrons on schedule. This decision provides the Marine Corps flexibility as it continues to determine the best mix of tactical aircraft as operational requirements develop and change.

34. Senator BLUMENTHAL. Secretary Shanahan, I understand the budget request also includes 8 fourth generation F-15X aircraft in fiscal year 2020, and a total of 80 F-15X jets in the Future Years Defense Plan (FYDP) over the next 5 years. Who directed the investment in F-15X, and when was this decision made? Please elaborate on the reasoning for this decision.

Secretary SHANAHAN. The decision to include investment in F-15EX was the result of deliberations between the Air Force, Joints Chiefs, and the Office of the Secretary of Defense during the annual Program and Budget Review. Several studies and analysis dating from 2017 and 2018 have identified an enduring need for the capability and capacity that fourth generation aircraft provide across the range of military operations. Similar to the Department of the Navy's continued investment in the F/A-18E Super Hornet, the United States Air Force has an enduring need for the improved capability of the F-15EX above the baseline F-15's. One added fac-

tor in the decision was that for the F-15EX, the Operations and Sustainment costs are significantly less than that of a fifth generation aircraft.

35. Senator BLUMENTHAL. Secretary Shanahan, does your current plan to purchase F-15EX's effect DOD's previous validate requirement for 2,456 F-35s? If the validate requirement remains unchanged, please explain how purchasing additional F-15EX's could result in a cost savings?

Secretary SHANAHAN. Procuring F-15EX does not affect the F-35 program requirement. Even with the full F-35 program, we have an emerging capacity shortfall due to an aging 4th Gen fleet. The F-35 will replace aging F-16 and A-10 aircraft as planned. The F-15EX is the most cost-effective way to replace aging F-15C/D and close the capacity shortfall because 4th Gen aircraft are cheaper to operate in missions that do not require 5th Gen aircraft.

#### USS HARRY TRUMAN RETIREMENT AND NAVY INTERESTS

36. Senator BLUMENTHAL. Secretary Shanahan, what are the risks of retiring the USS *Truman* early and reducing our naval carrier fleet from 11 to 10?

Secretary SHANAHAN. Navy's 2016 Force Structure Assessment (FSA) increased the requirement from 11 CVNs to 12 CVNs to meet the increased warfighting response requirements of the Defense Planning Guidance Defeat/Deny force sizing direction. CVN 75 is planned for retirement to pursue a more lethal balance of high-end, survivable platforms (e.g. CVNs) and complementary capabilities from emerging technologies. Operationally, CVN 75's accelerated retirement is projected to be balanced with these accelerated portfolio options of distributed effects.

Persistent threat analysis and ongoing warfighting studies will continue to inform the requirements for specific battle force ships in the context of an evolving capability force mix, and the Navy is postured to respond to these studies. Reducing the naval carrier fleet without the complementary capabilities could result in reduced presence, a delayed warfighting response, and/or inability to deter a second opportunistic aggressor if engaged in a major combat operation.

37. Senator BLUMENTHAL. Secretary Shanahan, are you concerned that our near peer competitors—most notably China—may attempt to exploit our near-term carrier capability gap?

Secretary SHANAHAN. I do not foresee a gap in carrier capability or capacity. CVN 75 is currently scheduled for retirement in fiscal year (FY) 2024 and the Navy will maintain its capacity of 11 carriers until then. The \$3.4 billion in savings from the decision to cancel the CVN 75 refueling and comprehensive overhaul (RCOH) will be invested to pursue a more lethal balance of high-end, survivable platforms (including CVNs) and complementary capabilities leveraging emerging technologies. Operationally, CVN 75's accelerated retirement is projected to be offset by this portfolio of accelerated capability options. If these future force capabilities cannot be developed at a pace to mitigate the retirement of a carrier in fiscal year 2024, then we will revisit the decision and adjust accordingly.

38. Senator BLUMENTHAL. Secretary Shanahan, if this decision was made to increase investment, why does this year's budget request for Science & Technology (S&T) remain stagnant?

Secretary SHANAHAN. While Navy Science & Technology account increased only by 1.2 percent from fiscal year 2019, most of the cutting-edge investments to improve naval lethality are part of either the Navy RDT&E account, which increased by 9.4 percent, or Procurement which increased by 7.8 percent. Within that context, the Truman decision, along with a two-carrier buy, provided funds to heavily invest in future diversified strike options. Those National Defense Strategy-driven decisions represent a conscious paradigm shift in naval force structure procurement for more advanced and distributed naval strike options to increase lethality and maneuver. To reach that goal, the Department increased investments in advanced strike options, including \$3.6 billion in large, offensively-armed unmanned surface vessels; \$1 billion in extra-large and large unmanned underwater vehicles; and \$3.5 billion in advanced long range offensive and defensive munitions.

39. Senator BLUMENTHAL. Secretary Shanahan, does the President's budget require any additional resources to effectively address the submarine maintenance backlog? What additional funding or authorities may be necessary to get this timeline back on track? Will the Navy continue to award submarine maintenance availabilities to the private sector in order to alleviate these delays?



Secretary SHANAHAN. As described in the Chief of Naval Operations' Fiscal Year 2020 Unfunded Priorities List, a number of requirements have emerged since the President's Budget was formulated. First among these is \$653 million needed for submarine maintenance (\$290 million for USS *Boise*, \$306 million for USS *Hartford*, and \$57 million for USS *Columbus*).

The Navy will continue to consider both the public and private industrial base when scheduling the maintenance and modernization of its ships and submarines, however no further authorities are needed at this time to address the submarine maintenance backlog. The Navy is committed to working with the private shipbuilders to improve private sector cost and schedule as these are key to the Navy's ability to outsource future work. The Navy is reviewing contracting strategies, scheduling tools and better ways to share lessons learned from the public shipyards with private industry to improve private shipyard performance. The current plan is to award two SSN 688 class Engineered Overhauls in the next two fiscal years to the private sector to help reach the goal of eliminating submarine idle time by 2023.

#### CIVILIAN CONTROL OF DOD

40. Senator BLUMENTHAL. Secretary Shanahan, as Acting Secretary, what actions have you taken to ensure DOD is upholding the principle of civilian control? In your view, has DOD fully addressed the Commission's concerns regarding the erosion of civilian control?

Secretary SHANAHAN. Civilian leaders within the Department have exercised, and will continue to exercise, their appropriate oversight responsibilities in the development of defense strategy, policy, and planning. Civilian oversight of the military will continue to be vigorously exercised throughout the Office of the Secretary of Defense as long as I am the Acting Secretary of Defense.

41. Senator BLUMENTHAL. Secretary Shanahan, the Commission's report highlights the importance of civilian participation in discussions regarding force management and the prioritization of global challenges. What efforts have you made to identify and address instances where civilian voices were absent from critical discussions pertaining to national security strategy development and implementation—particularly in regards to global force management?

Secretary SHANAHAN. Civilian leaders within the Department have exercised, and will continue to exercise, their appropriate oversight responsibilities in the development of defense strategy, policy, and planning. In particular, the Office of the Secretary of Defense and the Joint Staff work closely together to implement National Defense Strategy priorities; civilian voices are a key component of this implementation in global force management.

42. Senator BLUMENTHAL. Secretary Shanahan, what has DOD leadership done to ensure civilian employees feel empowered to fulfill their responsibilities?

Secretary SHANAHAN. Civilian leaders within the Department have exercised, and will continue to exercise, their appropriate oversight responsibilities in the development of defense strategy, policy, and planning. I expect all Department of Defense civilian leaders to exercise these responsibilities on a daily basis.

43. Senator BLUMENTHAL. Secretary Shanahan, in November, the Commission testified that civilian personnel vacancies were a contributing factor to the imbalance of civilian control. What are you doing to recruit and retain civilian personnel? What is the current vacancy rate?

Secretary SHANAHAN. I am confident in the civilian leaders we have in the Department of Defense and am proud to serve with them. The White House Personnel Office handles civilian nominations for the Department of Defense. My office provides recommendations to the White House to fill vacancies, but ultimately, key leader personnel decisions reside in the White House.

44. Senator BLUMENTHAL. Secretary Shanahan, in your view, what are the long-term consequences of eroding civilian control of the military? How does an imbalance of civilian and military perspectives impact national security policy, and frame defense advice provided to the President?

Secretary SHANAHAN. If civilian control of the military was eroding it would have my full attention, but I do not share the perception of this erosion. The Department has been and is civilian-led and under that statutory organizational model, I enjoy a close working relationship with all levels of military command.

## QUESTIONS SUBMITTED BY SENATOR MAZIE HIRONO

## INDO-PACIFIC ALLIANCES AND PARTNERSHIPS

45. Senator HIRONO. General Dunford, in your written testimony you stated that the intended effect of China's efforts to deny access to the East and South China Seas is to weaken our alliance structure in the Indo-Pacific. Based on that, what is the current state of our alliances and partnerships in the Indo-Pacific, specifically the military-to-military relationships?

General DUNFORD. Senator, in an update to the last 12 months, overall I assess China's behavior in the East and South China Seas has actually strengthened alliances and partnerships in the region. For some of the littoral states, China's militarization of the South China Sea and its challenges in the East China Sea have actually produced the opposite of China's intended effect—bringing the threat “closer to home” and hence the stronger mil-mil ties with the United States as a counterweight. However, those countries which have significant political and economic ties with China still have to tread carefully to maintain those interests.

46. Senator HIRONO. General Dunford, how resilient are our allies and partners in the face of China's economic and military growth?

General DUNFORD. Senator, each of our allies and partners has their own sovereign decision and interest vis-à-vis China, and each has varying levels of economic and military capability and capacity to resist Chinese coercive influence. While some are better positioned economically and militarily, we cannot take their resilience for granted because China is actively pulling economic and military levers to negatively tip the scale towards their favor—interfering in allies and partners' domestic national choices. One-Belt One-Road is but one example of this economic-security fusion. We must offer stronger incentives across all elements of national power, but especially in the economic realm, to effectively bolster and complement the security support we provide to allies and partners to resist China's increased influence. We have to help allies and partners resist this infringement on their sovereignty and the abuse of the global norms. One example is strengthening regional institutions such as ASEAN, the ASEAN Defense Ministers' Meeting-Plus, and the ASEAN Regional Forum. Over the last year, we have seen that countries across the region are becoming more aware of the threat Beijing's economic policies pose. Malaysia announced the cancellation of three projects worth \$22 billion in August 2018, declaring that it could not afford Beijing's projects, decrying the corrupt practices associated with the projects, and criticizing the loans as a “new version of colonialism.”

47. Senator HIRONO. General Dunford, what is the U.S. doing to support our allies and partners in the region to bolster our alliance structure?

General DUNFORD. Senator, we have been, and will continue to resist coercive behavior and publically condemn maligned activities by all actors. Our allies and partners are encouraged by U.S. willingness to “have skin in the game”—that is by sharing mutual risks, our commitment to support international laws and norms, and our willingness to speak out against destabilizing behavior. At the strategic level, the most effective action we can do to support allies and partners is to let them know that the United States military is combat credible and is here to stay in the Indo-Pacific. These efforts have provided our allies and partners the space to push back against this oppressive influence. At the operational level it is to enhance our interoperability throughout the Indo-Pacific region. Expanding our interoperability will ensure our respective defense enterprises can work together effectively during day-to-day competition, crisis, and conflict—if it is imposed upon us. Increasing interoperability also includes ensuring our military hardware and software is able to more easily integrate with those of our closest allies and partners, offering financing and sales of cutting-edge U.S. defense equipment to security partners, and opening up the aperture of United States professional military education to more Indo-Pacific military officers. As such, we have strengthened our alliances with Australia, Japan, the ROK, and the Philippines, while maintaining our long-standing alliance with Thailand. These alliances are indispensable to peace and security in the region and our investments in them will continue to pay dividends far into the future.

## MILITARY HOUSING AND CHILD CARE

48. Senator HIRONO. Secretary Shanahan, as you are aware, there was recently a tragedy in Hawaii where a 7-month old child passed away at what appears to be an unlicensed home day care in military family housing. While there are several investigations ongoing in that particular case, it raises a broader policy issue. Most enlisted servicemembers are under the age of 35 and many have families with

young children. Nothing is more nerve-racking for a parent than having to find safe, affordable child care for their children, especially when moving to a new duty station. Yet as the Committee has learned during the hearings on the privatized housing initiative and the tragedy in Hawaii, there are far too few child care slots available in military Child Development Centers (CDCs) for the families who need them. Many common-sense measures such as constructing new CDCs, streamlining hiring processes for child care workers, and increasing the transparency of wait lists have been proposed to address this issue. Will you commit to working with the Committee to address access to safe, affordable child care for military families as a readiness and retention issue?

Secretary SHANAHAN. We are a young force with young families and we know that our servicemembers need to rely on safe, quality child care in order to focus on the mission. The Department of Defense has long been recognized as a model for child care in the United States; our programs provide care to more than 160,000 children on a daily basis. We fully understand that even with these numbers, many military families are challenged in finding access to child care. Unfortunately, there is no “one size fits all solution” for what is a national challenge, not just a military challenge. My office and each of the Military Departments are exploring a number of solutions.

49. Senator HIRONO. Secretary Shanahan, does the fiscal year 2020 budget request of over \$700 billion for the Defense Department include appropriate resources to address the lack of sufficient access to this critical service for our military families?

Secretary SHANAHAN. The Military Services indicate that they have reviewed their budgets and adjusted where needed to ensure sufficient funding for children, youth, and family programs.

---

#### QUESTIONS SUBMITTED BY SENATOR MARTIN HEINRICH

##### MILITARY HOUSING

50. Senator HEINRICH. Secretary Shanahan and General Dunford, the service chiefs agreed last week that there is value in having a uniform building code for military housing. Do you agree?

Secretary SHANAHAN. To the maximum extent practicable, the Department of Defense (DOD) has required uniform building codes in the housing privatization agreements. When the Military Departments developed their agreements with the housing privatization partners, they required that the privatized housing adhere to DOD Unified Facilities Criteria (UFC) for fire protection and housing space standards, as well as state and local building codes (unless overridden by DOD UFCs), in addition to installation or Military Department specific requirements such as installation architectural standards.

General DUNFORD. Nothing is more important than taking care of our members and their families and as such, I agree with the service chiefs, there is definite value in having a uniform building code for military housing. My staff and I will continue to work with the services to ensure our military families receive the housing they deserve.

##### HYPERSONICS

51. Senator HEINRICH. Secretary Shanahan and General Dunford, I am pleased to see \$2.6 billion budgeted for hypersonics. Sandia National Laboratories has played a critical role in developing this technology over decades. I've heard from our national labs how valuable it is to co-locate the R&D and manufacturing of these systems. Do you agree?

Secretary SHANAHAN. The National Labs, Government Labs, Federally-Funded Research & Development Centers and University Associated Research Centers have played a critical role in the development and demonstration of foundational hypersonic concepts and technologies. Much of the intellectual capital for the vehicle designs, and even some of the more advanced manufacturing techniques, resides within this government research and development ecosystem. We need to make sure that this core intellectual horsepower continues to focus on rapidly evolving our technology to address our most difficult challenges moving forward. We must accelerate the rate at which we transition from technology development and prototype demonstration to production of weapon systems. We are creating a highly collaborative environment between industry and government to accomplish this acceleration. Industry is essential to being able to produce weapon systems with the com-

plexity and scale necessary to field warfighting capability. We must capture essential knowledge and transfer it to industry for production of the first generation of weapons while enabling the Labs to work on the next generation of capability.

General DUNFORD. Co-location of research and development with manufacturing could result in efficiencies when it comes to getting new technologies into the manufacturing process. This is by no means a requirement, with today's world of technology and data transfer capabilities, information can be readily available in just about any location with Internet access. Contract selection should be based on considerations for how to develop the most effective systems, while being good stewards of our budget. It is possible that person to person contact can provide synergy and efficiencies that are difficult to quantify. However, it is also possible that a location-centric approach could increase costs over prioritizing allocation of available funding towards R&D.

52. Senator HEINRICH. Secretary Shanahan and General Dunford, do you think it is worth encouraging an ecosystem where the manufacturing and the core expertise for these systems exist together?

Secretary SHANAHAN. I do not think that colocation of core hypersonic technical expertise with manufacturing is necessarily the most effective or efficient model for accelerating and sustaining the fielding of warfighting capability enabled by hypersonics. The expertise associated with some of the more advanced technologies may reside within our government research and development ecosystem, but that ecosystem is not as well suited as industry for production of large quantities of complex weapons systems. As such I think we need to work across our national infrastructure to optimize our path forward.

General DUNFORD. I am an advocate of co-locating R&D and manufacturing facilities when it provides the warfighter an advanced capability fielded in the shortest amount of time and is also cost effective. There are potential areas where a geographically co-located ecosystem could play an important role in the cost, ease of communications and quality of the manufactured product; however, in today's highly-connected internet-of-things world geographic differences within the ecosystem could have less impact than they have had in the past on collaborations between design, manufacture and fielding activities, and are best determined on a case by case basis.

53. Senator HEINRICH. Secretary Shanahan and General Dunford, the 2019 Missile Defense Review acknowledged emerging threats like cruise missiles and hypersonic weapons, but the report did not propose any new creative solutions or acceleration of efforts to address them defensively. Do you believe we are acting with the right sense of urgency to counter those threats on the defensive side?

Secretary SHANAHAN. In fiscal year 2020, the Department is continuing investments in Missile Defense Agency (MDA) defensive concepts. MDA is identifying the architecture requirements necessary to design an effective hypersonic missile defense system that can be integrated into the current ballistic missile defense system. Attributes of this architecture will be sensors for detection and track, battle management, command and control systems, and weapons for hypersonic missile intercept. The department is investing in technologies to mature promising space and ground sensor concepts and kinetic and non-kinetic intercept concepts through industry engagements.

General DUNFORD. Yes—President's Budget 2020 is consistent with the National Defense Strategy and the 2019 Missile Defense Review (MDR). The Missile Defense Defeat Enhancement (MDDE) in 2018 provided significant investment and the Department is sustaining critical near-term layered capabilities and initial investment in studies. The MDR directs researching improvements for timely warnings on hypersonic and advanced cruise missiles launched at the U.S. Homeland. Future investment recommendations will be balanced by additional insights drawn from an MDA Defense Against Hypersonic Threats (DAHT) Analysis of Alternatives (AoA) and an MDR directed follow-on analysis. MDA's DAHT AoA investigated a wide range of options.

54. Senator HEINRICH. Secretary Shanahan and General Dunford, does the budget invest in those specific defensive capabilities to counter these threats? If so, please identify them for the Committee.

Secretary SHANAHAN. The Missile Defense Agency Budget request for fiscal year 2020 includes \$157.4 million for Hypersonic Defense to continue to assess architecture alternatives and provide recommendations for future Ballistic Missile Defense System configurations to keep pace with this threat. The budget request also invests \$38 million for advanced targets to begin testing against this threat. The Agency

is investing \$116 million for Directed Energy to include a laser scaling effort that will develop scalable, efficient and compact high energy laser components for integration into high power systems; and \$132 million for Discrimination Sensor Demonstrator Development to provide an airborne sensor to detect and discriminate advanced threats. The Space Development Agency (SDA) budget includes \$20 million to foster development of a Department-wide Space Sensor Layer effort (referred to as Hypersonic and Ballistic Tracking Space Sensor (HBTSS)) and \$30 million to do an assessment of architectures for a discriminating space sensor and a Space Based Interceptor.

General DUNFORD. The Department is requesting \$157.4 million in fiscal year 2020 for hypersonic defense to move from concept development to technology risk reduction. The fiscal year 2020 plan includes software modifications to current BMDS assets and further defines the architecture for future capability demonstrations. In addition, the Department is requesting \$49.8 million in fiscal year 2020 for the Space Development Agency to pursue a proliferated Low Earth Orbit (pLEO) constellation. One goal of this constellation is to provide the space sensor capabilities for missile warning and missile defense.

55. Senator HEINRICH. Secretary Shanahan and General Dunford, what specific defensive technologies and systems should the Committee be investing in to help counter cruise missiles and hypersonic weapons?

Secretary SHANAHAN. Investments in space based sensor technologies; kinetic interceptor technologies to include advanced sensor, propulsion, material science and guidance and control technologies; non-kinetic directed energy defeat concepts to include cyber, high powered microwave systems, and high energy lasers; artificial intelligence for advanced command and control in conditions of high uncertainty, and electronic warfare will be essential technologies for defeat of advanced cruise and hypersonic missile threats.

General DUNFORD. The fiscal year 2020 budget submission requests accelerated funding (\$428 million) for the Army's new Patriot radar (Lower Tier Air and Missile Defense Sensor (LTAMDS); rapid acquisition Maneuver-Short Range Air Defense (M-SHORAD) for near-term air and cruise missile defense, and the restructuring of the Indirect Fire Capability (IFC). The Navy PB2020 budget invests in SM-6 and Air and Missile Defense Radar (AMDR). The SM-6 RDT&E of \$116 million budget includes initial funding for rapidly developing a new Block 1B interceptor to extend the range of the current system. This would increase the SM-6 capabilities to air defense, ballistic missile defense, and anti-ship strike. In addition, the Department is requesting \$149.8 million in fiscal year 2020 for the Space Development Agency to pursue a proliferated Low Earth Orbit (pLEO) constellation. Finally, the Department is developing a Low-Power Laser Demonstrator to evaluate the technologies necessary for mounting a laser on an unmanned airborne platform to track and destroy missiles in their boost phase.

#### ARTIFICIAL INTELLIGENCE

56. Senator HEINRICH. Secretary Shanahan and General Dunford, part of the challenge we are going to experience with integrating Artificial Intelligence into mission sets is that we need a deeper foundation of people who understand the technology and the importance of good, useable data. Do you believe DOD recruitment efforts are doing enough to target individuals with that kind of skill set?

Secretary SHANAHAN. In both our enlisted and officer corps, the Services select and train individuals to meet future and current manning requirements. This includes specialized programs like Artificial Intelligence and Cyber. Officers are educated from a variety of outstanding colleges and universities around the country through the Senior Reserve Officer Training Corps, while others will attend the Military Service Academies. This education provides new officers with a solid foundation and the latest information available in these specialized areas. The Military Services also collaborate with industry to further develop the required skills of these officers. Our enlisted force is selected from among the best and the brightest of today's youth. The Military Services' selection and classification process uses a number of tools to further identify individuals with the greatest potential and aptitude to do well in these specialized areas. These servicemembers are selected and trained to meet the needs of their respective Military Service. Our civilian workforce also helps to round out and fill the needs of the Department for such skill sets.

General DUNFORD. Yes. The Department is not complacent and across the government we need to synch efforts to attract the right people. The Services are recruiting skills sets that have the greatest potential for understanding the Artificial Intelligence (AI) technology. The military personnel policy changes within the 2019

NDAA and the service academies commitment to producing future leaders with computer science and technical education are among the many efforts the Services are implementing to produce the right skill sets. In addition to recruiting efforts, Services internally train enlisted personnel who have demonstrated aptitude in cyber and other technical fields and endeavor to retain this talent by increasing bonuses in those highly technical areas. The Services have routinely collaborated with industry leaders in many technical fields to build critical skills within our current force. The civilian workforce also helps to meet Department needs, and I defer to Civilian Personnel leaders to address how the civilian workforce is employed.

57. Senator HEINRICH. Secretary Shanahan and General Dunford, is there value in the services assigning someone specifically for recruiting individuals in this area?

Secretary SHANAHAN. I believe each Service is best positioned to make that determination based on its own needs and requirements. The Military Services currently have the authority and resources to pursue that effort.

General DUNFORD. Yes. There is value in assigning specific individuals to recruit in AI. Services have seen success in using those already in a particular field to recruit additional talent in that same field and the Services are best positioned to determine those needs. For example, the Navy uses nuclear trained sailors and officers to recruit others into the field of this high demand/low density area. Special Operations, Cyber, and Linguists have all been used to recruit personnel within their respective areas of expertise. In this increasingly challenging recruiting environment, we appreciate the additional authorities granted in the NDAA as we consider initiatives to attract and retain the right talent.

#### BREAKOUT OF DOD AI FUNDING

58. Senator HEINRICH. Secretary Norquist, the fiscal year 2020 budget request includes a \$927 million investment in Artificial Intelligence, with money directed toward the Joint Artificial Intelligence Center (JAIC) and Advanced Image Recognition (Project Maven). Can you please provide the breakdown on how the \$927 million will be allocated?

Secretary NORQUIST. The Department's total Artificial Intelligence (AI) request is classified and can be provided under separate cover upon request. The \$927 million request highlights three major AI efforts. The funding allocation is detailed in the table below:

Effort	Appropriation	Budget Activity	Program Element	FY 2020 Request (\$M)
Joint AI Center (JAIC)	RDT&E, DW	04	0604532D8Z	209
	O&M, DW	04	0604532D8Z	4
	O&M, DW	04	0604532K	55
				<b>268</b>
Project Maven	RDT&E, DW	06	0305245D8Z	<b>250</b>
DARPA AI	RDT&E, DW	01	0601101E	141
	RDT&E, DW	02	0602303E	204
	RDT&E, DW	02	0602702E	27
	RDT&E, DW	02	0602715E	11
	RDT&E, DW	02	0602716E	17
	RDT&E, DW	03	0603286E	10
				<b>409</b>
Total				<b>927</b>

59. Senator HEINRICH. Secretary Norquist, one impediment to accurately evaluating funding levels for AI is the lack of a stand-alone AI Program Element (PE) in DOD funding tables. As a result, AI R&D appropriations are spread throughout generally titled PEs and incorporated into funding for larger systems with AI components. As the lead coordinating entity for AI, do you have visibility on the Department of Defense's total investment in AI, including Services and components, and can you provide that breakdown to the Committee by PE and amounts?

Secretary NORQUIST. The Department is working to more rigorously identify AI funding in its databases for future budget requests. For fiscal year 2020, the Department's data call likely captured most of the ongoing AI efforts, but a complete report of funding by program element is not available. While some AI efforts are large, stand-alone projects, such as JAIC and Project MAVEN, the vast majority are embedded in weapons and business systems. Identifying the cost of these efforts within larger systems will always have an element of uncertainty.

---

QUESTIONS SUBMITTED BY SENATOR ELIZABETH WARREN

DEFENSE FUNDING

60. Senator WARREN. General Dunford, in the course of your testimony, you said the following with regard to defense funding: "We have routinely not had a budget at the beginning of the year has delayed new starts and it's been incredibly inefficient in how we prioritize and allocate resources throughout the year and the three adjectives I use and I think they are all important is predictable, sustained and adequate levels of funding and if we had the entire fiscal year we could be the good stewards that you should hold us accountable for being." With the understanding that predictability, sustainment, and adequacy are all important, please prioritize among those. Which one is the most important and why?

General DUNFORD. Predictable, sustained, and adequate funding are interdependent variables and are equally necessary to meet NDS priorities. All three attributes translate to budget stability, which the Department requires to build a more lethal, resilient, agile, and ready Joint Force. Predictable funding builds readiness and supports effective planning—both for the military and the Industrial base. Sustained funding ensures we can modernize and invest for the future. Adequate funding ensures the Joint Force can balance building capacity to "fight tonight" while also ensuring the ability to deter, defend, and, if necessary, defeat future threats posed by near-peer adversaries.

CLIMATE CHANGE

61. Senator WARREN. General Dunford, the unclassified worldwide threat assessment by the Director of National Intelligence said: "Global environmental and ecological degradation, as well as climate change, are likely to fuel competition for resources, economic distress, and social discontent through 2019 and beyond." That assessment also said: "Damage to communication, energy, and transportation infrastructure could affect low-lying military bases, inflict economic costs, and cause human displacement and loss of life." Do you agree with the Intelligence Community's assessment?

General DUNFORD. Yes.

62. Senator WARREN. General Dunford, do you believe that climate change is a national security threat to the United States?

General DUNFORD. Climate change is a national security issue. The effects of climate change such as shortages of water, food, or migration can be sources of conflict.

63. Senator WARREN. General Dunford, do you believe that the Department of Defense can and should be doing more to address the threat of climate change? Please explain.

General DUNFORD. The U.S. military is routinely tasked to assist with humanitarian assistance and disaster relief.

64. Senator WARREN. General Dunford, do you believe that the combatant commands should incorporate climate change into their operational plans and planning processes?

General DUNFORD. The joint staff and combatant commands already take the effects of climate change into account when planning. Climate change is one of many factors the Joint Force considers when planning for future military operations.

65. Senator WARREN. General Dunford, does adapting to climate change have any negative impact on the readiness of our military to address the five challenges (Russia, China, Iran, North Korea, and violent extremism)?

General DUNFORD. Responding to any conflict or unanticipated requirement impacts readiness and affects our ability to respond to other challenges.

---

## QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

## PFOA/PFOS CLEAN UP FOR NATIONAL GUARD

66. Senator MANCHIN. Secretary Shanahan, as you know state-owned National Guard facilities that are associated with PFAS contamination of drinking water in their communities do not currently have access to Defense Environmental Restoration Program (DERP) dollars like their Active Duty counterparts do. Last year Senator Gillibrand, who had similar problems with National Guard facilities in her state, proposed an amendment in the NDAA to change this and allow National Guard facilities to utilize DERP funds instead of being forced to take from their Operations and Maintenance (O&M) funds. This amendment was stripped prior to the final version of the NDAA. Obviously, environmental cleanup is not the purpose of O&M dollars. Our national guards units use the same firefighting foam and train the same way as their Active Duty counterparts for ease of integration and to maximize the effects of the total force. Would you support the passage of an amendment proposed again this year to allow National Guard facilities to access DERP dollars for PFAS and any associated contamination cleanup?

Secretary SHANAHAN. We reviewed the authorities for use of Defense Environmental Restoration Program funds at State Air National Guard (ANG) facilities for remediating PFOS/PFOA. While these funds are not available for use at State owned or operated ANG facilities for cleanup activities, Operation & Maintenance ANG funds are being used, making a change unnecessary. The Air Force has programmed funds in the Air National Guard Operation & Maintenance account for the ANG to meet their Comprehensive Environmental Response, Compensation, and Liability Act responsibility.

## F-15EX AND F-35

67. Senator MANCHIN. Secretary Shanahan, in February the Secretary of the Air Force Heather Wilson admitted that the Air Force's 2020 budget submission to the Department of Defense did not include any F-15EX aircraft procurement. Further, she stated that the F-15EX procurement was added by the Office of the Secretary of Defense (OSD) for the final department budget. Further, recent OSD budget briefs to Congress have referenced results of a comprehensive study that explains the requirement for a fourth generation fighter to fill capacity and operational cost gaps, but they can't share much of the details due to claims of classification. If the experts in combat aircraft and associated force presentation, the Air Force, didn't identify a need for the F-15EX, then what does OSD know that the Air Force doesn't about the future threat environment or operational needs requiring the addition of fourth generation aircraft?

Secretary SHANAHAN. The decision to include investment in F-15EX was the result of deliberations between the Air Force, Joints Chiefs, and the Office of the Secretary of Defense during the annual Program and Budget Review. Several studies and analysis dating from 2017 and 2018 have identified an enduring need for the capability and capacity that fourth generation aircraft provide across the range of military operations. Similar to the Department of the Navy's continued investment in the F/A-18E Super Hornet, the United States Air Force has an enduring need for the improved capability of the F-15EX. The savings of F-15EX are not realized in the initial procurement but instead in the Operations and Sustainment costs that are significantly less than that of a fifth generation aircraft.

68. Senator MANCHIN. Secretary Shanahan and General Dunford, the F-15EX is a platform that is already largely un-survivable against many near peer weapon systems. This problem will only get worse over the expected lifespan of the F-15EX of 15-20 years. What is the long term intent of acquiring up to 80 F-15EX aircraft that clearly do not align with the priorities set forth in the National Defense Strategy of competing with ever advancing technology from our biggest competitors?

Secretary SHANAHAN. The F-15EX aligns with many portions of the National Defense Strategy (NDS). Specifically, the capability and capacity that a modernized and capable 4th generation platform brings to bear against both state and non-state actors. The NDS highlights that even non-state actors now have access to increasingly sophisticated weapons systems. The F-15EX has been continuously modernized both for the United States fleet as well as over \$5 billion worth of investment by foreign partner nations that continue to procure the aircraft today. At the opposite end of the spectrum of conflict, there is still a requirement for fourth generation aircraft even against a near peer competitor if it is part of an appropriate balance of capabilities. Not all missions will require the low observability and advanced systems of 5th generation aircraft. The decision to procure F-15EX is directed at re-



placing existing legacy F-15s that are approaching the end of their lifecycle. The age of legacy F-15s contributes to increased O&S costs.

General DUNFORD. The gaps identified in the 2018 Joint Military Net Assessment led to the Air Superiority Competitive Area Study which outlined capability, capacity, and readiness issues. The Competitive Area Study identified materiel and non-materiel recommendations and investment opportunities that could increase capability and/or capacity. One of the recommendations was F-15EX. F-15EX supports the priorities identified in the National Defense Strategy by providing modernized capacity, teamed with 5th gen capabilities, to contribute to and enhance lethality and survivability in contested environments. Short term recapitalization of the aging F-15C with F-15EX provides increased munitions capacity, advanced sensors, and weapons capabilities, and improved operational readiness capacity. The F-15EX replaces the aging F-15C/D fleet which will be retired by the late 2020's.

#### CYBERSECURITY AND DEFENSE INDUSTRIAL BASE

69. Senator MANCHIN. Secretary Shanahan and General Dunford, West Virginia is home to a number of companies that are a part of the defense industrial base and we're proud of the work that they do to ensure that our servicemen and women have the resources it needs. Our industry partners are just as big of targets, if not more, as the DOD for cyber theft and espionage. I'm particularly worried about our smaller subcontractors who do not always have the capital to invest in robust cybersecurity protection for their networks. What industry best practices or internally developed actions are you undertaking to better protect our industry partners who are developing defense capabilities from being attacked?

Secretary SHANAHAN. The Department of Defense (DOD) and the Defense Industrial Base (DIB) are true partners in addressing the needs of cybersecurity because every aspect of software and information technology pervades all aspects of DOD's mission (from business systems to weapons systems, supporting infrastructure to cybersecurity to space). Our collective responsibility is to ensure that DOD goods and services are delivered in conjunction with a strong, unified cybersecurity standard. We in the department see the need to create a unified cybersecurity standard, as currently there are several. The unified standard needs to take all of the controls called out in National Institute of Science and Technology (NIST) SP 800-171.1 and 53, as well as International Organization for Standardization (ISO) 27001 and other various standards across the DOD Supply Chain. With our industry partners we are currently evaluating how to strengthen and unify these cybersecurity standards in the DOD Supply Chain. We believe a comprehensive standard, as well as certification, will reduce risk across the entire DIB. Small businesses are critical to our National Defense Strategy (NDS) especially for innovation and specialization within the DIB. We aim to support the unified standard with a third-party certification process. The certification must be cost effective enough that small businesses can achieve certification with commercially available solution sets for those who might not have the capital to invest to meet certification. This unified standard effort is supportive of our efforts in regard to the SECURE Technologies Act of 2018. That Act, among other things, establishes the Federal Acquisition Security Council. The Department will actively participate in that Council, which is chaired by the Office of Management and Budget (OMB), to develop security standards and metrics for the entire Federal Acquisition Supply Chain. We are doing this in an open dialogue with all elements of the industrial base, as we need to be cognizant that we are just partners in our DIB. This effort is currently underway, and we will be conducting listening sessions with industry over the next few months to chart our path forward.

General DUNFORD. Senator, the Department is gravely concerned over the illicit transfer of advanced capabilities. As we continue to invest in next generation technologies, it is critical that we protect each in the R&D phase and beyond. Just last November, the Department stood up the Protecting Critical Technologies Task Force which reports directly to the Vice Chairman and the Deputy Secretary of Defense. This group is tasked with integrating, accelerating, scaling and institutionalizing the Department's efforts to protect critical capabilities. That said, this issue extends beyond contractors, subcontractors, and cybersecurity. Our adversaries are acquiring U.S. critical technology through a variety of licit and illicit means to include cyber theft, nefarious engagement in our R&D base, investments in acquisitions, and talent recruitment efforts. Specific to attacks on the defense industrial base, we are raising cybersecurity standards for new and existing contracts, moving away from a self-assessment evaluations to a model where the Department is actually enforcing cybersecurity compliance, and making cybersecurity part of our source selection and program evaluation criteria. Furthermore, the President's Budget submission for fiscal year 2020 contains a request for \$15 million in fiscal year 2020 and \$10 mil-

lion in fiscal year 2021 for a “DIB Cloud Pilot”. The Department anticipates using these funds to develop a Cybersecurity Maturity Model Certification (CMMC) effort and to conduct a range of other supporting Defense Industrial Base (DIB) cybersecurity pilots. The objective of the CMMC activity is to accelerate and validate the adoption of a cybersecurity maturity model for the DIB and further develop a framework for implementing an independent third party certification process to assess the commercial sector against the CMMC standards. The maturity model standards will be tiered and provide a more cost effective approach for smaller companies by requiring them to implement the appropriate set of controls based on the information they need to protect. The additional DIB pilot efforts will assess the feasibility of smaller DIB companies migrating to more cost effective secure environments. These combined activities are intended to increase the overall cyber hygiene of the DIB and help smaller companies better secure their data. Finally, we are also looking at measures to increase the integrity of the supply chain so that increased levels of cybersecurity extend beyond the prime contractors typically associated with DOD contracts to those subprime contractors as well.

#### DOD BUDGET AND BORDER SECURITY

70. Senator MANCHIN. Secretary Shanahan, as we have started to dig into the President’s budget request this week, there’s a lot of questions over the DOD portion being requested for border wall funding. A combination of an emergency fund as well as other budget shell games give us \$8.6 billion in border wall funding for fiscal year 2020. Given the briefs we’ve already heard from your office this week, it seems like a lot of energy is being spent by your department to figure out how to fund this primarily non-military requirement from the President. This appears to be taking a large portion of both your time and staff time to discuss and calculate. Is our attention in the Department of Defense budget discussion adequately covering the required defense items given the time and energy senior officials and staff have spent on figuring out how to carve out pieces of the military budget for a border wall?

Secretary SHANAHAN. Preparation of the Department’s Fiscal Year 2020 President’s Budget request is a comprehensive, deliberative process involving the Department’s senior leadership. The Department of Defense fiscal year 2020 budget request provides a foundation for transformational change and implementation of the National Defense Strategy. Through the strategic reprioritization of resources during the development of the budget, the Department increased investments in specific key areas such as cyber and space warfighting domains, capability modernization, and acceleration of emerging technologies. The deliberate investment of time in developing this budget will better enable us to deter and win against adversaries.

#### CRITICAL INFRASTRUCTURE AND CYBER SECURITY

71. Senator MANCHIN. Secretary Shanahan and General Dunford, the budget we’ve been presented lays out \$9.6 billion for DOD cyber domain efforts to include network, infrastructure and offensive and defensive cyber capabilities. As the Ranking Member of the Cyber Security Subcommittee and with my work on Energy and Natural Resources I have become deeply concerned with the vulnerabilities faced by our Nation’s critical infrastructure. How much of the Department’s efforts with these cyber security funds are directed at making sure our critical infrastructure that is vital to the defense of this country is protected from cyber-attacks by countries like China, North Korea, Russia and Iran?

Secretary SHANAHAN. Defense of national critical infrastructure is a key area of emphasis for the Department. This emphasis reflects the fact that competitors are targeting these assets, and that any large-scale disruption or degradation of national critical infrastructure, not just Department of Defense (DOD) infrastructure, would be a national security concern. We seek to preempt, defeat, or deter significant malicious cyber activity targeting national critical infrastructure by 1) defending forward to stop threats before they reach their targets and 2) supporting the Department of Homeland Security in fulfilling its responsibility to coordinate the overall Federal effort to promote the security and resilience of the Nation’s critical infrastructure.

Last year, Secretary Mattis and Secretary Nielsen signed a joint memorandum of understanding (MOU) detailing how our two departments can cooperate in order to secure and defend the Homeland from cyber threats. The MOU reiterates Department of Homeland Security’s (DHS) primary role as the U.S. Government lead for protection of national critical infrastructure, and emphasizes DOD’s unique mission of defending forward. These roles are mutually reinforcing; DHS’s efforts at home enable DOD to project power both in cyberspace and in the physical domains, even

as our efforts outside the Homeland help to secure U.S. infrastructure. As part of the efforts to implement this MOU fully, DOD and DHS senior leaders recently signed a charter creating a Cyber Protection and Defense Steering Group. This steering group provides us with visibility into existing areas of DOD–DHS cyber cooperation, enabling us to synchronize our efforts more effectively. By bringing leaders from both departments into the same working group, we are able to collaborate better, and to ensure that our two departments are able to address cyber threats synergistically, rather than work at cross-purposes.

General DUNFORD. The Department is also deeply concerned about protecting our Nation's critical infrastructure. Congruent with the 2017 NDAA Section 1650, we have been addressing this issue. The Joint Staff provided a tiered list of DOD installations based on strategic importance to global missions and OSD is actively working to conduct evaluations of cyber vulnerabilities at these locations. We are currently in a pilot phase of cyber assessments and hope to use these pilots as a model to conduct full evaluations of all DOD installations in the near future. Our budget request includes \$8 million and 8 manpower positions for this purpose. Once our vulnerabilities are identified, we will work with Congress to fund mitigations strategies to maximize security of our infrastructure. DOD keenly understands that we rely heavily on commercial infrastructure, and particularly, our Nation's energy grid. To that end, we are actively working with industry and the Army Cyber Institute to increase DOD participation in the Jack Voltaic series of research projects, which is an innovative bottom-up approach to critical infrastructure resilience. This analysis of strengths and weaknesses, tailored specifically to stress aspects of the incident response and disaster recovery plans, identifies gaps in critical infrastructure cybersecurity that directly and indirectly supports the DOD mission.

#### STATE DEPARTMENT BUDGET

72. Senator MANCHIN. Secretary Shanahan, the State Department is seeing a 23 percent decrease in its budget at the same time the Department of Defense is seeing an increase of approximately 5 percent. Secretary Mattis famously said that if we cut the State Department we were going to have to buy him more bullets. The State Department already traditionally operates on a fraction of the amount that the Department of Defense receives. I understand that you are not responsible for them, but do you consider such a drastic cut to the State Department budget as an overall negative for the Department of Defense given the additional duties your department will be forced to execute alongside a weaker State Department?

Secretary SHANAHAN. The Department of Defense supports the State Department's role in U.S. foreign policy. Along with the National Security Council and the Department of Homeland Security, we have generated remarkable alignment across the U.S. Government on a range of defense issues. I am in constant dialogue with Secretary Pompeo, and will let him address the appropriate level for the State Department budget. That said, achieving the objectives of the National Defense Strategy requires a strong, well-resourced interagency partner in the State Department.

#### GAO HIGH RISK LIST

73. Senator MANCHIN. Secretary Shanahan, this week GAO released its 2019 High Risk List report. There were several DOD items on the list—for right now, I'd like to focus on Weapons System Acquisition. In April 2018, GAO reported that the DOD expects to invest \$1.66 trillion in total to develop and procure its portfolio of 86 major defense acquisition programs. For years, DOD has struggled with cost, schedule, and performance goals. In fact, this weapons system acquisition was added to the GAO High Risk List in 1990. While GAO notes there has been some partial progress, there are still things that need to be done such as:

Tracking the costs to correct defects after ship delivery to help determine cases in which warranties could contribute to improvements in the cost and quality of Navy ships.

Requiring the Missile Defense Agency to make its cost estimates more comprehensive, to stabilize its element and program baselines by better understanding requirements before setting a baseline, and—once a baseline is set—to track revisions to enable meaningful comparisons over time.

Can you tell me how you and the Department of Defense are addressing these issues by discussing any meaningful steps being taken and when we will see or be briefed on the results?

Secretary SHANAHAN. With regard to cost, schedule, and performance goals generally, section 807 of the National Defense Authorization Act (NDAA) for fiscal year (FY) 2017 (Public Law 114–328), as amended by section 831 of the NDAA for fiscal

year 2019 (Public Law 115–232), requires the designated milestone decision authority to establish cost, fielding, and performance goals (also called targets) before funds are obligated for technology development, systems development, or production of a Major Defense Acquisition Program (MDAP). Further, Department of Defense Instructions stipulate that MDAPs are to report program data including unit cost estimates and Defense Acquisition Executive Summaries (DAES) on a quarterly basis after submission of the Selected Acquisition Report (SAR). USD(A&S) offices provide analysis of reported data to USD(A&S), Service Acquisition Executives (SAEs) and Program Offices.

With regard to tracking the costs to correct defects after ship delivery, the Department of Defense stated in our response to the GAO recommendation 3 in GAO–16–71 Navy and Coast Guard Shipbuilding: Navy Should Reconsider Approach to Warranties for Correcting Construction Defects, the GAO assertion that the Navy is not tracking the costs to correct defects after ship delivery to help determine cases in which warranties could contribute to improvements in the cost and quality of Navy ships is inaccurate. The Navy has been differentiating the Government's and shipbuilder's responsibility for defects and tracking the costs to correct all defects after delivery on shipbuilding contracts. The costs for any shipbuilder responsible corrections are tracked by the SUPSHIP and the shipbuilding program office.

With regards to the Missile Defense Agency, the Department partially concurred with the GAO recommendation regarding the Missile Defense Agency (MDA) life cycle costs, agreeing that decision makers should have insight into the full life cycle costs of programs. The Department concurred with the recommendation regarding the stabilization of the MDA acquisition baselines. However, it is necessary to recognize that Ballistic Missile Defense System (BMDS) baselines change to respond to evolving requirements provided by other organizations and leaders, from the Warfighter to the President, to counter changing threats. We also noted that the MDA Director has authority to make these adjustments within departmental guidelines. The MDA has enhanced the Ballistic Missile Defense System (BMDS) Accountability Report (BAR) format to be able to track revisions.

#### DUTY STATUS REFORM

74. Senator MANCHIN. Secretary Shanahan and General Dunford, Duty Status reform is a significant concern of mine given the large National Guard presence in West Virginia. I hope that your proposals are based on extensive consultation with the states regarding title 32 and other significant National Guard issues. Can you please share your discussions with state leadership and the results of those discussions as far as support or disagreement with your Duty Status Reform suggestions?

Secretary SHANAHAN. From the very beginning in developing a Duty Status Reform proposal, the Department has been open and transparent, collaborating freely across the entire Department of Defense and throughout government. Our team has worked tirelessly with leadership from each Reserve Component and the National Guard Bureau, as well as with major stakeholders such as the Departments of Veterans Affairs and Labor, the Office of Management and Budget (OMB), the Congressional Budget Office, and others. Throughout the entire process, the Department engaged and solicited feedback from the governors and adjutants generals of the states through various outreach efforts, to include briefing the Council of Governors on several occasions. At numerous points, we received feedback and suggestions and have worked collaboratively to ensure our proposal addressed the identified issues, while retaining the integrity and purpose of the reform effort. If the proposal is cleared by OMB and enacted, we anticipate a significant period of time will be required to fully implement. The Department will continue to work with the Congress to make any additional changes that are required prior to implementation. I commit to continuing to work with States and other stakeholders as we move forward on this critical reform effort.

General DUNFORD. From the very beginning in developing a Duty Status Reform proposal, the Department has been fully open and transparent, collaborating freely across the entire Department of Defense and throughout government. Our team has worked tirelessly with leadership from each Reserve Component and the National Guard Bureau, as well as with major stakeholders such as the Departments of Veterans Affairs and Labor, the Office of Management and Budget, the Congressional Budget Office, and more. Throughout the entire process, the Department engaged and solicited feedback from the governors and adjutants generals of the states through various outreach efforts, to include briefing the Council of Governors on several occasions. At numerous points, we received feedback and suggestions and have worked collaboratively to ensure our proposal addressed these issues, while retaining the integrity and purpose of the reform effort. If the proposal is enacted, we

anticipate a significant period of time will be required to implement. We request the support of Congress to support any legislative adjustments that need to be made to address unforeseen issues and concerns that may arise post-enactment. We are committed to continuing to work with the Congress, the states, and others as we move forward to implement the comprehensive, fundamental reform needed to support our National Guardsmen and reservists.

75. Senator MANCHIN. Secretary Shanahan and General Dunford, the Governors have been very clear that they do not accept that changes to the Insurrection Act in title 10, chapter 13 are necessary to complete the Duty Status Reform. Have any of your Duty Status reforms made changes to title 10, chapter 13, and if so, what are the impacts and cost of Duty Status reform?

Secretary SHANAHAN. Throughout the development of our Duty Status Reform initiative, the Department has zealously guarded the prerogatives, responsibilities, and authorities of the governors and states, including their authorities under the Insurrection Act in chapter 13 of title 10, United States Code. Today's "patchwork quilt" of laws, policies and procedures that govern how leaders utilize and manage our Reservist components, and how Reservists and National Guardsmen earn their pay and benefits, is a complex system fraught with inequities, disparity, and complexity. I recognize some concern has been expressed that Duty Status Reforms would fundamentally alter the role of governors as it pertains to the Insurrection Act. I can assure the Congress that is not our intent.

General DUNFORD. Throughout the development of our Duty Status Reform initiative, DOD has zealously guarded the prerogatives, responsibilities, and authorities of the governors and states, including their authorities under the Insurrection Act in chapter 13 of title 10, United States Code. Duty status reform, however, is long overdue. Today's "patchwork quilt" of laws, policies and procedures that govern how our leaders utilize and manage our Reserve components, and how Reservists and National Guardsmen earn their pay and benefits, is a complex system fraught with inequities, disparity, and complexity. Through adoption of a new Reserve Component duty status structure, our comprehensive draft legislative proposal simplifies and streamlines the more than 27 existing Reserve Component duty statuses, improves the utilization of the Reserve Components, and most importantly, aligns pay and benefits according to the nature of the work Reserve and National Guard members perform in service to their country. I recognize some concern has been expressed that the Department's duty status reform concept would fundamentally alter the role of governors as it pertains to the Insurrection Act. I can assure the Congress that was never our intent, and while it is absolutely necessary to reorganize the provisions of the Insurrection Act in order to effect the simplified, streamlined, duty status structure we are proposing, our current legislative draft proposal does preserve the governor's role and authority as specified in the Act. To the extent, however, that specific concerns with the Department's proposal as currently drafted, have been identified, OSD staff has worked closely with their National Guard Bureau colleagues and state Adjutants General representatives to address these concerns. Further, the Department will continue to work openly and transparently with all stakeholders to ensure any future concerns are also responsibly and fairly addressed. In terms of the part of your question that pertains to costs, at this time our proposal is pending release by the Office of Management and Budget, so the Department is unable to address the specifics of the budgetary implications of this proposal. However, throughout the development of the Duty Status Reform initiative, the Department considered the potential budgetary implications of this comprehensive, fundamental reform.

**Appendix A****Department of Defense***Fact Sheet on Section 2808 Funding Pool*

On February 15, 2019, President Donald J. Trump declared a national emergency that requires the use of the armed forces and authorized the use of title 10, U.S. Code, section 2808.

**Determining Requirements**

To make decisions about the use of military construction funds, the Joint Staff and USNORTHCOM will examine a project list of specific border barrier construction projects provided by the Department of Homeland Security and will conduct a mission analysis on which border barrier projects would support the use of the armed forces. This analysis will help determine the border barrier projects the Department of Defense (DoD) might undertake and the level of funding required.

Decisions have not yet been made concerning which border barrier projects will be funded through section 2808 authority. If the Department's FY 2020 budget is enacted on time as requested, no military construction project used to source section 2808 projects would be delayed or cancelled.

**Identifying Sources of Funds**

To identify the potential pool of sources of military construction funds, DoD will apply the following criteria:

- No military construction projects that already have been awarded, and no military construction projects with FY 2019 award dates will be impacted.
- No military housing, barracks, or dormitory projects will be impacted.
- The pool of potential military construction projects from which funding could be reallocated to support the construction of border barrier are solely projects with award dates after September 30, 2019.

For comprehensiveness, attached is a complete pool of all projects that were unawarded as of December 31, 2018. Once the above criteria is applied, the pool has a total value that is in excess of the amount needed to source potential section 2808 projects. The appearance of any project within the pool does not mean that the project will, in fact, be used to source section 2808 projects.

**Total DoD MILCON Unawarded Projects (\$ in thousands)**

(Organized by appropriation, component, state, location, projected award date, and project title)

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
Military Construction, Army	20,500	140,500	54,800	650,900	1,020,051
Department of the Army	20,500	140,500	54,800	650,900	1,020,051
ALABAMA	-	-	-	38,000	5,200
Anniston Army Depot	-	-	-	-	5,200
March 2020	-	-	-	-	5,200
Weapon Maintenance Shop	-	-	-	-	5,200
Fort Rucker	-	-	-	38,000	-
April 2019	-	-	-	38,000	-
Training Support Facility	-	-	-	38,000	-
ARIZONA	-	-	-	30,000	-
Fort Huachuca	-	-	-	30,000	-
May 2020	-	-	-	30,000	-
Ground Transport Equipment Building	-	-	-	30,000	-
BULGARIA	-	-	-	-	5,200
Nevo Selo Fos	-	-	-	-	5,200
October 2020	-	-	-	-	5,200
EDI: Ammunition Holding Area	-	-	-	-	5,200
CALIFORNIA	9,900	-	12,600	3,000	29,000
Concord	9,900	-	12,600	-	-
September 2019	9,900	-	-	-	-
Access Control Point	9,900	-	-	-	-
September 2019	-	-	12,600	-	-
Access Control Point	-	-	12,600	-	-
Fort Irwin	-	-	-	3,000	29,000
August 2019	-	-	-	-	29,000
Multipurpose Range Complex	-	-	-	-	29,000
September 2019	-	-	-	3,000	-
Land Acquisition	-	-	-	3,000	-
COLORADO	-	-	-	-	77,000
Fort Carson, Colorado	-	-	-	-	77,000
June 2019	-	-	-	-	77,000
Vehicle Maintenance Shop	-	-	-	-	77,000
GEORGIA	-	-	-	10,800	99,000
Fort Benning	-	-	-	10,800	-
March 2019	-	-	-	10,800	-
Air Traffic Control Tower	-	-	-	10,800	-
Fort Gordon	-	-	-	-	99,000
May 2019	-	-	-	-	99,000
Cyber Instructional Fac and Network Ctr	-	-	-	-	99,000
GERMANY	-	51,000	19,200	83,000	31,000
East Camp Grafenwoehr	-	-	-	-	31,000
January 2020	-	-	-	-	31,000
Mission Training Complex	-	-	-	-	31,000
Grafenwoehr	-	51,000	-	-	-
August 2019	-	51,000	-	-	-
Vehicle Maintenance Shop	-	51,000	-	-	-
Stuttgart	-	-	-	40,000	-
April 2019	-	-	-	40,000	-
Commissary	-	-	-	40,000	-
Weisbaden	-	-	-	43,000	-
May 2019	-	-	-	43,000	-
Administrative Building	-	-	-	43,000	-
Wiesbaden Army Airfield	-	-	19,200	-	-
August 2019	-	-	16,500	-	-
Controlled Humidity Warehouse	-	-	16,500	-	-
November 2019	-	-	2,700	-	-
Hazardous Material Storage Building	-	-	2,700	-	-
GUANTANAMO BAY, CUBA	-	-	-	115,000	-
Guantanamo Bay Naval Station	-	-	-	115,000	-
December 2019	-	-	-	115,000	-

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
OCO: Barracks	-	-	-	115,000	-
HAWAII	-	-	-	25,000	50,000
Pohakuloa Training Area	-	-	-	25,000	-
September 2019	-	-	-	25,000	-
Operational Readiness Tng Cplx (Brks), Ph1	-	-	-	25,000	-
Wheeler Army Air Field	-	-	-	-	50,000
February 2020	-	-	-	-	50,000
Rotary Wing Parking Apron	-	-	-	-	50,000
HONDURAS	-	-	-	-	21,000
Soto Cano AB	-	-	-	-	21,000
July 2019	-	-	-	-	21,000
Barracks	-	-	-	-	21,000
INDIANA	-	-	-	-	16,000
Crane Army Ammunition Plant	-	-	-	-	16,000
March 2020	-	-	-	-	16,000
Railcar Holding Area	-	-	-	-	16,000
JAPAN	10,600	-	-	-	-
Kadena AB	10,600	-	-	-	-
May 2019	10,600	-	-	-	-
Missile Magazine	10,600	-	-	-	-
KENTUCKY	-	-	-	-	76,000
Fort Campbell, Kentucky	-	-	-	-	50,000
September 2019	-	-	-	-	32,000
Vehicle Maintenance Shop	-	-	-	-	32,000
September 2019	-	-	-	-	18,000
Microgrid	-	-	-	-	18,000
Fort Knox	-	-	-	-	26,000
June 2019	-	-	-	-	26,000
Digital Air/Ground Integration Range	-	-	-	-	26,000
KOREA	-	-	-	53,000	17,500
Camp Tango	-	-	-	-	17,500
December 2020	-	-	-	-	17,500
Command and Control Facility	-	-	-	-	17,500
Kunsan AB	-	-	-	53,000	-
December 2019	-	-	-	53,000	-
Unmanned Aerial Vehicle Hangar	-	-	-	53,000	-
KUWAIT	-	-	-	-	44,000
Camp Arifjan, Kuwait	-	-	-	-	44,000
June 2019	-	-	-	-	44,000
Vehicle Maintenance Shop	-	-	-	-	44,000
MARYLAND	-	19,500	-	-	16,500
Fort Meade	-	19,500	-	-	16,500
May 2019	-	19,500	-	-	-
Access Control Point	-	19,500	-	-	-
June 2020	-	-	-	-	16,500
Cantonment Area Roads	-	-	-	-	16,500
NEW JERSEY	-	-	-	-	41,000
Picatinny Arsenal	-	-	-	-	41,000
December 2019	-	-	-	-	41,000
Munitions Disassembly Complex	-	-	-	-	41,000
NEW MEXICO	-	-	-	-	40,000
White Sands	-	-	-	-	40,000
February 2020	-	-	-	-	40,000
Information Systems Facility	-	-	-	-	40,000
NEW YORK	-	70,000	-	22,000	160,000
U.S. Military Academy	-	70,000	-	22,000	160,000
June 2019	-	-	-	22,000	-
Cemetery	-	-	-	22,000	-
September 2019	-	70,000	-	-	-
Waste Water Treatment Plant	-	70,000	-	-	-
June 2020	-	-	-	-	160,000
Engineering Center	-	-	-	-	95,000
Parking Structure	-	-	-	-	65,000
NORTH CAROLINA	-	-	-	-	10,000
Fort Bragg	-	-	-	-	10,000
September 2019	-	-	-	-	10,000



Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
Dining Facility	-	-	-	-	10,000
POLAND	-	-	-	-	144,400
Poland	-	-	-	-	109,400
April 2020	-	-	-	-	6,400
EDI: Rail Extension and Railhead	-	-	-	-	6,400
June 2020	-	-	-	-	52,000
EDI: Ammunition Storage Facility	-	-	-	-	52,000
September 2020	-	-	-	-	51,000
EDI: Staging Areas	-	-	-	-	51,000
Powidz Air Base	-	-	-	-	35,000
September 2019	-	-	-	-	14,000
EDI: Rail Extension & Railhead	-	-	-	-	14,000
November 2020	-	-	-	-	21,000
EDI: Bulk Fuel Storage	-	-	-	-	21,000
ROMANIA	-	-	-	-	21,651
Mihail Kogalniceanu	-	-	-	-	21,651
November 2019	-	-	-	-	21,651
EDI: Explosives & Ammo Load/Unload Apron	-	-	-	-	21,651
SOUTH CAROLINA	-	-	-	85,000	52,000
Fort Jackson	-	-	-	60,000	52,000
May 2019	-	-	-	60,000	-
Reception Barracks Complex, Ph1	-	-	-	60,000	-
August 2019	-	-	-	-	52,000
Trainee Barracks Complex 3, Ph2	-	-	-	-	52,000
Shaw AFB	-	-	-	25,000	-
March 2019	-	-	-	25,000	-
Mission Training Complex	-	-	-	25,000	-
TEXAS	-	-	-	66,600	33,600
Camp Bullis	-	-	-	13,600	-
July 2019	-	-	-	13,600	-
Vehicle Maintenance Shop	-	-	-	13,600	-
Fort Bliss	-	-	-	20,000	24,000
March 2019	-	-	-	-	24,000
Supply Support Activity	-	-	-	-	24,000
January 2020	-	-	-	20,000	-
Defense Access Roads	-	-	-	20,000	-
Fort Hood, Texas	-	-	-	33,000	9,600
September 2019	-	-	-	33,000	-
Vehicle Maintenance Shop	-	-	-	33,000	-
December 2019	-	-	-	-	9,600
Supply Support Activity	-	-	-	-	9,600
VIRGINIA	-	-	23,000	34,000	30,000
Arlington	-	-	-	-	30,000
January 2020	-	-	-	-	30,000
Cantonment Area Roads, Paved	-	-	-	-	30,000
Fort Belvoir	-	-	23,000	-	-
July 2019	-	-	23,000	-	-
Vehicle Maintenance Shop	-	-	23,000	-	-
Joint Base Langley-Eustis	-	-	-	34,000	-
April 2019	-	-	-	34,000	-
Aircraft Maintenance Instructional Bldg	-	-	-	34,000	-
WASHINGTON	-	-	-	85,500	-
Joint Base Lewis-McChord	-	-	-	66,000	-
August 2019	-	-	-	66,000	-
Confinement Facility	-	-	-	66,000	-
Yakima	-	-	-	19,500	-
September 2019	-	-	-	19,500	-
Fire Station	-	-	-	19,500	-
Military Construction, Navy	-	23,300	121,355	701,965	2,336,858
Department of the Navy	-	23,300	121,355	701,965	2,336,858
ARIZONA	-	-	48,355	-	14,800
Camp Navajo	-	-	-	-	14,800
August 2019	-	-	-	-	14,800
Missile Motor Magazines and U&SI	-	-	-	-	14,800
Yuma	-	-	48,355	-	-
March 2019	-	-	48,355	-	-

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
VMX-22 Maintenance Hangar	-	-	48,355	-	-
BAHAMAS	-	-	-	-	31,050
Andros Island	-	-	-	-	31,050
September 2019	-	-	-	-	31,050
AUTEC Austere Quarters	-	-	-	-	31,050
BAHRAIN ISLAND	-	-	-	-	26,340
SW Asia	-	-	-	-	26,340
February 2020	-	-	-	-	26,340
Fleet Maintenance Facility & TOC	-	-	-	-	26,340
CALIFORNIA	-	-	-	-	689,507
Camp Pendleton, California	-	-	-	-	142,680
March 2019	-	-	-	-	53,430
AAV-ACV Maintenance & Warehouse Facility	-	-	-	-	49,410
Electrical Upgrades	-	-	-	-	4,020
May 2019	-	-	-	-	10,670
Full Motion Trainer Facility	-	-	-	-	10,670
August 2019	-	-	-	-	16,600
Supply Warehouse SOI - West	-	-	-	-	16,600
September 2019	-	-	-	-	61,980
Fire Emergency Response Station	-	-	-	-	14,750
Potable Water Distribution Improvements	-	-	-	-	47,230
Coronado	-	-	-	-	77,780
August 2019	-	-	-	-	77,780
CMV-22B Airfield Improvements	-	-	-	-	77,780
Lemoore	-	-	-	-	127,590
July 2019	-	-	-	-	14,900
Communications Line (Ops to Admin)	-	-	-	-	14,900
September 2019	-	-	-	-	112,690
F-35 Maintenance Hangar	-	-	-	-	112,690
Miramar	-	-	-	-	31,980
March 2019	-	-	-	-	31,980
Airfield Security Improvements	-	-	-	-	11,500
F-35 Vertical Landing Pads and Taxiway	-	-	-	-	20,480
Point Mugu	-	-	-	-	22,150
July 2019	-	-	-	-	22,150
Directed Energy Systems Intergration Lab	-	-	-	-	22,150
San Diego	-	-	-	-	116,687
May 2019	-	-	-	-	67,940
Harbor Drive Switching Station	-	-	-	-	48,440
LCS Mission Module Readiness Center	-	-	-	-	19,500
July 2019	-	-	-	-	48,747
Pier 8 Replacement (INC)	-	-	-	-	48,747
San Nicolas Island	-	-	-	-	31,010
May 2019	-	-	-	-	31,010
Missile Assembly Build & High Explosive Mag	-	-	-	-	31,010
Seal Beach	-	-	-	-	139,630
July 2019	-	-	-	-	117,830
Causeway, Boat Channel & Turning Basin	-	-	-	-	117,830
August 2019	-	-	-	-	21,800
Missile Magazines	-	-	-	-	21,800
DISTRICT OF COLUMBIA	-	-	-	-	40,000
Naval Observatory	-	-	-	-	40,000
August 2019	-	-	-	-	40,000
Master Time Clocks & Operations Fac (INC)	-	-	-	-	40,000
FLORIDA	-	-	-	203,694	92,350
Key West	-	-	-	128,700	-
September 2019	-	-	-	128,700	-
NAVY GATEWAY INN AND SUITES FACILITY	-	-	-	68,200	-
REPLACE AIRCRAFT MAINTENANCE HANGAR	-	-	-	52,000	-
TRUBMO POINT ANNEX FIRE STATION	-	-	-	8,500	-
Mayport	-	-	-	74,994	82,350
September 2019	-	-	-	74,994	82,350
Advanced Wastewater Treatment Plant (AWWTP)	-	-	-	74,994	-
LCS Support Facility	-	-	-	-	82,350
Whiting Field	-	-	-	-	10,000
September 2019	-	-	-	-	10,000

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
Air Traffic Control Tower (North Field)	-	-	-	-	10,000
GEORGIA	-	-	-	43,300	31,900
Albany	-	-	-	43,300	31,900
February 2019	-	-	-	43,300	-
Combat Vehicle Warehouse	-	-	-	43,300	-
July 2019	-	-	-	-	31,900
Welding and Body Repair Shop Facility	-	-	-	-	31,900
GERMANY	-	-	-	-	43,950
Panzer Kaserne	-	-	-	-	43,950
June 2021	-	-	-	-	43,950
MARFOREUR HQ Modernization and Expansion	-	-	-	-	43,950
GREECE	-	-	-	-	47,850
Souda Bay	-	-	-	-	47,850
October 2019	-	-	-	-	41,650
EDI: Joint Mobility Processing Center	-	-	-	-	41,650
November 2019	-	-	-	-	6,200
EDI: Marathi Logistics Support Center	-	-	-	-	6,200
GUAM	-	-	-	93,268	188,370
Joint Region Marianas	-	-	-	93,268	188,370
August 2019	-	-	-	-	36,170
Unaccompanied Enlisted Housing	-	-	-	-	36,170
September 2019	-	-	-	-	49,930
ACE Gym & Dining	-	-	-	-	27,910
Ordnance Ops	-	-	-	-	22,020
March 2020	-	-	-	-	50,000
Machine Gun Range (INC)	-	-	-	-	50,000
June 2020	-	-	-	37,180	-
Navy-Commercial Tie-In Hardening	-	-	-	37,180	-
July 2020	-	-	-	56,088	-
Water Well Field	-	-	-	56,088	-
December 2020	-	-	-	-	52,270
Earth Covered Magazines	-	-	-	-	52,270
GUANTANAMO BAY, CUBA	-	-	-	-	109,500
Guantanamo Bay Naval Station	-	-	-	-	109,500
September 2019	-	-	-	-	109,500
Consolidated Fire Station	-	-	-	-	24,500
Solid Waste Management Facility	-	-	-	-	85,000
HAWAII	-	-	-	165,556	189,420
Joint Base Pearl Harbor-Hickam	-	-	-	73,200	45,000
March 2019	-	-	-	73,200	-
Sewer Lift Station & Relief Sewer Line	-	-	-	73,200	-
September 2019	-	-	-	-	45,000
Drydock Waterfront Facility	-	-	-	-	45,000
Kaneohe Bay	-	-	-	26,492	66,100
April 2019	-	-	-	-	66,100
Corrosion Control Hangar	-	-	-	-	66,100
May 2020	-	-	-	26,492	-
Security Improvements Mokapu Gate	-	-	-	26,492	-
Pearl City	-	-	-	-	78,320
May 2019	-	-	-	-	78,320
Water Transmission Line	-	-	-	-	78,320
Wahiawa	-	-	-	65,864	-
July 2019	-	-	-	65,864	-
Communications/Crypto Facility	-	-	-	65,864	-
ITALY	-	-	-	-	66,050
Sigonella	-	-	-	-	66,050
August 2020	-	-	-	-	66,050
EDI: P-8A Taxiway and Apron Upgrades	-	-	-	-	66,050
JAPAN	-	-	-	-	9,049
Kadena AB	-	-	-	-	9,049
April 2019	-	-	-	-	9,049
Tactical Operations Center	-	-	-	-	9,049
MAINE	-	-	-	61,692	149,685
Kittery	-	-	-	61,692	149,685
February 2019	-	-	-	61,692	-
Paint, Blast, and Rubber Facility	-	-	-	61,692	-

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
July 2019	-	-	-	-	149,685
Dry Dock #1 Superflood Basin	-	-	-	-	109,960
Extend Portal Crane Rail	-	-	-	-	39,725
MISSISSIPPI	-	-	-	-	22,300
Gulfport	-	-	-	-	22,300
June 2019	-	-	-	-	22,300
Expeditionary Combat Skills Student Berthing	-	-	-	-	22,300
NORTH CAROLINA	-	23,300	-	81,455	140,650
Camp Lejeune, North Carolina	-	-	-	65,784	25,650
May 2019	-	-	-	65,784	-
Water Treatment Plant Replacement Hadnot Pt	-	-	-	65,784	-
April 2020	-	-	-	-	25,650
2nd Radio BN Complex, Phase 2 (INC)	-	-	-	-	25,650
Cherry Point Marine Corps Air Station	-	23,300	-	15,671	115,000
March 2019	-	23,300	-	-	-
Airfield Security Improvements	-	23,300	-	-	-
September 2019	-	-	-	15,671	115,000
Aircraft Maintenance Hangar (INC)	-	-	-	-	60,000
F-35B Vertical Lift Fan Test Facility	-	-	-	15,671	-
Flightline Utility Modernization (INC)	-	-	-	-	55,000
PENNSYLVANIA	-	-	-	-	71,050
Philadelphia	-	-	-	-	71,050
July 2019	-	-	-	-	71,050
Submarine Propulsor Manufacturing Support Fac	-	-	-	-	71,050
SOUTH CAROLINA	-	-	-	-	61,757
Beaufort	-	-	-	-	26,567
August 2019	-	-	-	-	9,517
Recycling/Hazardous Waste Facility	-	-	-	-	9,517
September 2019	-	-	-	-	6,300
Cryogenics Facility	-	-	-	-	6,300
April 2020	-	-	-	-	10,750
Laurel Bay Fire Station Replacement	-	-	-	-	10,750
Parris Island	-	-	-	-	35,190
April 2019	-	-	-	-	35,190
Range Improvements & Modernization, Phase 2	-	-	-	-	35,190
SPAIN	-	-	-	-	21,590
Rota	-	-	-	-	21,590
January 2020	-	-	-	-	21,590
EDI: Port Operations Facilities	-	-	-	-	21,590
UNITED KINGDOM	-	-	-	-	79,130
Lossiemouth	-	-	-	-	79,130
May 2020	-	-	-	-	79,130
EDI: P-8 Base Improvement	-	-	-	-	79,130
UTAH	-	-	-	-	55,000
Hill AFB	-	-	-	-	55,000
March 2020	-	-	-	-	55,000
D5 Missile Motor Receipt/Storage Fac (INC)	-	-	-	-	55,000
VIRGINIA	-	-	-	53,000	39,220
Dam Neck	-	-	-	29,262	-
August 2019	-	-	-	29,262	-
ISR Operations Facility Expansion	-	-	-	29,262	-
Portsmouth	-	-	-	-	26,120
January 2020	-	-	-	-	26,120
Ships Maintenance Facility	-	-	-	-	26,120
Quantico	-	-	-	23,738	13,100
May 2019	-	-	-	23,738	-
TBS Fire Station	-	-	-	23,738	-
June 2019	-	-	-	-	13,100
Ammunition Supply Point Upgrade, Phase 2	-	-	-	-	13,100
WASHINGTON	-	-	73,000	-	116,340
Bangor	-	-	73,000	-	88,960
December 2019	-	-	73,000	-	-
SEAWOLF Class Service Pier	-	-	73,000	-	-
February 2021	-	-	-	-	88,960
Pier and Maintenance Facility	-	-	-	-	88,960
Whidbey Island	-	-	-	-	27,380

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
February 2019	-	-	-	-	7,930
Next Generation Jammer Facility	-	-	-	-	7,930
March 2019	-	-	-	-	19,450
Fleet Support Facility	-	-	-	-	19,450
Military Construction - Air Force	-	78,450	709,637	1,161,737	1,490,958
Department of the Air Force	-	78,450	709,637	1,161,737	1,490,958
ALABAMA	-	-	15,500	-	18,000
Maxwell AFB	-	-	15,500	-	18,000
March 2019	-	-	15,500	-	-
JAG School Expansion	-	-	15,500	-	-
September 2019	-	-	-	-	18,000
Air Traffic Control Tower	-	-	-	-	18,000
ALASKA	-	34,400	41,800	41,000	63,800
Eielson AFB	-	34,400	12,800	41,000	63,800
March 2019	-	-	-	-	6,800
F-35 Aircraft Maintenance Unit Admin Facility	-	-	-	-	6,800
May 2019	-	-	12,800	-	-
F-35A Missile Maintenance Facility	-	-	12,800	-	-
July 2019	-	-	-	-	22,500
F-35A School Age Facility	-	-	-	-	22,500
August 2019	-	-	-	-	15,500
F-35 Conventional Munitions Maintenance Fac	-	-	-	-	15,500
January 2020	-	34,400	-	-	19,000
F-35A CATM Range	-	-	-	-	19,000
Repair Central Heat & Power Plant Boiler Ph3	-	34,400	-	-	-
February 2021	-	-	-	41,000	-
Repair Central Heat/Power Plant Boiler PH 4	-	-	-	41,000	-
Joint Base Elmendorf-Richardson	-	-	29,000	-	-
October 2019	-	-	29,000	-	-
Add/Alter AWACS Alert Hangar	-	-	29,000	-	-
ARIZONA	-	-	-	-	55,000
Davis-Monthan AFB	-	-	-	-	15,000
September 2019	-	-	-	-	15,000
AGE Facility	-	-	-	-	15,000
Luke AFB	-	-	-	-	40,000
June 2019	-	-	-	-	23,000
F-35A Aircraft Maintenance Unit Facility	-	-	-	-	23,000
June 2019	-	-	-	-	17,000
F-35A Squad Ops #6	-	-	-	-	17,000
ARKANSAS	-	-	-	20,000	-
Little Rock AFB	-	-	-	20,000	-
October 2020	-	-	-	20,000	-
DORMITORY - 168 PN	-	-	-	20,000	-
AUSTRALIA	-	-	-	76,000	-
Darwin	-	-	-	76,000	-
August 2019	-	-	-	76,000	-
APR - Bulk Fuel Storage Tanks	-	-	-	76,000	-
CALIFORNIA	-	-	-	107,000	-
Travis AFB	-	-	-	107,000	-
June 2019	-	-	-	107,000	-
KC-46A Aircraft 3-Bay Maintenance Hangar	-	-	-	107,000	-
COLORADO	-	-	-	30,000	-
U.S. Air Force Academy	-	-	-	30,000	-
July 2019	-	-	-	30,000	-
Air Force CyberWorx	-	-	-	30,000	-
DELAWARE	-	-	39,000	-	-
Dover AFB	-	-	39,000	-	-
April 2019	-	-	39,000	-	-
Aircraft Maintenance Hangar	-	-	39,000	-	-
Estonia	-	-	6,500	4,700	-
Amani Air Base	-	-	6,500	4,700	-
July 2019	-	-	6,500	4,700	-
Construct Bulk Fuel Storage	-	-	6,500	-	-
ERI: POL Capacity Phase II	-	-	-	4,700	-
FLORIDA	-	-	75,000	107,100	74,963
Eglin AFB	-	-	75,000	82,000	62,863

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
March 2019	-	-	-	-	28,000
F-35A Student Dormitory II	-	-	-	-	28,000
March 2019	-	-	75,000	-	-
Advanced Munitions Technology Complex	-	-	75,000	-	-
May 2019	-	-	-	38,000	-
Long-Range Stand-Off Acquisition Fac	-	-	-	38,000	-
June 2019	-	-	-	-	34,863
F-35A Integrated Trng Center Academics Bldg	-	-	-	-	34,863
August 2019	-	-	-	44,000	-
Dormitories Replace Dorm 19	-	-	-	44,000	-
Macdill AFB	-	-	-	8,100	3,100
July 2019	-	-	-	-	3,100
KC-135 Beddown Add Flight Simulator Training	-	-	-	-	3,100
September 2019	-	-	-	8,100	-
KC-135 Beddown OG/MXG HQ	-	-	-	8,100	-
Patrick AFB	-	-	-	-	9,000
September 2019	-	-	-	-	9,000
Main Gate & Commercial Inspection Facility	-	-	-	-	9,000
Tyndall AFB	-	-	-	17,000	-
January 2020	-	-	-	17,000	-
Fire/Crash Rescue Station	-	-	-	17,000	-
GEORGIA	-	-	30,900	9,800	-
Moody AFB	-	-	30,900	-	-
October 2019	-	-	30,900	-	-
Personnel Recovery 4-Bay Hangar/HMU	-	-	30,900	-	-
Robins AFB	-	-	-	9,800	-
May 2019	-	-	-	9,800	-
Commercial Vehicle Visitor Control Facility	-	-	-	9,800	-
GERMANY	-	-	77,502	-	119,000
Ramstein AB	-	-	13,437	-	119,000
September 2020	-	-	13,437	-	119,000
37 AS Squadron Operations/AMU	-	-	13,437	-	119,000
EDI - KMC DABS-FEV/RH Storage Warehouses	-	-	-	-	119,000
Spangdahlem AB	-	-	64,165	-	-
March 2020	-	-	2,700	-	-
Upgrade Hardened Aircraft Shelters for F/A-22	-	-	2,700	-	-
July 2020	-	-	18,000	-	-
F/A-22 Low Observable/Composite Repair Fac	-	-	18,000	-	-
August 2021	-	-	43,465	-	-
EIC - Site Development and Infrastructure	-	-	43,465	-	-
GUAM	-	2,500	49,500	-	9,800
Joint Region Marianas	-	2,500	49,500	-	9,800
January 2020	-	-	14,200	-	-
APR - SATCOM C4I Facility	-	-	14,200	-	-
February 2020	-	-	35,300	-	-
APR - Munitions Storage Igloos, Ph 2	-	-	35,300	-	-
February 2020	-	-	-	-	9,800
Hayman Munitions Storage Igloos MSA 2	-	-	-	-	9,800
September 2020	-	2,500	-	-	-
PRTC Roads	-	2,500	-	-	-
HUNGARY	-	-	-	55,400	-
Kecskemet AB	-	-	-	55,400	-
April 2020	-	-	-	12,500	-
ERI: Increase POL Storage Capacity	-	-	-	12,500	-
October 2020	-	-	-	42,900	-
ERI: Airfield Upgrades	-	-	-	12,900	-
ERI: Construct Parallel Taxiway	-	-	-	30,000	-
ILLINOIS	-	-	41,000	-	-
Scott AFB	-	-	41,000	-	-
October 2019	-	-	41,000	-	-
Consolidated Communications Facility Add/Alt	-	-	41,000	-	-
JAPAN	-	-	51,835	-	-
Kadena AB	-	-	19,815	-	-
June 2019	-	-	19,815	-	-
APR - Replace Munitions Structures	-	-	19,815	-	-
Yokota AB	-	-	32,020	-	-

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
January 2020	-	-	8,243	-	-
Construct CATM Facility	-	-	8,243	-	-
February 2020	-	-	23,777	-	-
C-130J Corrosion Control Hangar	-	-	23,777	-	-
Jordan	-	-	-	82,940	-
Azraq	-	-	-	82,940	-
April 2019	-	-	-	8,003	-
OCO: OIR: Dormitory	-	-	-	8,003	-
September 2019	-	-	-	74,937	-
OCO: OIR: Airfield Pavements	-	-	-	52,735	-
OCO: OIR: Cargo Marshalling Yard Facility	-	-	-	1,034	-
OCO: OIR: CAS Revetments/Sunshades	-	-	-	11,168	-
OCO: OIR: ISR Shelters	-	-	-	10,000	-
LOUISIANA	-	-	21,000	-	12,250
Barksdale AFB	-	-	21,000	-	12,250
May 2019	-	-	21,000	-	-
Consolidated Communication Facility	-	-	21,000	-	-
August 2019	-	-	-	-	12,250
Entrance Road and Gate Complex	-	-	-	-	12,250
LUXEMBOURG	-	-	-	67,400	-
Sanem	-	-	-	67,400	-
April 2021	-	-	-	67,400	-
ERI: ECAOS Deployable Airbase System Storage	-	-	-	67,400	-
MARIANA ISLANDS	-	-	-	-	50,700
Tinian	-	-	-	-	50,700
September 2019	-	-	-	-	50,700
APR - Cargo Pad with Taxiway Extension	-	-	-	-	46,000
APR - Maintenance Support Facility	-	-	-	-	4,700
MARYLAND	-	-	50,000	17,500	58,000
Joint Base Andrews	-	-	50,000	17,500	58,000
June 2019	-	-	-	17,500	-
PAR Land Acquisition	-	-	-	17,500	-
July 2019	-	-	50,000	-	-
Consolidated Communications Center	-	-	50,000	-	-
October 2019	-	-	-	-	8,000
Military Working Dog Kennel	-	-	-	-	8,000
January 2020	-	-	-	-	13,000
Child Development Center	-	-	-	-	13,000
June 2020	-	-	-	-	37,000
PAR Relocate Haz Cargo Pad and EOD Range	-	-	-	-	37,000
MASSACHUSETTS	-	-	-	11,400	90,000
Hanscom AFB	-	-	-	11,400	90,000
April 2019	-	-	-	11,400	-
Vandenberg Gate Complex	-	-	-	11,400	-
September 2019	-	-	-	-	90,000
MIT-Lincoln Lab (West Lab CSL/MIF) Inc 2	-	-	-	-	90,000
MONTANA	-	-	14,600	-	-
Malmstrom AFB	-	-	14,600	-	-
June 2019	-	-	14,600	-	-
Relocate Missile Maintenance Facility	-	-	14,600	-	-
NEBRASKA	-	-	-	-	9,500
Offutt AFB	-	-	-	-	9,500
April 2019	-	-	-	-	9,500
Parking Lot, USSTRATCOM	-	-	-	-	9,500
NEVADA	-	3,450	-	23,000	64,900
Creech AFB	-	-	-	-	59,000
August 2019	-	-	-	-	59,000
MQ-9 CPIP GCS Operations Facility	-	-	-	-	28,000
MQ-9 CPIP Operations & Command Center Fac.	-	-	-	-	31,000
Nellis AFB	-	3,450	-	23,000	5,900
March 2019	-	-	-	23,000	-
Red Flag 5th Gen Facility Addition	-	-	-	23,000	-
March 2019	-	3,450	-	-	-
F-35A Munitions Maintenance Facilities	-	3,450	-	-	-
May 2019	-	-	-	-	5,900
CRH Simulator	-	-	-	-	5,900

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
NEW JERSEY	-	-	-	81,000	9,900
Joint Base McGuire-Dix-Lakehurst	-	-	-	-	9,900
September 2019	-	-	-	-	9,900
Commerical Gate Security Improvements	-	-	-	-	9,900
McGuire AFB	-	-	-	81,000	-
March 2019	-	-	-	72,000	-
KC-46A Two-Bay General Purpose MX Hangar	-	-	-	72,000	-
April 2019	-	-	-	9,000	-
KC-46A Alter Bldgs for Ops and TFI AMU-AMXS	-	-	-	9,000	-
NEW MEXICO	-	-	-	55,550	92,000
Cannon AFB	-	-	-	42,000	-
August 2019	-	-	-	42,000	-
Dangerous Cargo Pad Relocate CATM	-	-	-	42,000	-
Holloman AFB	-	-	-	4,250	85,000
May 2019	-	-	-	4,250	-
RPA Fixed Ground Control Station Facility	-	-	-	4,250	-
March 2020	-	-	-	-	85,000
MQ-9 FTU Ops Facility	-	-	-	-	85,000
Kirtland AFB	-	-	-	9,300	7,000
July 2019	-	-	-	-	7,000
Wyoming Gate Upgrade for AT Compliance	-	-	-	-	7,000
August 2019	-	-	-	9,300	-
Replace Fire Station 3	-	-	-	9,300	-
NEW YORK	-	-	-	-	14,200
Rome Research Site	-	-	-	-	14,200
September 2019	-	-	-	-	14,200
AT Perimeter Security/ECP	-	-	-	-	14,200
NORTH CAROLINA	-	17,100	-	-	6,000
Seymour Johnson AFB	-	17,100	-	-	6,000
March 2019	-	17,100	-	-	6,000
Air Traffic Control Tower/Base Ops Facility	-	17,100	-	-	6,000
NORTH DAKOTA	-	-	-	27,000	66,000
Minot AFB	-	-	-	27,000	66,000
May 2019	-	-	-	27,000	-
Indoor Firing Range	-	-	-	27,000	-
October 2019	-	-	-	-	66,000
Consolidated Helo/TRF Ops/AMU and Alert Fac	-	-	-	-	66,000
NORWAY	-	-	-	10,300	13,800
Rygge	-	-	-	10,300	13,800
September 2019	-	-	-	-	13,800
EDI - Construct Taxiway	-	-	-	-	13,800
November 2020	-	-	-	10,300	-
ERI: Replace/Expand Quick Reaction Alert Pad	-	-	-	10,300	-
OHIO	-	-	-	6,800	61,000
Wright-Patterson AFB	-	-	-	6,800	61,000
November 2019	-	-	-	6,800	-
Fire/Crash Rescue Station	-	-	-	6,800	-
March 2020	-	-	-	-	61,000
ADAL Intelligence Prod. Complex (NASIC) INC	-	-	-	-	61,000
OKLAHOMA	-	18,000	-	16,000	192,000
Altus AFB	-	18,000	-	16,000	12,000
April 2019	-	-	-	-	12,000
KC-46A FTU/FTC Simulator Facility Ph 3	-	-	-	-	12,000
October 2019	-	18,000	-	-	-
Dormitory (120 RM)	-	18,000	-	-	-
October 2019	-	-	-	16,000	-
Fire Rescue Center	-	-	-	16,000	-
Tinker AFB	-	-	-	-	180,000
March 2019	-	-	-	-	81,000
KC-46A Depot Maintenance Hangar	-	-	-	-	81,000
April 2019	-	-	-	-	85,000
KC-46A Depot Fuel Maintenance Hangar	-	-	-	-	85,000
September 2019	-	-	-	-	14,000
Commerical Vehicle Inspection Facility	-	-	-	-	14,000
QATAR	-	-	-	15,000	70,400
Al Udeid, Qatar	-	-	-	15,000	70,400



Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
August 2019	-	-	-	15,000	-
Consolidated Squadron Operations Facility	-	-	-	15,000	-
September 2019	-	-	-	-	70,400
Flightline Support Facilities	-	-	-	-	30,400
Personnel Deployment Processing Facility	-	-	-	-	40,000
SLOVAKIA	-	-	-	46,000	59,000
Malacky	-	-	-	24,000	59,000
November 2019	-	-	-	4,000	-
ERI: Airfield Upgrades	-	-	-	4,000	-
February 2020	-	-	-	20,000	-
ERI: Increase POL Storage Capacity	-	-	-	20,000	-
December 2020	-	-	-	-	59,000
EDI - Regional Munitions Storage Area	-	-	-	-	59,000
Sliac Airport	-	-	-	22,000	-
November 2019	-	-	-	22,000	-
ERI: Airfield Upgrades	-	-	-	22,000	-
SOUTH CAROLINA	-	-	17,000	-	53,000
Joint Base Charleston	-	-	17,000	-	-
January 2019	-	-	17,000	-	-
Fire & Rescue Station	-	-	17,000	-	-
Shaw AFB	-	-	-	-	53,000
May 2019	-	-	-	-	53,000
CPIP MQ-9 MCE GROUP	-	-	-	-	53,000
TEXAS	-	-	67,300	66,500	25,000
Joint Base San Antonio	-	-	67,300	66,500	25,000
June 2019	-	-	67,300	-	25,000
BMT Recruit Dormitory 6	-	-	67,300	-	25,000
October 2019	-	-	-	10,000	-
Air Traffic Control Tower	-	-	-	10,000	-
December 2019	-	-	-	38,000	-
BMT Classrooms/Dining Facility 4	-	-	-	38,000	-
February 2020	-	-	-	18,500	-
Camp Bullis Dining Facility	-	-	-	18,500	-
TURKEY	-	-	-	48,697	-
Incirk AB	-	-	-	48,697	-
March 2019	-	-	-	8,100	-
OCO: Replace Perimeter Fence	-	-	-	8,100	-
August 2020	-	-	-	14,600	-
OCO: Relocate Base Main Access Control Point	-	-	-	14,600	-
September 2020	-	-	-	25,997	-
Dormitory - 216 PN	-	-	-	25,997	-
United Arab Emirates	-	-	35,400	-	-
Al Dhafra	-	-	35,400	-	-
July 2019	-	-	35,400	-	-
Large Aircraft Maintenance Hangar	-	-	35,400	-	-
UNITED KINGDOM	-	-	16,500	45,650	144,745
Croughton RAF	-	-	16,500	-	-
October 2019	-	-	16,500	-	-
Main Gate Complex	-	-	16,500	-	-
Raf Fairford	-	-	-	-	106,000
September 2019	-	-	-	-	19,000
EDI - Munitions Holding Area	-	-	-	-	19,000
September 2019	-	-	-	-	87,000
EDI - Construct DABS-FEV Storage	-	-	-	-	87,000
Royal Air Force Fairford	-	-	-	45,650	-
November 2019	-	-	-	45,650	-
EIC RC-135 Infrastructure	-	-	-	2,150	-
EIC RC-135 Intel and Squad Ops Facility	-	-	-	38,000	-
EIC RC-135 Runway Overrun Reconfiguration	-	-	-	5,500	-
Royal Air Force Lakenheath	-	-	-	-	38,745
September 2019	-	-	-	-	9,204
F-35A ADAL Conventional Munitions MX	-	-	-	-	9,204
October 2019	-	-	-	-	29,541
F-35A Dorm	-	-	-	-	29,541
UTAH	-	-	-	28,000	26,000
Hill AFB	-	-	-	28,000	26,000

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
January 2020	-	-	-	28,000	-
UTTR Consolidated Mission Control Center	-	-	-	28,000	-
August 2020	-	-	-	-	26,000
Composite Aircraft Antenna Calibration Fac	-	-	-	-	26,000
VIRGINIA	-	-	59,200	-	-
Joint Base Langley-Eustis	-	-	59,200	-	-
May 2019	-	-	14,200	-	-
Fuel System Maintenance Dock	-	-	14,200	-	-
July 2019	-	-	45,000	-	-
Air Force Targeting Center	-	-	45,000	-	-
WASHINGTON	-	-	-	-	14,000
Fairchild AFB	-	-	-	-	14,000
September 2019	-	-	-	-	14,000
JPRA C2 Mission Support Facility	-	-	-	-	14,000
WORLDWIDE CLASSIFIED	-	3,000	-	-	18,000
Classified Location	-	3,000	-	-	18,000
June 2019	-	3,000	-	-	-
Munitions Storage	-	3,000	-	-	-
January 2020	-	-	-	-	18,000
TACMOR - Utilities and Infrastructure Support	-	-	-	-	18,000
WYOMING	-	-	-	62,000	-
F. E. Warren AFB	-	-	-	62,000	-
October 2019	-	-	-	62,000	-
Consolidated Helo/TRF Ops/AMU and Alert Fac	-	-	-	62,000	-
Military Construction, Defense-Wide	152,201	65,320	337,922	1,006,093	1,542,617
Defense Health Agency	-	-	-	93,400	41,660
CALIFORNIA	-	-	-	26,400	-
Camp Pendleton, California	-	-	-	26,400	-
April 2019	-	-	-	26,400	-
Ambulatory Care Center Replacement	-	-	-	26,400	-
GUANTANAMO BAY, CUBA	-	-	-	-	9,080
Guantanamo Bay Naval Station	-	-	-	-	9,080
September 2019	-	-	-	-	9,080
Working Dog Treatment Facility Replacement	-	-	-	-	9,080
NORTH CAROLINA	-	-	-	58,700	32,580
Camp Lejeune, North Carolina	-	-	-	58,700	-
March 2019	-	-	-	43,400	-
Ambulatory Care Center/Dental Clinic	-	-	-	22,000	-
Ambulatory Care Center/Dental Clinic	-	-	-	21,400	-
January 2020	-	-	-	15,300	-
Ambulatory Care Center Addition/Alteration	-	-	-	15,300	-
New River	-	-	-	-	32,580
September 2019	-	-	-	-	32,580
Amb Care Center/Dental Clinic Replacement	-	-	-	-	32,580
TEXAS	-	-	-	8,300	-
Fort Bliss	-	-	-	8,300	-
July 2019	-	-	-	8,300	-
Blood Processing Center	-	-	-	8,300	-
Defense Logistics Agency	-	17,700	-	157,100	250,800
ALASKA	-	-	-	-	14,000
Joint Base Elmendorf-Richardson	-	-	-	-	14,000
July 2019	-	-	-	-	14,000
Operations Facility Replacement	-	-	-	-	14,000
ARKANSAS	-	-	-	-	14,000
Little Rock AFB	-	-	-	-	14,000
September 2019	-	-	-	-	14,000
Hydrant Fuel System Alterations	-	-	-	-	14,000
CALIFORNIA	-	10,700	-	-	18,800
Defense Distribution Depot-Tracy	-	-	-	-	18,800
November 2019	-	-	-	-	18,800
Main Access Control Point Upgrades	-	-	-	-	18,800
Fresno Yosemite IAP ANG	-	10,700	-	-	-
September 2019	-	10,700	-	-	-
Replace Fuel Storage and Distrib. Facilities	-	10,700	-	-	-
ITALY	-	-	-	22,400	-
Sigonella	-	-	-	22,400	-

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
May 2019	-	-	-	22,400	-
Construct Hydrant System	-	-	-	22,400	-
JAPAN	-	-	-	30,800	54,600
Iwakuni	-	-	-	30,800	33,200
September 2019	-	-	-	-	33,200
Fuel Pier	-	-	-	-	33,200
January 2020	-	-	-	30,800	-
Construct Bulk Storage Tanks PH 1	-	-	-	30,800	-
Kadena AB	-	-	-	-	21,400
June 2020	-	-	-	-	21,400
Truck Unload Facilities	-	-	-	-	21,400
MAINE	-	-	-	-	11,600
Kittery	-	-	-	-	11,600
May 2019	-	-	-	-	11,600
Consolidated Warehouse Replacement	-	-	-	-	11,600
NEW JERSEY	-	-	-	-	10,200
Joint Base McGuire-Dix-Lakehurst	-	-	-	-	10,200
May 2019	-	-	-	-	10,200
Hot Cargo Hydrant System Replacement	-	-	-	-	10,200
NORTH CAROLINA	-	-	-	20,000	-
Seymour Johnson AFB	-	-	-	20,000	-
May 2019	-	-	-	20,000	-
Construct Tanker Truck Delivery System	-	-	-	20,000	-
OKLAHOMA	-	-	-	-	7,000
McAlester	-	-	-	-	7,000
November 2019	-	-	-	-	7,000
Bulk Diesel System Replacement	-	-	-	-	7,000
OREGON	-	2,500	-	-	-
Klamath Falls IAP	-	2,500	-	-	-
January 2020	-	2,500	-	-	-
Replace Fuel Facilities	-	2,500	-	-	-
SOUTH CAROLINA	-	-	-	22,900	-
Shaw AFB	-	-	-	22,900	-
March 2019	-	-	-	22,900	-
Consolidate Fuel Facilities	-	-	-	22,900	-
TEXAS	-	-	-	-	81,700
Joint Base San Antonio	-	-	-	-	10,200
April 2019	-	-	-	-	10,200
Energy Aerospace Operations Facility	-	-	-	-	10,200
Red River Army Depot	-	-	-	-	71,500
April 2019	-	-	-	-	71,500
General Purpose Warehouse	-	-	-	-	71,500
UTAH	-	-	-	20,000	-
Hill AFB	-	-	-	20,000	-
March 2019	-	-	-	20,000	-
Replace POL Facilities	-	-	-	20,000	-
VIRGINIA	-	4,500	-	41,000	12,700
Fort Belvoir	-	4,500	-	-	-
May 2019	-	4,500	-	-	-
Replace Ground Vehicle Fueling Facility	-	4,500	-	-	-
Joint Base Langley-Eustis	-	-	-	-	12,700
June 2019	-	-	-	-	12,700
Fuel Facilities Replacement	-	-	-	-	6,900
Ground Vehicle Fueling Facility Replacement	-	-	-	-	5,800
Norfolk	-	-	-	18,500	-
January 2020	-	-	-	18,500	-
Replace Hazardous Materials Warehouse	-	-	-	18,500	-
Portsmouth	-	-	-	22,500	-
January 2020	-	-	-	22,500	-
Replace Harardous Materials Warehouse	-	-	-	22,500	-
WASHINGTON	-	-	-	-	26,200
Joint Base Lewis-Mcchord	-	-	-	-	26,200
August 2019	-	-	-	-	26,200
Refueling Facility	-	-	-	-	26,200
Department of Defense Education Agency	137,101	47,620	116,645	249,227	367,793
BELGIUM	-	-	-	-	14,305

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
Chievres AB	-	-	-	-	14,305
September 2020	-	-	-	-	14,305
Europe West District Superintendent's Office	-	-	-	-	14,305
GERMANY	-	14,676	45,221	125,750	156,003
Garmisch	-	14,676	-	-	-
March 2019	-	14,676	-	-	-
Garmisch E/MS-Addition/Modernization	-	14,676	-	-	-
Kaiserlautern AB	-	-	45,221	-	99,955
April 2019	-	-	-	-	99,955
Kaiserslautern Middle School	-	-	-	-	99,955
December 2019	-	-	45,221	-	-
Sembach Elementary/Middle School Replacement	-	-	45,221	-	-
Spangdahlem AB	-	-	-	79,141	-
March 2020	-	-	-	79,141	-
Spangdahlem Elementary School Replacement	-	-	-	79,141	-
Stuttgart	-	-	-	46,609	-
June 2022	-	-	-	46,609	-
Robinson Barracks Elem. School Replacement	-	-	-	46,609	-
Weisbaden	-	-	-	-	56,048
December 2022	-	-	-	-	56,048
Clay Kaserne Elementary School	-	-	-	-	56,048
ITALY	-	-	-	62,406	-
Vicenza	-	-	-	62,406	-
September 2019	-	-	-	62,406	-
Vicenza High School Replacement	-	-	-	62,406	-
JAPAN	137,101	-	-	-	134,851
Camp Mctureous	-	-	-	-	94,851
April 2020	-	-	-	-	94,851
Bechtel Elementary School	-	-	-	-	94,851
Okinawa	99,420	-	-	-	-
cancelling	99,420	-	-	-	-
Kubasaki High School Replacement/Renovation	99,420	-	-	-	-
Sasebo	37,681	-	-	-	-
September 2019	37,681	-	-	-	-
E.J. King High School Replacement/Renovation	37,681	-	-	-	-
Yokosuka	-	-	-	-	40,000
September 2019	-	-	-	-	40,000
Kinnick High School Inc 1	-	-	-	-	40,000
KENTUCKY	-	-	-	-	62,634
Fort Campbell, Kentucky	-	-	-	-	62,634
February 2020	-	-	-	-	62,634
Ft Campbell Middle School	-	-	-	-	62,634
NORTH CAROLINA	-	32,944	-	-	-
Fort Bragg	-	32,944	-	-	-
cancelling	-	32,944	-	-	-
Butner Elementary School Replacement	-	32,944	-	-	-
PUERTO RICO	-	-	-	61,071	-
Punta Borinquen	-	-	-	61,071	-
December 2019	-	-	-	61,071	-
Ramey Unit School Replacement	-	-	-	61,071	-
UNITED KINGDOM	-	-	71,424	-	-
Croughton RAF	-	-	71,424	-	-
January 2020	-	-	71,424	-	-
Croughton Elem/Middle/High School Replacement	-	-	71,424	-	-
Missile Defense Agency	-	-	-	-	182,000
ALASKA	-	-	-	-	182,000
Clear AFS	-	-	-	-	174,000
March 2019	-	-	-	-	174,000
Long Range Discrim Radar Sys Complex Ph2	-	-	-	-	174,000
Fort Greely	-	-	-	-	8,000
January 2021	-	-	-	-	8,000
Missile Field #1 Expansion	-	-	-	-	8,000
National Geospatial Intelligence Agency	-	-	-	200,000	291,000
MISSOURI	-	-	-	200,000	291,000
St Louis	-	-	-	200,000	291,000
March 2019	-	-	-	200,000	291,000

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
Next NGA West (N2W) Complex Phase 1 INC	-	-	-	200,000	181,000
Next NGA West (N2W) Complex Phase 2 INC	-	-	-	-	110,000
National Security Agency	-	-	21,000	11,000	90,000
MARYLAND	-	-	21,000	-	30,000
Fort Meade	-	-	21,000	-	30,000
September 2019	-	-	-	-	30,000
Mission Support Operations Warehouse Facility	-	-	-	-	30,000
October 2019	-	-	21,000	-	-
Access Control Facility	-	-	21,000	-	-
QATAR	-	-	-	-	60,000
Al Udeid, Qatar	-	-	-	-	60,000
September 2019	-	-	-	-	60,000
OCO: Trans-Regional Logistics Complex	-	-	-	-	60,000
UNITED KINGDOM	-	-	-	11,000	-
Menwith Hill Station	-	-	-	11,000	-
February 2020	-	-	-	11,000	-
RAFMH Main Gate Rehabilitation	-	-	-	11,000	-
U.S. Special Operations Command	-	-	180,061	247,266	283,514
CALIFORNIA	-	-	-	113,319	83,684
Camp Pendleton, California	-	-	-	17,242	12,596
April 2019	-	-	-	-	9,049
SOF Human Performance Training Center-West	-	-	-	-	9,049
May 2019	-	-	-	7,284	-
SOF Motor Transport Facility Expansion	-	-	-	7,284	-
September 2019	-	-	-	9,958	3,547
SOF EOD Facility - West	-	-	-	-	3,547
SOF Marine Battalion Company/Team Facilities	-	-	-	9,958	-
Coronado	-	-	-	96,077	71,088
June 2019	-	-	-	-	58,320
SOF ATC Applied Instruction Facility	-	-	-	-	14,819
SOF ATC Training Facility	-	-	-	-	18,329
SOF NSWG-1 Operations Support Facility	-	-	-	-	25,172
August 2019	-	-	-	-	12,768
SOF Close Quarters Combat Facility	-	-	-	-	12,768
September 2019	-	-	-	96,077	-
SOF Basic Training Command	-	-	-	96,077	-
COLORADO	-	-	-	-	24,297
Fort Carson, Colorado	-	-	-	-	24,297
April 2019	-	-	-	-	24,297
SOF Human Performance Training Center	-	-	-	-	15,297
SOF Mountaineering Facility	-	-	-	-	9,000
CONUS CLASSIFIED	-	-	-	-	49,222
Classified Location	-	-	-	-	49,222
September 2019	-	-	-	-	49,222
Battalion Complex, PH2	-	-	-	-	49,222
Estonia	-	-	-	-	15,700
Unspecified Estonia	-	-	-	-	15,700
December 2020	-	-	-	-	15,700
EDI: SOF Operations Facility	-	-	-	-	6,100
EDI: SOF Training Facility	-	-	-	-	9,600
FLORIDA	-	-	-	39,700	-
Eglin AFB	-	-	-	5,000	-
June 2019	-	-	-	5,000	-
SOF Simulator Facility	-	-	-	5,000	-
Hurlburt Field	-	-	-	34,700	-
June 2019	-	-	-	34,700	-
SOF Combat Aircraft Parking Apron	-	-	-	34,700	-
GERMANY	-	-	-	-	11,504
Baumholder	-	-	-	-	11,504
April 2021	-	-	-	-	11,504
SOF Joint Parachute Rigging Facility	-	-	-	-	11,504
JAPAN	-	-	169,156	62,908	-
Kadena AB	-	-	55,425	3,972	-
June 2019	-	-	12,602	-	-
SOF Simulator Facility (MC-130)	-	-	12,602	-	-
May 2020	-	-	42,823	3,972	-

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
SOF Maintenance Hangar	-	-	42,823	3,972	-
Torri Commo Station	-	-	-	25,323	-
April 2019	-	-	-	25,323	-
SOF Tactical Equipment Maintenance Fac	-	-	-	25,323	-
Yokota AB	-	-	113,731	33,613	-
August 2019	-	-	47,555	12,989	-
Airfield Apron	-	-	41,294	10,800	-
Simulator Facility	-	-	6,261	2,189	-
December 2019	-	-	66,176	20,624	-
Hangar/Aircraft Maintenance Unit	-	-	-	12,034	-
Hangar/AMU	-	-	39,466	-	-
Operations and Warehouse Facilities	-	-	26,710	8,590	-
KENTUCKY	-	-	-	-	19,664
Fort Campbell, Kentucky	-	-	-	-	19,664
March 2019	-	-	-	-	19,664
SOF Air/Ground Integ. Urban Live Fire Range	-	-	-	-	9,091
SOF Logistics Support Operations Facility	-	-	-	-	5,435
SOF Multi-Use Helicopter Training Facility	-	-	-	-	5,138
NORTH CAROLINA	-	-	10,905	31,339	32,366
Camp Lejeune, North Carolina	-	-	-	31,339	-
May 2019	-	-	-	31,339	-
SOF Human Performance Training Center	-	-	-	10,800	-
SOF Motor Transport Maintenance Expansion	-	-	-	20,539	-
Fort Bragg	-	-	10,905	-	32,366
April 2019	-	-	10,905	-	-
SOF Combat Medic Training Facility	-	-	10,905	-	-
July 2019	-	-	-	-	12,109
SOF Replace Training Maze and Tower	-	-	-	-	12,109
September 2019	-	-	-	-	20,257
SOF SERE Resistance Training Lab. Complex	-	-	-	-	20,257
VIRGINIA	-	-	-	-	47,077
Dam Neck	-	-	-	-	8,959
June 2019	-	-	-	-	8,959
SOF Magazines	-	-	-	-	8,959
Fort A.P. Hill	-	-	-	-	11,734
September 2019	-	-	-	-	11,734
Training Campus	-	-	-	-	11,734
Fort Belvoir	-	-	-	-	6,127
August 2019	-	-	-	-	6,127
Human Performance Training Center	-	-	-	-	6,127
Humphreys Engineer Center	-	-	-	-	20,257
September 2019	-	-	-	-	20,257
Maintenance and Supply Facility	-	-	-	-	20,257
Washington Headquarters Services	15,100	-	20,216	50,100	35,850
VIRGINIA	15,100	-	20,216	50,100	35,850
Pentagon	15,100	-	20,216	50,100	35,850
cancelling	-	-	12,111	-	-
Pentagon Metro Entrance Facility	-	-	12,111	-	-
March 2019	15,100	-	-	8,140	-
Pentagon Corr 8 Pedestrian Access Control Pt	-	-	-	8,140	-
Redundant Chilled Water Loop	15,100	-	-	-	-
April 2019	-	-	-	28,700	-
S.E. Safety Traffic and Parking Improvements	-	-	-	28,700	-
June 2019	-	-	8,105	13,260	-
Security Updates	-	-	-	13,260	-
Upgrade IT Facilities Infrastructure-RRMC	-	-	8,105	-	-
July 2019	-	-	-	-	12,200
North Village VACP & Fencing	-	-	-	-	12,200
November 2019	-	-	-	-	23,650
Exterior Infrastruc. & Security Improvements	-	-	-	-	23,650
Mil. Con. Army National Guard	-	-	-	480,875	93,400
Department of the Army	-	-	-	480,875	93,400
ALASKA	-	-	-	-	27,000
Joint Base Elmendorf-Richardson	-	-	-	-	27,000
March 2019	-	-	-	-	27,000
United States Property & Fiscal Office	-	-	-	-	27,000

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
ILLINOIS	-	-	-	-	5,000
Marseilles	-	-	-	-	5,000
August 2019	-	-	-	-	5,000
Automated Record Fire Range	-	-	-	-	5,000
NORTH DAKOTA	-	-	-	-	32,000
Fargo	-	-	-	-	32,000
March 2019	-	-	-	-	32,000
National Guard Readiness Center	-	-	-	-	32,000
OHIO	-	-	-	-	7,400
Camp Ravenna	-	-	-	-	7,400
August 2019	-	-	-	-	7,400
Automated Multipurpose Machine Gun (MPMG) Ran	-	-	-	-	7,400
OKLAHOMA	-	-	-	-	11,000
Lexington	-	-	-	-	11,000
September 2019	-	-	-	-	11,000
Aircraft Vehicle Storage Building	-	-	-	-	11,000
OREGON	-	-	-	-	11,000
Boardman	-	-	-	-	11,000
September 2019	-	-	-	-	11,000
Tactical Unmanned Aerial Vehicle Hangar	-	-	-	-	11,000
PUERTO RICO	-	-	-	453,500	-
Arroyo	-	-	-	30,000	-
January 2021	-	-	-	30,000	-
Readiness Center	-	-	-	30,000	-
Camp Santiago	-	-	-	331,500	-
September 2020	-	-	-	159,500	-
Engineering/Housing Maintenance Shops (DPW)	-	-	-	11,000	-
Maneuver Area Training Equipment Site	-	-	-	80,000	-
National Guard Readiness Center	-	-	-	50,000	-
Power Substation/Switching Station Building	-	-	-	18,500	-
March 2021	-	-	-	172,000	-
Company Headquarters Bldg -Transient Training	-	-	-	47,000	-
Dining Facility, Transient Training	-	-	-	13,000	-
Enlisted Barracks, Transient Training	-	-	-	112,000	-
Gurabo	-	-	-	28,000	-
January 2021	-	-	-	28,000	-
Vehicle Maintenance Shop	-	-	-	28,000	-
San Juan	-	-	-	64,000	-
January 2021	-	-	-	64,000	-
Aircraft Maintenance Hangar (AASF)	-	-	-	64,000	-
VIRGIN ISLANDS	-	-	-	27,375	-
St. Croix	-	-	-	23,500	-
September 2020	-	-	-	3,500	-
Power Substation/Switching Station Building	-	-	-	3,500	-
January 2021	-	-	-	20,000	-
Vehicle Maintenance Shop	-	-	-	20,000	-
St. Thomas	-	-	-	3,875	-
September 2020	-	-	-	3,875	-
National Guard Vehicle Maintenance Shop Add/A	-	-	-	3,875	-
Mil. Con. Air National Guard	-	5,100	34,600	136,300	141,000
Department of the Air Force	-	5,100	34,600	136,300	141,000
CALIFORNIA	-	-	-	-	8,000
Channel Islands ANG	-	-	-	-	8,000
July 2020	-	-	-	-	8,000
Construct C-130J Flight Simulator Facility	-	-	-	-	8,000
COLORADO	-	5,100	-	8,000	-
Buckley Air Force Base	-	5,100	-	-	-
June 2019	-	5,100	-	-	-
ASE Maintenance and Storage Facility	-	5,100	-	-	-
Peterson AFB	-	-	-	8,000	-
September 2020	-	-	-	8,000	-
Space Control Facility	-	-	-	8,000	-
HAWAII	-	-	-	-	17,000
Joint Base Pearl Harbor-Hickam	-	-	-	-	17,000
July 2019	-	-	-	-	17,000
Construct Addition to F-22 LO/CRF B3408	-	-	-	-	17,000

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
ILLINOIS	-	-	-	-	9,000
Greater Peoria Regional Airport	-	-	-	-	9,000
September 2019	-	-	-	-	9,000
Construct New Fire Crash/Rescue Station	-	-	-	-	9,000
INDIANA	-	-	-	8,000	-
Hulman Regional Airport	-	-	-	8,000	-
February 2020	-	-	-	8,000	-
Construct Small Arms Range	-	-	-	8,000	-
KENTUCKY	-	-	-	9,000	-
Louisville IAP	-	-	-	9,000	-
May 2019	-	-	-	9,000	-
Add/Alter Response Forces Facility	-	-	-	9,000	-
LOUISIANA	-	-	-	-	39,000
Joint Reserve Base New Orleans	-	-	-	-	39,000
43,831	-	-	-	-	39,000
NORTHCOM - Construct Alert Apron	-	-	-	-	15,000
NORTHCOM - Construct Alert Facilities	-	-	-	-	24,000
MARYLAND	-	-	5,000	-	-
Joint Base Andrews	-	-	5,000	-	-
May 2019	-	-	5,000	-	-
Munitions Load Crew Training	-	-	5,000	-	-
MINNESOTA	-	-	-	-	8,000
Duluth IAP	-	-	-	-	8,000
July 2019	-	-	-	-	8,000
Construct Small Arms Range	-	-	-	-	8,000
MISSISSIPPI	-	-	-	8,000	-
Jackson IAP	-	-	-	8,000	-
August 2020	-	-	-	8,000	-
Construct Small Arms Range	-	-	-	8,000	-
MISSOURI	-	-	-	10,000	-
Rosecrans Memorial Airport	-	-	-	10,000	-
November 2019	-	-	-	10,000	-
Replace Communications Facility	-	-	-	10,000	-
MONTANA	-	-	-	-	9,000
Great Falls IAP	-	-	-	-	9,000
September 2019	-	-	-	-	9,000
Construct Aircraft Apron	-	-	-	-	9,000
NEW YORK	-	-	-	6,800	20,000
Francis S. Gabreski Airport	-	-	-	-	20,000
June 2019	-	-	-	-	20,000
Security Forces/Comm.Training Facility	-	-	-	-	20,000
Hancock Field	-	-	-	6,800	-
July 2019	-	-	-	6,800	-
Add To Flight Training Unit, Building 641	-	-	-	6,800	-
NORTH CAROLINA	-	-	29,600	-	-
Charlotte/Douglas IAP	-	-	29,600	-	-
March 2019	-	-	29,600	-	-
C-17 Corrosion Control & Fuel Cell Hgr	-	-	29,600	-	-
OHIO	-	-	-	15,000	13,000
Mansfield Lahm Airport	-	-	-	-	13,000
September 2019	-	-	-	-	13,000
Replace Fire Station	-	-	-	-	13,000
Toledo Express Airport	-	-	-	15,000	-
April 2019	-	-	-	15,000	-
NORTHCOM - Construct Alert Hangar	-	-	-	15,000	-
OKLAHOMA	-	-	-	8,000	-
Tulsa Iap	-	-	-	8,000	-
May 2020	-	-	-	8,000	-
Construct Small Arms Range	-	-	-	8,000	-
OREGON	-	-	-	18,500	-
Klamath Falls IAP	-	-	-	18,500	-
February 2019	-	-	-	10,500	-
Construct Corrosion Control Hangar	-	-	-	10,500	-
February 2020	-	-	-	8,000	-
Construct Indoor Range	-	-	-	8,000	-
PENNSYLVANIA	-	-	-	-	8,000



Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
Fort Indiantown Gap	-	-	-	-	8,000
November 2019	-	-	-	-	8,000
Replace Operations Training/Dining Hall	-	-	-	-	8,000
SOUTH DAKOTA	-	-	-	12,000	-
Joe Foss Field	-	-	-	12,000	-
June 2019	-	-	-	12,000	-
Aircraft Maintenance Shops	-	-	-	12,000	-
TENNESSEE	-	-	-	25,000	-
Mcghee-Tyson Airport	-	-	-	25,000	-
May 2019	-	-	-	25,000	-
Replace KC-135 Maintenance Hangar and Shops	-	-	-	25,000	-
VIRGINIA	-	-	-	-	10,000
Joint Base Langley-Eustis	-	-	-	-	10,000
January 2020	-	-	-	-	10,000
Construct Cyber Ops Facility	-	-	-	-	10,000
WISCONSIN	-	-	-	8,000	-
Truax Field	-	-	-	8,000	-
March 2020	-	-	-	8,000	-
Construct Small Arms Range	-	-	-	8,000	-
Mil. Con. Army Reserve	-	14,300	-	42,400	46,000
Department of the Army	-	14,300	-	42,400	46,000
MISSISSIPPI	-	9,300	-	-	-
Starkville	-	9,300	-	-	-
August 2019	-	9,300	-	-	-
Army Reserve Center	-	9,300	-	-	-
PENNSYLVANIA	-	5,000	-	-	-
Conneaut Lake	-	5,000	-	-	-
April 2019	-	5,000	-	-	-
DAR Highway Improvement	-	5,000	-	-	-
PUERTO RICO	-	-	-	42,400	-
Aguadilla	-	-	-	14,400	-
April 2019	-	-	-	14,400	-
Army Reserve Center	-	-	-	14,400	-
Fort Buchanan	-	-	-	28,000	-
September 2019	-	-	-	28,000	-
Army Reserve Center	-	-	-	28,000	-
WASHINGTON	-	-	-	-	23,000
Yakima	-	-	-	-	23,000
December 2019	-	-	-	-	23,000
ECS Modified TEMF	-	-	-	-	23,000
WISCONSIN	-	-	-	-	23,000
Fort McCoy	-	-	-	-	23,000
January 2020	-	-	-	-	23,000
Transient Training Barracks	-	-	-	-	23,000
Mil. Con. Naval Reserve	17,650	18,443	19,621	17,330	13,630
Department of the Navy	17,650	18,443	19,621	17,330	13,630
CALIFORNIA	-	-	-	17,330	-
Lemoore	-	-	-	17,330	-
March 2019	-	-	-	17,330	-
Naval Operational Support Center, NAS Lemoore	-	-	-	17,330	-
GEORGIA	-	-	-	-	13,630
Benning	-	-	-	-	13,630
August 2019	-	-	-	-	13,630
Reserve Training Center	-	-	-	-	13,630
LOUISIANA	-	-	11,207	-	-
New Orleans	-	-	11,207	-	-
January 2020	-	-	11,207	-	-
Joint Reserve Intelligence Center	-	-	11,207	-	-
PENNSYLVANIA	17,650	-	-	-	-
Pittsburgh	17,650	-	-	-	-
September 2019	17,650	-	-	-	-
Reserve Training Center - Pittsburgh, PA	17,650	-	-	-	-
TEXAS	-	-	8,414	-	-
Galveston	-	-	8,414	-	-
March 2019	-	-	8,414	-	-
Reserve Center Annex	-	-	8,414	-	-

Row Labels	FY 2015 Enactment	FY 2016 Enactment	FY 2017 Enactment	FY 2018 Enactment	FY 2019 Enactment
VIRGINIA	-	18,443	-	-	-
Dam Neck	-	18,443	-	-	-
September 2019	-	18,443	-	-	-
Reserve Training Center Complex	-	18,443	-	-	-
Mil. Con. Air Force Reserve	-	-	-	59,100	115,450
Department of the Air Force	-	-	-	59,100	115,450
FLORIDA	-	-	-	-	24,000
Patrick AFB	-	-	-	-	24,000
September 2019	-	-	-	-	24,000
HC-130J General Maintenance Hangar	-	-	-	-	24,000
GEORGIA	-	-	-	32,000	-
Robins AFB	-	-	-	32,000	-
July 2019	-	-	-	32,000	-
Consolidated Mission Complex Phase 2	-	-	-	32,000	-
GUAM	-	-	-	5,200	-
Joint Region Marianas	-	-	-	5,200	-
July 2019	-	-	-	5,200	-
Reserve Medical Training Facility	-	-	-	5,200	-
HAWAII	-	-	-	5,500	-
Joint Base Pearl Harbor-Hickam	-	-	-	5,500	-
September 2020	-	-	-	5,500	-
Consolidated Training Facility	-	-	-	5,500	-
INDIANA	-	-	-	-	21,500
Grissom ARB	-	-	-	-	21,500
August 2019	-	-	-	-	21,500
Add/Alter Aircraft Maintenance Hangar	-	-	-	-	12,100
Aerial Port Facility	-	-	-	-	9,400
MASSACHUSETTS	-	-	-	10,000	42,600
Westover ARB	-	-	-	10,000	42,600
July 2019	-	-	-	10,000	-
Indoor Small Arms Range	-	-	-	10,000	-
September 2019	-	-	-	-	42,600
Regional ISO Maintenance Hangar	-	-	-	-	42,600
MISSISSIPPI	-	-	-	-	4,550
Keesler AFB	-	-	-	-	4,550
August 2019	-	-	-	-	4,550
Aeromedical Staging Squadron Facility	-	-	-	-	4,550
NEW YORK	-	-	-	-	14,000
Niagara Falls IAP	-	-	-	-	14,000
July 2019	-	-	-	-	14,000
Physical Fitness Center	-	-	-	-	14,000
NORTH CAROLINA	-	-	-	6,400	-
Seymour Johnson AFB	-	-	-	6,400	-
April 2020	-	-	-	6,400	-
KC-46A ADAL for Alt Mission Storage	-	-	-	6,400	-
OHIO	-	-	-	-	8,800
Youngstown Map	-	-	-	-	8,800
September 2019	-	-	-	-	8,800
Relocate Main Gate	-	-	-	-	8,800
<b>Grand Total</b>	<b>190,351</b>	<b>345,413</b>	<b>1,277,935</b>	<b>4,258,700</b>	<b>6,799,964</b>

**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**TUESDAY, MARCH 26, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**ARMY POSTURE**

The Committee met, pursuant to notice, at 9:29 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Perdue, Cramer, McSally, Blackburn, Hawley, Reed, Shaheen, Blumenthal, Hirono, Kaine, King, Heinrich, Warren, Peters, Manchin, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. Our meeting will come to order.

We—as soon as we have a quorum here, we do have some nominations that have to break into the regular order.

The Committee meets to receive testimony on the posture of the U.S. Army in fiscal year 2020 budget request.

We welcome Dr. Mark Esper, the Secretary of the Army, and General Mark Milley, Chief of Staff of the Army. We thank both of you for your years of distinguished service. Look forward to the upcoming months.

The National Defense Strategy directs our Nation's military to prepare for the return of great-power competition. This means that we've got to be prepared to deter—if necessary, decisively defeat—potential near-peer adversaries, obviously referring to China and Russia.

In order for the Army to achieve that goal, our Army must be manned, trained, and equipped appropriately. The Army has made significant progress in rebuilding readiness across the force, but there's still a lot to be done. A high state of readiness is crucial for our Nation to demonstrate peace through strength.

With their alarming speed of modernization of both conventional and nuclear forces, China and Russia now present a credible threat to America and our allies in their regions, and an increasing threat around the world. In fact, in some areas they—they've actually surpassed us. It's a hard thing to explain to American people. They al-

ways assume that we have the very best of everything. That has been true in the past. It's not true today.

It's past time for action. You have testified that the Army is out-ranged and outgunned, as currently organized and equipped. The future of our Army readiness and the relevance requires modernization now. Any successful modernization strategy must focus on results. Rapid prototyping and realistic experimentation will be vital to getting modern, reliable, lethal weapons into the hands of our soldiers, and doing so on time within allotted budgets. We cannot allow the past acquisition failures to continue any longer.

The Army undertook a detailed and exhaustive look at every single program to ensure that each supports the National Defense Strategy. This National Defense Strategy, which, of course, we've had two hearings on this, it's a strategy that was agreed to by both Democrats and Republicans, and we're trying to use that as our blueprint. These choices will require an open and transparent dialogue with Congress along the way. We look forward to working with you to make our shared modernization vision a reality as the Army reinvests itself to become a 21st century fighting force prepared for the more lethal and dynamic battlefields of the future.

Senator Reed.

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Well, thank you very much, Mr. Chairman.

Let me join you in welcoming Secretary Esper and General Milley to this morning's hearing. This will likely be the last time that General Milley testifies before the Committee in the capacity as Chief of Staff of the Army. So, let me thank you, General, for the leadership of our soldiers, very, very much.

The President's budget request for fiscal year 2020 includes \$182.3 billion in funding for the Army. Of that amount, 150.7 billion is for the base budget requirements, and 31.6 billion for overseas contingency operations activities. This request should be evaluated in the context of the National Defense Strategy and the national security challenges facing our country. The renewed focus on strategic competition with China and Russia will require the Army to train for full-spectrum operations and to field equipment necessary for a high-end fight. I commend the Army for recognizing that, while there is a change in strategy, budgets remain constrained. I understand that, as this budget was developed, senior Army leadership scrutinized existing programs to determine which ones supported the Army's modernization priorities and which programs should be reduced or canceled so that savings could be reinvested. While the Committee may not agree with every budget decision made by the Army, they did make tough decisions to prioritize funding for the future fight.

In support of the focus on near-peer competition, the Army has also made major structural changes to expedite modernization across the force. The Army has established eight cross-functional teams to demonstrate capabilities through prototyping and experimentation for major modernization priorities. The Army is also exercising new acquisition authorities provided by Congress, while Army Futures Command was established as the single command for all modernization efforts. Delivering cutting-edge capabilities to

the warfighter under an expedited acquisition timeline is always a challenge. To do so while undergoing a major structural and cultural change with the establishment of the Army Futures Command makes this process even more complex.

While I applaud the Army for taking a hard look at their acquisition processes, we do not have a wide margin for mistakes, given the threats from our adversaries. I asked our witnesses this morning to share what the Army has learned to date from these efforts.

While modernizing military platforms and upgraded equipment are critical for the battlefield, ensuring our soldiers are ready for the fight remains our highest priority. I commend Army leadership for their focus on unit readiness and for submitting a budget proposal that supports 25 Combat Training Center rotations for brigade combat teams. This budget request seeks an increase of 2,000 Active Duty soldiers as well as a slight end-strength increase for the Army National Guard and Reserve. It is imperative that, as the Army grows, it remains focused on the quality of our soldiers rather than the quantity. The Army has acknowledged that they were unable to meet the recruitment goals last year, and I would like to know from our witnesses how the Army plans to address this challenge.

The President's budget also requests an across-the-board pay raise of 3.1 percent for all military personnel, equal to the annual increase in the employment cost index. However, once again, the President has decided not to include in this budget the funding necessary to support a pay raise for civilian employees. This budget request also makes reduction to Federal employee pensions affecting current and future employees. Civilians working in the Department of the Army are force multipliers and part of the total force. Unfortunately, by denying a corresponding pay increase for our civilians and cutting their pensions, the President's budget request sends the message that their work and contributions to our national defense are not as highly valued as they should be, and it hinders the Army's ability to recruit the very best civilian workforce we need. I hope to hear from our witnesses their views on the morale of the Army civilian workforce and their ability to effectively manage the total force, including civilian employees.

Finally, I wanted to close on two important issues. First, this Committee has received the list of military construction projects that will be targeted in order to resource the President's proposed wall. Many of these projects are Army military construction priorities, and they will be at risk for delay or cancellation. Also, there are concerns that troop deployments to the southern border may undermine Army readiness goals. Given the efforts by the Army over the past several years to rebuild readiness, I would like to hear from our witnesses today whether moving funds from military construction projects or deploying soldiers to the border will have a detrimental impact on readiness.

Second, I want to emphasize the urgency of fixing the substandard living conditions that are pervasive in privatized military housing. I appreciate the Army has acknowledged the enormity of the issue and that they are working to address this crisis. In the meantime, this Committee will continue our stringent oversight

until every servicemember and their family has access to the high-quality housing that they have earned and deserve.

Again, thank you. I look forward to hearing from the witnesses. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Now Carl Doms and your group understand why you're here today.

Since a quorum is now present, I ask the Committee to consider a list of 2,743 pending military nominations. All the nominations have been before the Committee the required length of time.

Is there a motion to favorably report these——

Senator REED. So moved.

Chairman INHOFE.—2,743——

Senator WICKER. Second.

Chairman INHOFE.—pending——

There's a motion. There's a second.

All in favor, say aye.

[A chorus of ayes.]

Chairman INHOFE. Opposed, no.

[No response.]

[The list of nominations considered and approved by the Committee follows:]

MILITARY NOMINATIONS PENDING WITH THE SENATE ARMED SERVICES COMMITTEE WHICH ARE PROPOSED FOR THE COMMITTEE'S CONSIDERATION ON MARCH 26, 2019.

1. **In the Marine Corps Reserve there are 2 appointments to the grade of brigadier general (list begins with Leonard F. Anderson IV)** (Reference No. 32)
2. In the Air Force there are 55 appointments to the grade of lieutenant colonel (list begins with Daniel M. Anderson) (Reference No. 288)
3. In the Army there is 1 appointment to the grade of major (Matthew D. Colsia) (Reference No. 305)
4. In the Army there is 1 appointment to the grade of major (Deven R. Gaston) (Reference No. 306)
5. In the Marine Corps there are 2 appointments to the grade of major (list begins with Steven M. Angeline) (Reference No. 319)
6. In the Marine Corps there are 2 appointments to the grade of lieutenant colonel (list begins with David F. Hunley) (Reference No. 326)
7. In the Marine Corps there is 1 appointment to the grade of major (John C. Jarvis) (Reference No. 328)
8. In the Marine Corps there are 2 appointments to the grade of major (list begins with Nathaneal J. Hart, Jr.) (Reference No. 337)
9. In the Marine Corps there are 5 appointments to the grade of major (list begins with Matthew J. Anderson) (Reference No. 340)
10. **RADM(lh) Peter G. Stamatopoulos, USN to be rear admiral** (Reference No. 346)
11. **RADM(lh) Gayle D. Shaffer, USN to be rear admiral** (Reference No. 347)
12. **In the Navy there are 2 appointments to the grade of rear admiral (list begins with Kelly A. Aeschbach)** (Reference No. 348)
13. **In the Navy there are 12 appointments to the grade of rear admiral (list begins with Blake L. Converse)** (Reference No. 349)
14. **Capt. Dean A. Vanderley, USN to be rear admiral (lower half)** (Reference No. 354)
15. **Capt. Kenneth W. Epps, USN to be rear admiral (lower half)** (Reference No. 355)
16. **Capt. Timothy H. Weber, USN to be rear admiral (lower half)** (Reference No. 356)

17. **Capt. James L. Hancock, USN to be rear admiral (lower half)** (Reference No. 357)
18. **In the Navy there are 2 appointments to the grade of rear admiral (lower half) (list begins with Nicholas M. Homan)** (Reference No. 358)
19. **Capt. Charles W. Brown, USN to be rear admiral (lower half)** (Reference No. 359)
20. In the Army there are 949 appointments to the grade of major (list begins with Adrian Acevedo) (Reference No. 380)
21. In the Army there are 556 appointments to the grade of major (list begins with Benjamin T. Abel) (Reference No. 381)
22. In the Army there are 555 appointments to the grade of major (list begins with Kwansah E. Ackah) (Reference No. 382)
23. In the Army there are 51 appointments to the grade of major (list begins with Alan Adame) (Reference No. 383)
24. In the Army there is 1 appointment to the grade of major (Elizabeth A. Fields) (Reference No. 384)
25. **RADM John B. Nowell, Jr., USN to be vice admiral and Chief of Naval Personnel and Deputy Chief of Naval Operations for Manpower, Personnel, Training, and Education, N1** (Reference No. 393)
26. **MG Steven L. Basham, USAF to be lieutenant general and Deputy Commander, US Air Forces Europe and Deputy Commander, US Air Forces Africa** (Reference No. 419)
27. **Col. Steven J. Butow, ANG to be brigadier general** (Reference No. 420)
28. **MG Karen H. Gibson, USA to be lieutenant general and Deputy Director of National Intelligence for National Security Partnerships, Office of the Director of National Intelligence** (Reference No. 421)
29. **In the Navy there are 3 appointments to the grade of rear admiral (list begins with James P. Downey)** (Reference No. 422)
30. **RADM Ronald A. Boxall, USN to be vice admiral and Director, Force Structure, Resources and Assessment, J-8, Joint Staff** (Reference No. 423)
31. In the Air Force Reserve there is 1 appointment to the grade of colonel (Thomas D. Crimmins) (Reference No. 425)
32. In the Air Force there are 16 appointments to the grade of lieutenant colonel (list begins with Shawn C. Bishop) (Reference No. 427)
33. In the Air Force there are 14 appointments to the grade of colonel (list begins with Michell A. Archebelle) (Reference No. 428)
34. In the Air Force there are 6 appointments to the grade of colonel (list begins with Peter N. Fischer) (Reference No. 429)
35. In the Air Force there are 425 appointments to the grade of colonel (list begins with Brian M. Alexander) (Reference No. 430)
36. In the Army there is 1 appointment to the grade of lieutenant colonel (P.J. Fox) (Reference No. 433)
37. In the Army there is 1 appointment to the grade of major (Nathan M. Clayton) (Reference No. 434)
38. In the Army there is 1 appointment to the grade of major (Adam P. James) (Reference No. 435)
39. In the Army Reserve there are 33 appointments to the grade of colonel (list begins with Jason S. Baker) (Reference No. 436)
40. In the Army there is 1 appointment to the grade of lieutenant colonel (Shelia R. Day) (Reference No. 437)
41. In the Army there is 1 appointment to the grade of lieutenant colonel (Robert D. Cope) (Reference No. 438)
42. In the Army Reserve there is 1 appointment to the grade of colonel (William C. Mitchell) (Reference No. 439)
43. **BG Thomas L. Solhjem, USA to be major general and Chief of Chaplains, US Army** (Reference No. 457)
44. **In the Army there are 2 appointments to the grade of major general (list begins with Telita Crosland)** (Reference No. 458)
45. **LTG Daniel R. Hokanson, ARNG to be lieutenant general and Director, Army National Guard** (Reference No. 459)

46. **MG Leon N. Thurgood, USA to be lieutenant general and Director of Hypersonics, Directed Energy, Space and Rapid Acquisition, Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology** (Reference No. 461)
47. **MG Walter E. Piatt, USA to be lieutenant general and Director of the Army Staff** (Reference No. 463)
48. In the Air Force there is 1 appointment to the grade of lieutenant colonel (Latoya D. Smith) (Reference No. 472)
49. In the Air Force Reserve there is 1 appointment to the grade of colonel (Lisa Marie Ahaesy) (Reference No. 473)
50. In the Army there is 1 appointment to the grade of major (Rubirosa B. Bago) (Reference No. 474)
51. In the Army there is 1 appointment to the grade of major (Meghan C. Gerrity) (Reference No. 475)
52. In the Army there is 1 appointment to the grade of major (Daniel M. Jansen) (Reference No. 476)
53. In the Army there is 1 appointment to the grade of major (Randolph Powell) (Reference No. 477)
54. In the Army there is 1 appointment to the grade of major (Michael J. Prokos) (Reference No. 478)
55. In the Army there is 1 appointment to the grade of major (Anthony Bellofigueroa) (Reference No. 481)
56. In the Army there is 1 appointment to the grade of major (Sean R. Richardson) (Reference No. 482)
57. In the Army there is 1 appointment to the grade of major (Kahtonna C. Allen) (Reference No. 483)
58. In the Army Reserve there is 1 appointment to the grade of colonel (Angelo N. Catalano) (Reference No. 484)
59. In the Army there is 1 appointment to the grade of lieutenant colonel (Charles J. Calais) (Reference No. 485)
60. In the Army Reserve there is 1 appointment to the grade of colonel (Robert T. Evans) (Reference No. 486)
61. In the Navy there is 1 appointment to the grade of lieutenant commander (Edward M. Prendergast) (Reference No. 487)
62. In the Navy there is 1 appointment to the grade of commander (Thomas L. Hinnant III) (Reference No. 489)
63. In the Navy there is 1 appointment to the grade of lieutenant commander (Sanjay Sharma) (Reference No. 490)
64. **LTG James C. Slife, USAF to be lieutenant general and Commander, Air Force Special Operations Command** (Reference No. 493)
65. **LTG Paul E. Funk II, USA to be general and Commanding General, US Army Training and Doctrine Command** (Reference No. 494)
66. **RADM Dee L. Mewbourne, USN to be vice admiral and Deputy Commander, US Transportation Command** (Reference No. 497)
67. **RADM Jon A. Hill, USN to be vice admiral and Director, Missile Defense Agency** (Reference No. 498)
68. **RADM Stuart B. Munsch, USN to be vice admiral and Deputy Chief of Naval Operations for Operations, Plans, and Strategy, N3/N5** (Reference No. 499)
69. In the Air Force there are 3 appointments to the grade of colonel (list begins with Julie Huygen) (Reference No. 500)
70. In the Army there are 2 appointments to the grade of colonel (list begins with Paula I. Schasberger) (Reference No. 501)
71. In the Navy there is 1 appointment to the grade of commander (Angela Tang) (Reference No. 502)

---

TOTAL: 2,743

Chairman INHOFE. The motion carries.

We'll now hear from our two witnesses. It's a pleasure having both of you here.



We'll start with you, Secretary Esper. Try to keep your remarks somewhere in the neighborhood of 5 minutes. You're recognized.

**STATEMENT OF THE HONORABLE MARK T. ESPER,  
SECRETARY OF THE ARMY**

Secretary ESPER. Yes, sir, I'll watch the clock, here.

So, Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, thank you for the opportunity to appear before you today.

I want to, first, thank Congress for helping us reverse the readiness decline that developed following several years of budget uncertainty. Because of the strong support provided in the fiscal year 2018 and fiscal year 2019 budgets, we have increased the number of fully ready brigade combat teams by 55 percent over the past 2 years. However, while I am confident we would prevail against any foe today, our adversaries are working hard to contest the outcome of future conflicts. As a result, the Army stands at a strategic inflection point. If we fail to modernize the Army now, we risk losing the first battles of the next war.

For the past 17 years, the Army bore the brunt of the wars in Iraq and Afghanistan. For over a decade, we postponed modernization to procure equipment tailored to counterinsurgency operations. Our legacy combat systems, designed for high-intensity conflict, entered service when I joined the Army in the early 1980s. While they dominated in past conflicts, incremental upgrades for many of them are no longer adequate for the demands of future battlefield, as described in the National Defense Strategy. We must build the next generation of combat systems now, before Russia and China outpace us with their modernization programs.

Despite Russia's looming economic difficulties, they are steadily upgrading their military capabilities. In addition to field testing their next-generation T-14 Armada tank, they continue to advance the development of their air defense and artillery systems. When combined with new technologies, such as drones, cyber, and electronic warfare, Russia has proven its battlefield prowess.

We have no reason to believe that Moscow's aggressive behavior will cease in the short term. Russia's blatant disregard for their neighbors' sovereignty, as demonstrated in Ukraine and Georgia, is a deliberate strategy meant to intimidate weaker states and undermine the NATO alliance.

In the long run, China presents an even greater challenge. They continue to focus their military investments in cutting-edge technologies, such as artificial intelligence, directed energy, and hypersonics. Beijing's systematic theft of intellectual property is also allowing them to develop capabilities cheaper and faster than ever before. Additionally, China's coercive economic practices are expanding its sphere of influence in ways contrary to our Nation's interests.

To deter the growing threat posed by great-power competitors, and to defeat them in battle if necessary, we must leap ahead to the next generation of combat systems, and we must do so now. Over the past year, the Army took a major step forward in reorganizing its entire modernization enterprise with the establishment of Futures Command. In doing so, we stripped away layers of bu-

reaucracy and streamlined our acquisition process while achieving unity of command and greater accountability. Guided by our six modernization priorities, Army Futures Command is hard at work developing the systems needed to maintain battlefield overmatch in future conflicts.

When we received our budget this time last year, we felt that it was unreasonable to ask Congress for the additional 4 to 5 billion dollars needed annually to fund our modernization without first looking internally to find the necessary resources. As a result, the Army's senior leaders took an unprecedented initiative to review every Army program. Our goal was simple: Find those programs that least contribute to the Army's lethality, and reallocate those resources into higher-priority activities. After over 50 hours of painstaking deliberations, we eliminated, reduced, or delayed nearly 200 programs, freeing up over \$30 billion over the next 5 years. We then reinvested this money into our top priorities, those systems and initiatives we need to prevail in future wars. The Army will continue to ruthlessly prioritize our budgets to provide a clear, predictable path forward that will achieve our strategic goals. That process is underway now as we develop next year's budget.

Support for the Army's fiscal year 2020 budget is critical to building the Army the Nation needs and demands. Those who are invested in legacy systems will fight to hold on to the past, while ignoring the billions of dollars in opportunity created by our investments in new technologies and what it means for the Army's future readiness. While change will be hard for some, we can no longer afford to delay the Army's modernization. We believe we are following the sound guidance conveyed to us by many of you.

In this era of great-power competition, we cannot risk falling behind. If left unchecked, Russia and China will continue to erode the competitive military advantage we have held for years.

The Army has clear vision—a clear vision, which I ask be entered into the record—and a sound strategy to maintain battlefield overmatch. We are making the tough choices. We now need the support of Congress to modernize the force, and it starts with the fiscal year 2020 budget. The bottom line is this: We owe it to our soldiers to provide them the weapons and equipment they need to win decisively in the future.

Thank you again for your continued support. I look forward to your questions and appreciate the opportunity to discuss these important matters with you today.

Chairman INHOFE. Thank you, Mr. Secretary. Excellent statement. Without objection, the report made part of the record.

[The information referred to follows:]

#### THE ARMY VISION

The United States Army is the most lethal and capable ground combat force in history. It has proven this in multiple conflicts, across a broad spectrum of operations, in various locations around the world, defending the Nation and serving the American people well for over 240 years. The key to this success has been the skill and grit of the American soldier, the quality of its Leaders, the superiority of its equipment, and the ability of the Army—Regular, National Guard, and Reserve to adapt to and dominate a complex and continuously changing environment as a member of the Joint Force.

As we look ahead, near-peer competitors such as China and Russia will increasingly challenge the United States and our allies in Europe, the Middle East, and

the Indo-Pacific region. At the same time, we should expect these countries' arms, equipment, and tactics to be used against us by others, including threats such as North Korea and Iran, failed states, and terrorist groups. Our adversaries' ambitions and the accelerating pace of technological change will create challenges and opportunities for the Army's battlefield superiority.

Meanwhile, the many demands on the Nation's resources will put downward pressure on the defense budget in the future, forcing the Army to continue making difficult choices about how it spends scarce dollars to meet national objectives and compelling us to become ever more efficient. A continued commitment to strengthening our alliances and building partnerships will help offset these challenges.

The Army Mission—our purpose—remains constant: *To deploy, fight, and win our Nation's wars by providing ready, prompt, and sustained land dominance by Army forces across the full spectrum of conflict as part of the Joint Force.* The Army mission is vital to the Nation because we are a Service capable of defeating enemy ground forces and indefinitely seizing and controlling those things an adversary prizes most—its land, its resources, and its population.

Given the threats and challenges ahead, it is imperative the Army have a clear and coherent vision of where we want to be in the coming years so that we retain our overmatch against all potential adversaries and remain capable of accomplishing our Mission in the future. As such, the Army Vision—our future end state—is as follows:

*The Army of 2028 will be ready to deploy, fight, and win decisively against any adversary, anytime and anywhere, in a joint, multi-domain, high-intensity conflict, while simultaneously deterring others and maintaining its ability to conduct irregular warfare. The Army will do this through the employment of modern manned and unmanned ground combat vehicles, aircraft, sustainment systems, and weapons, coupled with robust combined arms formations and tactics based on a modern warfighting doctrine and centered on exceptional leaders and soldiers of unmatched lethality.*

To achieve our Vision, the Army must meet the following objectives in the coming years:

- *Man.* Grow the Regular Army above 500,000 soldiers, with associated growth in the National Guard and Army Reserve, by recruiting and retaining high quality, physically fit, mentally tough soldiers who can deploy, fight, and win decisively on any future battlefield.
- *Organize.* Ensure war-fighting formations have sufficient infantry, armor, engineer, artillery, and air defense assets. Units from brigade through corps must also have the ability to conduct sustained ground and air Intelligence, Surveillance, and Reconnaissance; Electronic Warfare; and cyber operations to shape the battlefield across all domains. Aviation, additional combat support, and robust logistical support must be readily available to units.
- *Train.* Focus training on high-intensity conflict, with emphasis on operating in dense urban terrain, electronically degraded environments, and under constant surveillance. Training must be tough, realistic, iterative, and dynamic. Continuous movement, battlefield innovation, and leverage of combined arms maneuver with the Joint F , allies, and partners must be its hallmarks. This training will require rapid expansion of our training environments and deeper distribution of simulations capabilities down to the company level to significantly enhance soldier and team lethality.
- *Equip.* Modernize the force by first reforming the current acquisition system and unifying the modernization enterprise under a single command to focus the Army's efforts on delivering the weapons, combat vehicles, sustainment systems, and equipment that Soldiers need when they need it. This includes experimenting with and developing autonomous systems, artificial intelligence, and robotics to make our soldiers more effective and our units less logistically dependent.
- *Lead.* Develop smart, thoughtful, and innovative leaders of character who are comfortable with complexity and capable of operating from the tactical to the strategic level. We will build a new talent management-based personnel system that leverages the Knowledge, skills, behaviors, and preferences of its officers and noncommissioned officers. This system, when coupled with more flexible career models, will enable the Army to better attract, identify, develop, and place these leaders to optimize outcomes for all.

To achieve and sustain these objectives given the uncertainty of future budgets, the Army must continually assess everything we do, identifying lower value activi-

ties to discontinue and ways to improve what we must do, in order to free up time, money, and manpower for our top priorities. Trusting and empowering subordinate leaders will facilitate both reform and greater performance.

In all these efforts, we will ensure that our soldiers, civilian workforce, and their families enjoy the professional opportunities and quality of life they deserve. From the top down we must also remain committed to the Army Values. The Army is at its best when we work and fight as one team, and our Army Values, coupled with our Warrior Ethos, will guide and serve us well as we face the challenges ahead.

Since 1775, the United States Army has proven itself absolutely vital to protecting the American people, safeguarding the Nation, and advancing our Interests abroad. This fact remains true today. Our ability to do so will be even more in the future as threats continue to emerge and evolve, becoming ever more dangerous and more complex. To remain ready to accomplish our Mission of fighting and winning the Nation's wars, the Army must fulfill the future Army Vision outlined herein. We are confident that with the right leadership, the proper focus, sufficient resources, and sustained effort the U.S. Army will achieve our Vision, remain the world's premier fighting force, and serve the Nation well for decades to come.

Mark A. Milley  
General, United States Army  
Chief of Staff

Mark T. Esper  
Secretary of the Army

Chairman INHOFE. General Milley.

#### **STATEMENT OF GENERAL MARK A. MILLEY, USA, CHIEF OF STAFF OF THE ARMY**

General MILLEY. Chairman Inhofe, Ranking Member Reed, and distinguished Members of this Committee, thank you again for the opportunity to join Secretary Esper here today.

It remains an incredible privilege and honor to represent the million soldiers in uniform in the regular Army, the National Guard, and the U.S. Army Reserve, arrayed in 18 divisions, 58 brigade combat teams, with 180,000 of them tonight deployed on freedom's frontier in 140 countries around the world.

While much of our testimony today is going to focus on our challenges and how to make us stronger and more lethal, it's important to note up front, to you, the Committee, and to the Congress, to the American people, our allies, and, perhaps most importantly, to our adversaries, the United States Army is highly capable, globally deployable on very short notice to anywhere in the world, and we have the training, equipment, people, and leaders to prevail in ground combat against anyone, anywhere, anytime.

I concur with Secretary Esper's comments on the threats posed by China and Russia. The international order, and, by extension, United States interests, are under increasingly dangerous pressure. China is a significant threat to the United States and our allies in the mid and long terms. They're a revisionist power seeking to diminish our influence in the Pacific and establish themselves as the controlling regional power in Asia, and they are setting conditions to challenge the United States on a global scale.

Russia seeks to return to global great-power status, and will continue to challenge the United States, not only in Europe but also in the Middle East, Asia, the Arctic, Africa, and the western hemisphere. Russia continues to undermine NATO as an alliance and to sow dissent throughout the European continent and in our own Homeland through a variety of means. Russia remains the only

current existential threat to the United States, and will likely become increasingly opportunistic in the near term, in my view.

In the last 17 years, our strategic competitors have eroded our military advantages, as outlined by Secretary Esper. With your help, starting 2 years ago, we began to restore our competitive advantage, and our recent budgets have helped improve readiness and lay the groundwork for future modernization. We ask, with this budget, that you sustain these efforts. Our goal remains 66 percent, two-thirds, of the Active Duty Army brigades at the highest levels of readiness, and 33 percent of the Guard and Reserve also at the highest levels. Those numbers, those levels of readiness, are what we need to be able to align with the strategy, as laid out in the National Defense Strategy. With continued, consistent, predictable congressional support, we can reach those levels of readiness sometime in 2022.

Specifically, this budget will fund, in terms of readiness, 58 brigade combat teams, six security force assistance brigades for the total Army, 32 combat training rotations, to include four for the National Guard, increase pre-positioned stocks in both EUCOM [European Command] and INDOPACOM [Indo-Pacific Command]. In terms of modernization, which is really just another term for future readiness, this budget will improve capabilities across our six modernization priority areas and the 31 specific programs that are embedded within that. In addition to that, it funds 51 other programs that are of significant importance to the Army. It'll increase the lethality of munitions across the globe, and it will fill specific solutions that we have identified, 17 critical gaps relative to our near-peer competitors that I can brief in detail in a classified hearing, if you so choose.

Lastly, I want to highlight that this Committee and Congress as a whole has provided us tremendous support over the last several years. We recognize that, and we are committed to applying our resources deliberately and responsibly, understanding that they've been entrusted to us by Congress and the American people. We will continue to do that, going forward, to ensure that our solemn obligation to never send our sons and daughters into harm's way unless they are properly trained, fully manned, have the best equipment money can buy, and are extraordinarily well led.

Thank you again for your continued support to our soldiers and their families. I look forward to answering your questions.

[The joint prepared statement of Dr. Esper and General Milley follows:]

JOINT PREPARED STATEMENT BY SECRETARY MARK T. ESPER

AND

GENERAL MARK A. MILLEY

#### INTRODUCTION

America's Army stands ready today to deploy, fight, and win our Nation's wars. The Army has made great progress in recent years, recovering from depleted levels of readiness following extended periods of sustained conflict and reduced defense spending. Our near-peer competitors, however, capitalized on this period to advance their own positions by modernizing their militaries and reducing the overmatch we held for decades. Aligned with the National Defense Strategy (NDS), the Army is

pursuing a path to ensure we stay ahead of our competitors and remain ready and lethal into the future.

The Army's Vision and Strategy outline the force needed to prevail over the threats of the future, along with the plan for building that Army. To accomplish this, the Army's efforts are focused on three priority areas: building readiness for high-intensity conflict against strategic competitors; modernizing our doctrine, equipment, and formations to conduct multi-domain operations; and reforming our personnel system, business processes, and fiscal management to ensure our resources are put towards the highest priority activities. Additionally, the Army will continue to take care of its people, live the Army Values, and strengthen our alliances and partnerships to sustain long-term success in wartime and peace.

We are grateful to Congress for the strong and timely support provided to the Army in the fiscal year 2019 (FY19) appropriations. Receiving this funding on time reduced risk to short term readiness and allowed us to make significant investments towards our six modernization priorities. In order to achieve the defense objectives in the NDS and meet our goals as outlined in the Army Vision, we must receive predictable, adequate, sustained, and timely funding in the future. The Army's total fiscal year 2020 budget request is \$182.3 billion, consisting of \$150.7 billion for base requirements and \$31.6 billion for Overseas Contingency Operations requirements. This request provides the resources the Army needs to build readiness, while modernizing for the future.

#### STRATEGIC ENVIRONMENT

The Army faces a global security environment that continually grows more competitive and volatile. The challenges are many: the reemergence of great power competition; a resilient but weakening post-World War II order; accelerating technological advancements empowering state and non-state actors; and persistent threats to the Homeland. The Army must be ready now, and in the future, to confront this challenging strategic environment. We must have an Army prepared for high-intensity conflict, modernized to extend overmatch against near-peer adversaries, and trained to fight as part of the Joint Force alongside our allies and partners, all while sustaining our ability to conduct irregular warfare.

The modern battlefield encompasses all domains—air, land, sea, space, and cyberspace—and is increasing in geographic scale. Near-peer competitors, like China and Russia, are aggressively pursuing modernization programs to erode American overmatch. They have developed sophisticated anti-access and area denial (A2/AD) systems, fires, cyber, electronic warfare, and space-based capabilities that generate layers of stand-off to disrupt the deployment of military forces, deny the build-up of combat power, and separate Joint Force capabilities in time and space. These capabilities may embolden more aggressive behavior in the conventional realm. China's military modernization program aims to transform the People's Liberation Army into a modern, mechanized, Information Age force in the next one to two decades and a world-class military capable of strategic force projection and warfighting by mid-century. Their military strategy seeks to protect Chinese interests outside of Asia and into Europe, the Middle East, and Africa. Furthermore, Russia is likely to threaten our interests for the next 20 years as they attempt to regain control of historic spheres of influence and shape European economic and security structures in their favor. Although we may not face China and Russia directly, we are likely to face their systems and methods of warfare as they proliferate military capabilities to others.

Regional state adversaries, namely North Korea and Iran, also present significant challenges as they pursue advanced capabilities and weapons of mass destruction to gain regional influence and ensure regime survival. Additionally, transnational terrorist organizations continue to pose a threat to our Homeland and our interests, as well as our allies and partners. The Army must be prepared to defeat and deter highly capable adversaries while disrupting violent extremists and simultaneously defending the Homeland.

Today, the Army contributes to our Nation's efforts to counter these challenges by providing combatant commanders over 179,000 soldiers in more than 140 countries, including 110,000 soldiers deployed on a rotational basis. This includes over 30,000 soldiers supporting operations in the Middle East and Afghanistan; 8,000 soldiers supporting NATO operations and the European Deterrence Initiative; and over 17,000 soldiers providing a forward American presence on the Korean Peninsula. Additionally, Army forces remain prepared to respond to other contingency requirements, both abroad and at home. Concurrently, the Army is investing in the research and development of the next generation of weapons and equipment needed to stay ahead of our adversaries. Through a disciplined prioritization of resources,

the Army will remain postured to defend the Nation in an increasingly dangerous world.

#### READINESS

America's Army stands ready today to defeat any adversary that threatens our Nation and our national interests. We have made great progress in rebuilding warfighting readiness, which remains the Army's number one priority as we increase lethality to prepare for the future. Ready forces must be organized, trained, and equipped for prompt and sustained ground combat. This ensures the Army can deploy, fight, and win decisively in high-intensity conflict against any adversary, anytime, and anywhere. Over the past year, the Army balanced our force structure, increased manning in combat units, filled equipment shortfalls, and improved deployability to build readiness across the force. From September 2016 to December 2018, we increased the number of ready Brigade Combat Teams from 18 to 28, and more broadly, increased readiness across all Army units by nearly 11 percent. We achieved these readiness gains despite sustained operational demand for Army units. Our fiscal year 2020 budget request sustains this momentum, so the Army can achieve our readiness objectives by 2022.

The Army has implemented several readiness initiatives to reorganize for high-intensity conflict against near-peer competitors. We are increasing combat readiness by working to fill our operational units to 100 percent of authorized strength this year and 105 percent of strength by the end of 2020. Furthermore, we reduced the non-deployable rates of soldiers from 15 percent in 2015 to six percent today. We anticipate achieving our goal of five percent non-deployable soldiers by the end of this year. This equates to thousands more soldiers ready to deploy in support of global contingency operations. We also rebalanced our force structure to increase lethality by initiating the conversion of two Infantry Brigade Combat Teams to Armored Brigade Combat Teams, our most potent battlefield formation. Furthermore, we plan to modestly grow the Regular Army to 480,000 with associated growth in the Army National Guard and the Army Reserve in 2020. This growth will allow the Army to fill critical gaps in the near term in cyber, air and missile defense, and fires while we develop the necessary force structure and end strength needed to execute Multi-Domain Operations.

Another critical element of readiness is training. We overhauled Army basic training to develop more lethal, disciplined, and resilient soldiers. This includes extending Infantry One Station Unit Training from 14 weeks to 22 weeks. Initial reports show a significant reduction in attrition and injuries with significant improvements in physical fitness, land navigation, and marksmanship skills based on the additional training time and a reduced Drill Sergeant to trainee ratio. Other branches may see similar adjustments through fiscal year 2024.

Army collective training focuses on high-intensity conflict, with an emphasis on operating in complex terrain, electronically degraded environments, and under constant surveillance. Training is tough, realistic, iterative, and task focused. We eliminated or reduced over 85 individual training requirements to unburden commanders and allow them to focus on training their units. In the Army National Guard and the Army Reserve, we increased the training days for select units to increase the pool of Reserve component units available to support operational requirements. Additionally, we maximized capacity at our combat training centers to meet Army force readiness requirements. The Army will execute 26 Decisive Action Training Environment rotations for Brigade Combat Teams and six other mission specific rotations for a total of 32 combat training center rotations in fiscal year 2019. Moreover, we continue to develop a Synthetic Training Environment which will integrate live, virtual, constructive, and game-based training environments into a single platform to increase home station training repetitions and enhance training realism in a variety of scenarios and locations.

We also approved the new Army Combat Fitness Test (ACFT) to fundamentally improve our fitness culture, reduce injuries, increase deployability, and increase the probability that a soldier survives on the battlefield of the future. We have focused our fitness standards on the skills needed to fight in sustained close combat where physical toughness and endurance will be pushed to the extremes of human capacity. We began field-testing the ACFT in 2018 with 63 units across the Total Army and will begin full implementation this year. By the end of fiscal year 2020, the ACFT will be the fitness test of record for all soldiers.

Increasing readiness is also about improving our equipment. To this end, Army Materiel Command increased the spare parts inventory and ammunition stockpiles. The Army also redistributed equipment to Focused Readiness Units, which remain at higher readiness levels to support global response. Furthermore, we are making

progress towards achieving ground and aviation equipment readiness goals Army-wide.

To further improve equipment readiness and enhance our power projection capabilities, the Army uses prepositioned stocks to quickly execute operational plans and conduct contingency operations. We budgeted \$1.7 billion in fiscal year 2019 and fiscal year 2020 to improve the readiness of Army Prepositioned Stocks. Additionally, we initiated a Configured-for-Combat effort to equip Army Prepositioned Stocks with combat enablers such as communications, modernized weapons, and counter-measure systems in order to speed our ability to build combat power. This reduces the time it takes to build combat power by weeks and significantly reduces the amount of strategic airlift previously required to deploy early entry Army forces. Follow-on forces will continue to rely on modern and ready strategic lift assets, especially sealift, to deliver ready and lethal ground forces in support of the Joint Force. We must continue to invest in robust power projection platforms and strategic lift capabilities to ensure we can rapidly deploy and operate anywhere in the world.

Through these readiness initiatives, the Army is getting stronger by the month in manning, training, and equipping the force. With Congressional support, our fiscal year 2020 budget will allow us to continue to increase readiness and build lethality.

#### MODERNIZATION

While we continue to build readiness, the Army must also prepare for the future. This includes modernizing our doctrine, equipment, processes, and organizational structures to extend our overmatch against any competitor on any battlefield. Guiding our modernization effort is our Multi-Domain Operations concept, which identifies the threats and challenges we will face in the future. Great power competitors like China are developing capabilities to create standoff intended to frustrate our ability to build combat power and maneuver at will. To counter this, the Army will need to integrate our capabilities with the Air Force, Navy, and Marines even more in the future. The Army's new Multi-Domain Operations concept describes how we will synchronize our capabilities across all domains in support of the Joint Force.

The Army is using the Multi-Domain Operations concept to inform future force development through numerous iterations of experimentation and analysis, including field experimentation with Multi-Domain Task Force pilots in the Indo-Pacific region and Europe. Our future success depends on modernized equipment, evolving doctrine, and the organizations essential to ensure overmatch against our competitors. These elements will work in concert to increase our combat capabilities across all domains.

As a major step towards developing the capabilities needed for Multi-Domain Operations, we reorganized our entire modernization enterprise for greater speed and efficiency. Last year, the Army made its most significant organizational change in over 40 years by establishing the Army Futures Command (AFC). We stood up AFC in the innovation hub of Austin, Texas with a focus on providing unity of command and unity of effort for the modernization enterprise. For the first time, one commander is driving concept development, requirements determination, organizational design, science and technology research, and solution development. We located AFC outside of a traditional Army installation to increase their accessibility and ability to collaborate with industry and academia. Through these partnerships, AFC will identify and deliver new capabilities with greater speed and more efficient use of our resources.

To guide AFC, the Army established a clear set of modernization priorities that emphasize rapid maneuver, overwhelming fires, tactical innovation, and mission command. Our six modernization priorities will not change, and they underscore the Army's commitment to innovate for the future. We have one simple focus—to make soldiers and units more capable and lethal. Over the last year, we identified \$16.1 billion in legacy equipment programs that we could reinvest towards 31 signature systems that are critical to realizing Multi-Domain Operations and are aligned with these priorities. The six Army modernization priorities are:

- *Long Range Precision Fires*—We will improve the range and lethality of cannon artillery and increase missile capabilities to ensure overmatch at each echelon. Army artillery weapons, including Extended Range Cannon Artillery and the Precision Strike Missile, will neutralize and dis-integrate adversary A2/AD networks, from extended ranges, to create windows of opportunity for the Joint Force to exploit. The Extended Range Cannon Artillery is on schedule for delivery in fiscal year 2023. It will protect and support maneuver forces in the close and deep operational maneuver areas with an extended range out to 70km and increased 6–10 rounds/minute volume of fire. The Army has requested \$1.31 bil-



lion for Long Range Precision Fires in the fiscal year 2020 President's Budget to accelerate prototyping and initial fielding.

- *Next Generation of Combat Vehicles*—The Army will modernize the next generation of combat vehicles through technology development, experimentation, and prototyping to ensure overmatch against near-peer competitors. These vehicles will employ greater firepower, mobility, and protection to successfully maneuver on more lethal battlefields. They will have manned and unmanned variants for combined arms maneuver, and be built with future growth in mind. The first prototype will arrive in fiscal year 2021 to accelerate experimentation and initial fielding. We requested \$2.0 billion in the fiscal year 2020 President's Budget to deliver an initial capability.
- *Future Vertical Lift*—We will increase our competitive aviation advantage with next generation aircraft to penetrate contested airspace and support independent maneuver from greater distances through extended range, endurance, and lifting capacity. The most important FVL investments at the moment are the Army's development of the Future Armed Reconnaissance Aircraft, designed to address the gap left by retirement of the Kiowa, and the Future Long Range Assault Aircraft. An additional investment includes integrating unmanned aerial systems, which we will prototype in fiscal year 2024, for manned/unmanned teaming and improved lethality, situational awareness, and survivability. Over \$797.2 million is included in the fiscal year 2020 President's Budget to develop initial designs and unmanned demonstration systems.
- *Army Network*—The Army Network supports mission command and the continuous integration of combined arms and Joint capabilities. We will deliver a resilient and secure tactical communications network effective in the most challenging contested and congested electromagnetic spectrum and cyber environments. This network includes advanced information technology, hardware and software, and a reduced electromagnetic signature. We have allocated \$2.28 billion in the fiscal year 2020 budget to build our integrated tactical network as part of our network restructuring.
- *Air and Missile Defense*—Advanced air and missile defense will protect our forces from adversary aircraft, missiles, and drones to enable joint operations. This includes both theater systems and short-range air defense, like the Mobile Short-Range Air Defense with directed energy technologies. The fiscal year 2020 budget includes \$1.4 billion to rapidly deliver an initial capability by fiscal year 2022.
- *Soldier Lethality*—We will equip and train soldiers to extend overmatch through increased lethality, mobility, and survivability against emerging threats. This includes improved weapons, sensors, body armor, and training. The fiscal year 2020 budget includes \$1.18 billion for prototyping, development, and procurement of the Next Generation Squad Automatic Weapon and Squad Rifle, Enhanced Night Vision Goggles, Integrated Visual Augmentation System (HUD 3.0), and Synthetic Training Environment.

Eight Cross Functional Teams (CFTs), aligned under AFC, lead the development of these modernization priorities. The CFTs streamline Army acquisition processes to reduce the requirements process, shorten acquisition time, and, by engaging soldiers early in development, ensure fielded systems are affordable and meet warfighter needs. This approach demonstrates our commitment to good stewardship of taxpayer dollars. In addition to this organizational realignment, we updated acquisition policies. Our new intellectual property policy will encourage private industry to work with our CFTs to develop innovative solutions to maintain technological overmatch.

The Army is taking a holistic approach to modernization so we can achieve multi-domain dominance by 2028. Next generation equipment, combined with modern doctrine and formations, will allow the Army to maintain overmatch on future battlefields.

#### REFORM

Over the past year, the Army aggressively pursued reforms to free up time, money, and manpower for our highest priorities and to empower subordinate commanders to make more effective and timely decisions. In addition to our detailed program review process, we are executing the Army Reform Initiative, instituting fiscal discipline, scrutinizing contract management and contract services, and working towards financial auditability. Through these reform efforts, we realigned over \$30 billion across the Future Years Defense Program (FYDP) for higher priority programs to build readiness and increase lethality.

In our most significant reform effort, Army Senior Leaders conducted a detailed review of Army equipping programs for the fiscal year 2019 and fiscal year 2020 budgets. Through this in-depth, time intensive process, we eliminated, reduced, or consolidated nearly 200 legacy programs to reallocate funding towards our modernization priorities. While each of these programs had value, we must continue to make hard choices to ensure we spend each dollar wisely and remain aligned with Army priorities.

Through the Army Reform Initiative, we garnered over 700 ideas to eliminate, delegate, consolidate, or streamline Army policies, programs and practices. Inputs included work efficiencies, business process improvements, and structural realignments. For example, through our installation management reform effort, we are realigning Installation Management Command under Army Materiel Command and consolidating staff functions to garner personnel savings and improve efficiency. This integration of sustainment and installation functions provides the ability to prioritize resources on key requirements for both combat readiness and soldier and family support. Additionally we have an ongoing headquarters reduction effort across multiple levels of command. The goal of the Army Reform Initiative is to eliminate redundancy and delegate authorities and resources to the lowest appropriate level of command. This allows for rapid actions and decisions while simultaneously saving resources for higher priorities.

To improve fiscal discipline, we implemented the Command Accountability & Execution Review (CAER) to optimize the purchasing power of the Army's operating budget. This Army-wide program educates Army leaders on fiscal stewardship, updates policies to increase purchasing power, and creates a scorecard of key performance indicators to measure progress. While still early, CAER has generated a marked improvement in the efficient execution of the Army's budget for fiscal year 2018 and we anticipate greater success in fiscal year 2019.

In 2018, contract management and contract services reform saved the Army \$1.6 billion across the FYDP by eliminating contract redundancies, improving contract competition processes, and using data analytics for contracting decisions. We continue to implement category management and increased emphasis on the use of strategic sourcing contracts to improve management of services acquisitions. This year, we found service acquisition efficiencies in Army rotary-wing aircraft and ground system maintenance programs, food services, and the use of advanced data analytics. We saved over \$400 million and are on pace to reach over \$1 billion in budget savings from improved contract management in fiscal year 2019. These savings and their reinvestment into modernization are crucial to the Army and our progress towards the force of the future.

The Army completed its first full financial statements audit in fiscal year 2018, and the audit findings are an important part of our larger reform effort. We fully support these audits, which help the Army identify ways to improve resource management and business practices. We are aggressively implementing corrective action plans and are on track to achieve auditable financial statements across all accounts by fiscal year 2022.

Another major area of reform is the directed reorganization of our medical capabilities across the Army. Readiness is the primary focus throughout this effort because the Army will continue to be responsible for a ready medical force trained in clinical skills that are critical to wartime missions. As we transition medical treatment facilities to the Defense Health Agency, we are working to ensure we retain the necessary combat medical support at each echelon to maintain readiness and deliver premier military health care on the battlefield and in garrison. This reorganization provides us an opportunity to optimize the Army medical structure and plan for future medical capabilities.

The Army will continue to pursue savings in time, money, and manpower that we can reinvest into our top priorities. These aggressive reform efforts, will sustain our momentum as we build readiness and increase lethality to prepare for high-intensity conflict against great power competitors.

#### ALLIES & PARTNERS

America's network of allies and partners is an unrivaled strategic advantage the Army is actively working to enhance. Every day, the Army works to strengthen alliances and build new partnerships through security cooperation and security assistance. A continued commitment to our allies and partners helps us compete against great power competitors and bolster deterrence. In support of our allies and partners we established Security Force Assistance Command (SFAC), which will consist of six subordinate Security Force Assistance Brigades (SFABs)—five Regular Army and one Army National Guard. The SFABs are specialized units whose core mission

is to train, advise, assist, enable and accompany allied and partner nations. SFABs reduce the demand on conventional Brigade Combat Teams enabling them to focus on high-intensity conflict against near-peer threats. The Army deployed its first SFAB to Afghanistan in support of the Afghan National Army to validate the proof of concept, and we will apply what we learned to the second SFAB deployment this year.

The Army works with Combatant Commanders to ensure our security cooperation efforts support their priorities as we work to increase interoperability and build partner capability. Interoperability ensures we can train and fight alongside our allies and partners more effectively and efficiently so we are ready to face any threat together. In fiscal year 2018, the Army executed \$115 million on 58 multinational exercises with 95 allies and partners. In fiscal year 2019, we programmed \$165 million for multinational training exercises to increase interoperability.

In Europe, we are leading a multinational battlegroup in Poland as part of NATO's Enhanced Forward Presence mission to deter Russian aggression. Last summer, our soldiers participated in Exercise Trident Juncture alongside forces from every other NATO ally and two of our closest partners, Sweden and Finland. This was the largest NATO exercise conducted in recent years, and it demonstrated both the Alliance's commitment and collective defense capability. We will continue these efforts as we prepare for the division-level Defender exercise in 2020, which will exercise the Army's force projection capabilities. We also maintain close training and exercise relationships with Ukraine and Georgia, key partners in the region for promoting peace and security.

Likewise, in the Indo-Pacific region we are deepening cooperation with our allies to protect our national and shared interests. The United States Army presence in the Republic of Korea and Japan deters North Korean aggression and protects United States interests. Assigned and rotational forces participate in combined training exercises, such as Yama Sakura in Japan and Yudh Abhyas with the Indian Army. These exercises strengthen our relationships and build interoperability. Furthermore, we are testing the Multi-Domain Task Force in exercises through our Pacific Pathways program to determine the right capability mix to counter Chinese A2AD capabilities. We will continue to use regional training and exercises to work with new partners and leverage multi-component and inter-service integration. This helps us to expand the competitive space and counter Chinese influence throughout the region.

We are assisting our partners around the world in building military capabilities to enhance security. The Army, through its security assistance enterprise, supports combatant command theater security cooperation plans. We will continue to prioritize security assistance programs to counter key threats and achieve shared defense objectives with our allies and partners.

#### PEOPLE & VALUES

The Army's greatest strength is our people—the intelligent, adaptable, and professional soldiers, civilians, and families who sacrifice for our Nation. We take care of our people by ensuring our soldiers are ready for combat with modern doctrine, equipment, and realistic training while simultaneously providing their families with the resources they need to thrive at home. Furthermore, our continued commitment to the Army Values ensures we foster strong and resilient units built on a foundation of trust.

Comprehensive reform of the Army's personnel management system is a top initiative for 2019. To remain the most lethal ground combat force in the world, we must continue to attract, develop, and retain the best people our Nation has to offer. A competitive labor market for America's most highly skilled talent complicates this effort. We thank Congress for the Defense Officer Personnel Management Act (DOPMA) reforms and additional authorities in the fiscal year 2019 NDAA, and we will incorporate these into our new Talent Management Strategy. We are moving the Army towards a market-based assignment process with more flexible career models along with updates to our promotion system and retention incentives.

The Army faced significant challenges in meeting our fiscal year 2018 recruiting goals, however, we remain committed to quality over quantity. Despite these challenges, we recruited over 70,000 new soldiers into our ranks, the most in any single year since 2010. To meet our fiscal year 2019 recruiting goals, we changed our approach to increase the pool of qualified applicants so we can attract the best talent and improve diversity in our ranks. We restructured our accessions enterprise to ensure unity of effort across the Army, manned our recruiter positions at 100 percent, realigned resources to increase our recruiting capacity, and improved our use of technology. Additionally, we centered this recruiting initiative in 22 major metro-

politan areas across the Nation to expand our reach using micro-targeted web advertising and local marketing. This revised strategy expands recruiting across the Total Army to increase awareness of the opportunities for service and to better connect the Army to the American people.

Taking care of Army families remains a top priority, and we are taking steps to improve quality of life programs across our installations. This year we increased staffing rates at Army child care centers, and we are implementing new policies to improve spouse employment opportunities. Given recent reports of deficient conditions in some of our family housing, the Army has taken immediate action to ensure we are providing safe, high quality family housing. We are visiting all Army housing and inspecting all barracks to identify health, life, and safety issues that exist. We will work with the Residential Communities Initiatives (RCI) companies to remediate these issues immediately, and over the long term, to improve work order resolution, customer satisfaction, and communication with residents. We are also reviewing and standardizing partnership agreements and incentive structures to ensure we hold the RCI companies accountable for providing quality housing. The Army is fully committed to providing a safe and secure environment on all of our installations where our soldiers and families can thrive.

The Army Values form the bedrock of our profession and guide us in all that we do. The Army's Senior Leaders have asked everyone to recommit themselves to these Values, and we demand that every member of our Army team treat each other with dignity and respect. Across the Total Army, we continue to focus on eradicating sexual harassment and sexual assault from our ranks. Over the past several years, we have placed a high priority on our prevention efforts, and the Army will continue to improve the effectiveness of our prevention efforts moving forward. This starts by ensuring that the perpetrators of sexual assaults are held accountable and that the victims are protected without fear of retribution. Additionally, we are reinforcing leader responsibility for building a climate of trust and professionalism that emphasizes the Army Values. We are taking a similar approach with other essential programs including Equal Opportunity, Suicide Prevention, Alcohol and Drug Abuse Prevention, and Resilience.

#### CONCLUSION

The Army mission remains constant: to deploy, fight, and win our Nation's wars by providing ready, prompt, and sustained land dominance by Army forces across the full spectrum of conflict as part of the Joint Force. Our Army is ready today to win in the unforgiving crucible of combat. We are supporting the National Defense Strategy and expanding the competitive space by increasing our lethality through our modernization effort, strengthening American alliances through combined operations and training, and reforming our business practices to be the best stewards of the resources Congress has provided. The Army thanks Congress and the American people for their continued strong support, which enables our ability to accomplish our mission. By providing predictable, adequate, sustained, and timely funding, Congress will ensure America's Army remains the most capable and lethal ground combat force in the world.

Chairman INHOFE. Thank you, General Milley.

Both statements were excellent, and I appreciate—and we appreciate, up here, the time you're devoting to making us aware, and America aware, of the threats that are out there in our peer competitors of China and Russia.

Unfortunately, the Army missed our recruiting goals in both fiscal year 2018 and 2019, coming up short about 9,500 of what this Committee authorized in fiscal year 2019. So, let's start—General Milley, what's your assessment of the most critical manning shortfalls facing the Army as we begin to try to meet our blueprint, here, with the—what would come to your mind as the most critical?

General MILLEY. We did miss the shortfall. I would add that we did recruit and assess 70,000 soldiers into the United States Army, which was a 10-year high, which, in combination, is more soldiers than are in the British and Canadian armies, combined. So, that's significant, I think. In terms of the shortages, going forward, what we're asking for this budget is modest growth of an increase of

2,000, which I think Senator Reed mentioned in his opening statement. We knew we had a very significant and high objective on the last years' recruiting, and we've made a variety of changes inside Recruiting Command, to include the commander. We're focusing on 22 significant cities throughout the United States. We're looking at where the storefronts are. We're looking at redoing the advertising campaign. There's a variety of other initiatives. We are very confident—we're on glidepath right now, and we're very confident that we'll meet the recruiting and accessions missions for this year.

Chairman INHOFE. What do you think, Secretary?

Secretary ESPER. Senator, I agree. Last summer, we actually turned up the standards. We raised the quality standards, because quality is more important than quantity. We need to do that. We need to raise the quality, and we need to continue to bring more in each year, because we need to fully man the units exist, we need to put capabilities back into—

Chairman INHOFE. Yeah.

Secretary ESPER.—the units that we lost over the years, such as EW—electronic warfare—and we need to add new capabilities to our units, such as cyber. So, this is all consistent with the vision of where we want to go. The vision that we outlined says we definitely need to be above 500,000 soldiers by 2028.

Chairman INHOFE. That's good. What we don't want to do, we've emphasized and you have emphasized in the past, that we don't want to lower standards in order to increase.

Secretary ESPER. Right.

Senator REED. That's not happening now, and it's not going to happen.

You addressed this, this goal, General Milley, of 66 percent. It's probably—you don't want to get into any detail on that, but would you repeat what you did—what you said in your opening statement? I think you said, in year 2022—what's going to happen?

General MILLEY. We think, by our projections, if things in the international environment remain at a constant and we continue to get steady budgets at the rates we're getting, we assess that we'll be at the highest levels of readiness, with two-thirds, 66 percent, in the regular Army and 33 percent in the Guard and Reserve, sometime in 2022, which is significant. When I became the Chief of Staff, 3 years ago—3 and a half years ago—we had three brigades at the highest level of readiness. Today, we have—roughly speaking, as of December's reports, you're looking at about 28. So, that's a significant increase. But, we have yet to achieve that 66 percent. We are, essentially, right now, somewhere around the high-water marks of pre-9/11, but we need—if we're serious about Russia, China, and what's in the NDS, with North Korea, Iran, and the violent extremists and terrorist organizations, our assessment is, of those 58 brigades, 66 percent in the—or 66 percent in the regular Army, 33 percent in the Guard and Reserve. We'll—

Chairman INHOFE. Okay.

General MILLEY.—achieve that in 2022.

Chairman INHOFE. Yeah. Before I run out of time, I do want to get a comment from each one of you on the budget. You know, we went through a period of starvation, the last 5 years, of—between 2010 and 2015—of actually reducing, in constant dollars, the

amount of money that came into our military. We are now paying for that. Even with the budget increases that we saw in 2018, 2019, what we're proposing for 2020, it still doesn't put us where we need to be. When you go back to this book, you're talking about an increase in—for that 5-year period, of somewhere between 3 and 5 percent above inflation. Even the 750 doesn't reach that. It would have to be somewhere around 757, I think it would be. So, I'd like to have each one of you comment as to where we are. Do you think that's a figure that's going to be adequate to take care of the needs that we have in our assessment?

Secretary ESPER. Mr. Chairman, you summed it up well. I mean, the needs will always exceed the means, but we think, if Congress passes this budget, we will continue on a good trajectory with regard to restoring readiness and modernizing the Army. That's really the key thing right now.

Chairman INHOFE. Yeah.

General MILLEY. I concur with the Secretary. As you well know, Chairman, it's all related to the amount of risk we are willing to take relative—

Chairman INHOFE. Exactly.

General MILLEY.—to the tasks.

Chairman INHOFE. Exactly.

General MILLEY. So, it's all about risk.

Chairman INHOFE. We understand that.

Senator Reed.

Senator REED. Thank you very much, Mr. Chairman.

Mr. Secretary, General Milley, last night we received notice that the Department of Defense was reprogramming \$1 billion from the Army to support border wall construction. This is being done without approval by Congress, which is a custom that both sides have relied upon for many, many, many years to ensure that our constitutional authority over spending is maintained. The Army also has a \$2.3 billion unfunded requirements for fiscal year 2020. Does this \$1 billion reprogramming support Army requirements, or could the funds be spent better elsewhere to improve readiness and maintain the Army?

Secretary ESPER. The funds do not affect our fiscal year 2020 budget, Senator Reed. With regard to fiscal year 2019, it—those funds came out of our Military Personnel (MILPERS) wedge, if you will—military personnel—that we could not fill that end strength. So, that's where those came from. The—otherwise, the fiscal year 2019 budget approved by this Congress on time meets our readiness needs.

Senator REED. You still do have \$2.5 billion of unfunded readiness, including things like aviation readiness—

Secretary ESPER. Yes, sir.

Senator REED.—whole host of issues that the money could have been used for.

Secretary ESPER. That's true.

Senator REED. In a sense, you are foregoing at least the immediate use of those funds for military purposes, like aviation readiness. Is that correct?

Secretary ESPER. Like I said, the fiscal year 2019 budget was more than adequate for our needs, but, you know, clearly, with—

there—as I said, to—in response to the Chairman, the needs always exceed the means. So, yes, we could have used that money for—as the other services, for—to continue to improve our readiness.

Senator REED. Thank you.

The Army's unfunded requirements list included \$564 million for key infrastructure projects. As I mentioned in my opening statement, the Committee has received the list of military construction projects that will be—or could be included in order to resource the proposed wall along the southern border. These will obviously include Army construction projects. Given the Army has identified more than half a billion in unfunded infrastructure requirements for the fiscal year 2020 budget, how detrimental will it be to the Army readiness if we cancel or delay these projects?

Secretary ESPER. Well, Senator, we have to see what projects will be teed up for repurposing. I think, once we see those initial requests, we can make a better estimate of what the impact will be.

Senator REED. One of the areas, too, that's been identified are projects overseas, the European Defense Initiative and other areas. We often rely upon host and partner contributions to facilitate those constructions. They schedule sometimes on calendar years or fiscal years. So, what impact would we have on delaying those projects?

Secretary ESPER. Again, I'm familiar with some of those projects. It includes everything from schools, I think, to warehouses. We'll have to, again, assess, based on—once DHS, Department of Homeland Security, makes the request to DOD, and then, from there, DOD, I assume, will prioritize the projects, and we will do our own reprioritizing within the Army submission and assess the impacts at that time.

Senator REED. Section 335 of the fiscal year 2018 NDAA asked for each military service to submit the top 10 list of most vulnerable installations to climate change, extreme weather, or whatever appropriate terminology that you want to use. Unfortunately, to date, we have not received that letter. Could you commit to sending us the top 10 list of Army facilities that are vulnerable to weather effects?

Secretary ESPER. Yes, sir.

[The information referred to follows:]

Secretary ESPER. Pursuant to NDAA 2018 Section 335, the Army has been evaluating the effect of the six specified climate impacts: recurrent flooding, drought, desertification, wildfires, thawing permafrost, and rising sea tides.

The Army Cold Regions Research and Engineering Laboratory (CRREL), home of the United States Army Corp of Engineers' Climate Preparedness and Resilience Community of Practice, created a model to assess the risk to individual Army installations. While the work is ongoing, the table below lists the top ten most at-risk installations in the 50 United States. Assessment of installations overseas and in U.S. territories is forthcoming. The analysis is based on climate science only and is not influenced by strategic or mission considerations.

The Army will continue to work closely with other leaders throughout the Department of Defense and with Congress to identify corrective actions and implement steps to enhance our readiness and capability in the face of climate related threats. Thank you for your interest in this matter, as well as your continued support of the Army.

Installation	State	Primary driver of climate effects	Secondary driver of climate effects
Yuma Proving Ground .....	AZ	Desertification	Drought
Fort Irwin .....	CA	Desertification	Drought
Fort Huachuca .....	AZ	Desertification	Drought
Fort Bliss .....	TX	Desertification	Drought
White Sands Missile Range .....	NM	Desertification	Drought
Camp Roberts .....	CA	Desertification	Drought
Hawthorne Army Depot .....	NV	Desertification	Drought
Tooele Army Depot .....	UT	Desertification	Drought
Military Ocean Terminal Concord .....	CA	Riverine Flooding	Drought
Pueblo Chemical Depot .....	CO	Desertification	Drought

Note: All of the top ten are subject to riverine flooding and wildfires. Military Ocean Terminal Concord is also subject to coastal flooding.

Senator REED. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you.

Senator Wicker.

Senator WICKER. Thank you.

Gentlemen, appreciate your service.

General Milley, let's talk about Poland. The Army's there on a rotational basis now. The Government of Poland has asked us to look seriously at a permanent station there. Section 1280 of the fiscal year 2019 NDAA required a DOD report on the feasibility and advisability of permanently stationing United States forces in the Republic of Poland. Do you know the status of that report? It was due March 1st. What can you tell us about your opinion as to how that would work, sir?

General MILLEY. Thank you, Senator. I do not know the status of the actual report, and I'll have to get back to you with that. I'm not sure where that's at in the pipeline sort of thing.

[The information referred to follows:]

General MILLEY. Given that discussions with the Polish on the \$2 billion offer are still ongoing, the Office of the Secretary of Defense (Policy) sent an interim letter to Congress offering to provide periodic classified updates in person until discussions have concluded. A physical report will be provided once discussions are complete.

Senator WICKER. All right. Just——

General MILLEY. But, as far as personal——

Senator WICKER.—just give us your assessment.

General MILLEY. Yeah. My assessment, I am in the camp of recommending rotational forces to Europe, in general, and Poland, in specific. There are some forces that should and could be forward-stationed, some enabling-type things, some infrastructure. But, for the most part, I recommend, and have recommended, rotational forces, for a couple of reasons. From the analysis I've seen, rotational forces are more cost-efficient, cheaper, than permanently-based. Secondly is, you don't have to build schools and post exchange's (PX's) and all the infrastructure that goes with permanent-based forces. Third is, I think you get much more operational flexibility for SACEUR, Supreme Allied Commander Europe, because he can move forces around much easier than he can if they're tied down to bases—permanent bases, with families, et cetera. Fourth is, you get a strategic benefit from rotating forces, because we exercise the strategic muscle memory of TRANSCOM [Trans-



portation Command] to move large-scale forces back and forth to Europe. There are some other reasons, but bottom line is, I recommend rotational forces, with some exceptions for infrastructure and enablers, command and control, some other things that would be necessary at the higher end. But, for the most part, most forces, I recommend rotational.

Senator WICKER. Thank you, sir.

Some of the things we're mindful of with regard to Russia are Russia rapidly seizing NATO territory, reinforcing it and presenting it as a *fait accompli* scenario to the West. Do you think the rotational idea that you've enunciated is sufficient to meet those challenges?

General MILLEY. I do, for a couple of reasons. One is, depending on how you structure the rotations—in the National Defense Strategy, we talk about dynamic force employment, so you want to keep an adversary guessing as to where you're going to position forces around the globe at a moment in time. By rotating forces, you can pick and choose your own schedule, you can do heel-to-toe, so you have the same strategic effect, operational effect, as permanent-based, or you can have episodic, where the adversary doesn't necessarily know when and where you're going to introduce forces of different sizes. I think, depending on the size of the force, the disposition, and the rotational schedule, it would be sufficient to enhance the deterrent effect of United States forces in Europe.

Senator WICKER. Did DOD ask for your input in formulating the report that is now due?

General MILLEY. I'll have to go back and check to see if they specifically asked for Army input. I've given my input on numerous meetings, numerous occasions, to both DOD, EUCOM, and the Army. I'm at a loss, Senator, as to the specific report that you're referring to, whether I inputted that.

Senator WICKER. All right.

General MILLEY. I input a lot of things, and I'll have to go back and doublecheck—

Senator WICKER. Thank you.

General MILLEY.—and see if that specific—

Senator WICKER. Appreciate that. If you'd get back to us.

[The information referred to follows:]

General MILLEY. The report has not yet been written. When discussions with the Polish Government have concluded, the Army will provide input to the report.

Senator WICKER. Let me just ask, then, General, about the idea of a new rotary wing program called the Future Attack Reconnaissance aircraft. It is meant to fill the capability gap in the role of armed reconnaissance and attack in complex, degraded operation environments. Can you describe, in an unclassified setting, what type of capabilities we're talking about there, and how such an aircraft would fare against Russian and Chinese threats?

General MILLEY. As Secretary Esper mentioned, in terms of these six priority areas, one of which is future vertical lift, and the FAR [future attack reconnaissance] aircraft, which is the one you're referring to is one of those programs underneath the future vertical lift. The Apache helicopter is one of the big five that came in in the 1980s, so it's been in now for 40 years or so. That particular aircraft, although it's deadly—it's a great weapon system, the

Apache—it's going to need to be replaced in the out years. So, we're looking for an aircraft that, without going into specific requirements and classifications, essentially goes further, can see further, can acquire targets further, and can engage at greater ranges than currently exists, and has greater legs, can fly further with a greater payload of weapon systems. A significant improvement over that which exists today.

Senator WICKER. Can you tell the Committee how soon you envision moving in that direction?

General MILLEY. We're already moving in that direction, in terms of research, development, and the development of the prototypes. In terms of actually fielding the weapon, or fielding the helicopter, that, I think, is still a moving target with industry, because we want to see the prototypes and we want to do proof of principle on some of the technologies.

Senator WICKER. Thank you, sir.

Chairman INHOFE. Thank you, Senator Wicker.

Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.

Thank you, Secretary Esper and General Milley, for your testimony this morning.

Secretary ESPER, I was pleased to see a story in—a report this morning that said that the Army had backed down on the Freedom of Information request relative to contamination from PFAS components. I just wanted to applaud the fact that you had decided to waive those fees. We have a significant contamination from PFOS and PFOA at the former Pease Air Force Base, and the Air Force has been very responsive to the community of Portsmouth and New Hampshire on that. I hope the Army will be as responsive.

I want to go back to pick up on Senator Reed's question about the \$1 billion that is coming for the President's border wall, because the reports—the news reports have suggested that that \$1 billion is counterdrug money. Can you—you mentioned that it was coming from a different fund, in your testimony—can you clarify where, exactly, that billion dollars is coming from?

Secretary ESPER. Yes, Senator. My understanding—and I would obviously defer to OSD [Office of the Secretary of Defense], because it's their decision, of course—is, that is money that was in the fiscal year 2019 budget for the Army for military personnel. When we adjusted our end-strength number down, it freed up the 1 billion or so military personnel money, and that money is now being reprogrammed into what's called the 284 counterdrug account. Then that is the means by which it is leveraged to build the necessary barriers that were outlined, I think, in the notification sent to Congress.

Senator SHAHEEN. So, it's actually being programmed into the counterdrug account—

Secretary ESPER. Yes, ma'am. I'm—

Senator SHAHEEN.—is what you're saying?

Secretary ESPER. I'm not familiar with all the movements. Again, it's not my decision or action, but, my understanding, it gets reprogrammed from the DOD account into the 284 account, and eventually ends up with the Corps of Engineers.

Senator SHAHEEN. Can you or General Milley speak to the reports that have suggested that a number of the dollars that are being talked about to be taken from military construction are coming from projects in Europe that are going to be needed for our various activities in defense of Europe and the West?

Secretary ESPER. Yes, ma'am. As you know, as you've read, there are things that, as I understand it, will not be included, will not be eligible, if you will, that would be—and it was our recommendation, "Do not include barracks or dormitories or housing." Then the decision was also made to not include any fiscal year 2019 projects that aren't awarded, I think, before the end of this fiscal year. That leaves a numbers of projects. We would need to take a look at the final list. Those projects are all over the world and the United States, of course. Then I'd have to look at the eaches to kind of—and we—and the Army staff will now have to look at, How do we prioritize those, based on MILCON thrust typically being—begins with readiness and power projection.

Senator SHAHEEN. So, are any of those funds coming from the European Deterrence Initiative?

Secretary ESPER. I don't know, Senator, because I don't think any decisions have been made yet on how much money needs to be drawn and, therefore, which projects, because I think OSD has available to them Army, Navy, Air Force, Marine Corps projects to choose from in order to fund what they want to do next.

Senator SHAHEEN. Well, I certainly hope that none of those dollars are going to be taken from funds that are needed to protect the national security of this country.

I understand that there has been a proposal to downsize or eliminate the Peacekeeping and Stability Operations Institute that's at the Army War College in Carlisle. I wonder if you can give us the status of that. I'm particularly interested because they're the entity that's charged with implementing the Women, Peace, and Security legislation. If that's going to be downsized or eliminated, what's going to happen to that initiative?

Secretary ESPER. Yes, ma'am. In the context of National Defense Strategy, we were told that, while we shift to higher-intensity conflict, we need to maintain proficiency in irregular warfare. So, the Army decided to stand up what we don't have, which is an irregular warfare office. In the context of reform, what we've done is, we looked at a number of programs throughout TRADOC [Training and Doctrine Command] and everywhere else to make sure we moved money and people internally. The assessment was that we had nearly 50 people at the Peacekeeping Institute, that we could accomplish the same mission with fewer people. That's what was done, at the recommendation of Training and Doctrine Command, is to reallocate people while preserving the functions, including the one you mentioned. Further reform also included aligning that Institute, because peacekeeping is a part of the mission set—aligning it much more closely with Fort Leavenworth, which is the home of Army doctrine, so we have a greater connectivity. We think we've got a more manageable set, more focused and better connected, both to Army doctrine and while retaining the connections at Carlisle, if you will, and with the joint community. We don't see that as degrading their mission, but we felt 50 people was more than

enough, that we could reduce that some in order to help build the irregular warfare office that we need for the Army.

Senator SHAHEEN. So, what's going to happen to the Women, Peace, and Security Initiative?

Secretary ESPER. My understanding is, that is—that function is being preserved.

Senator SHAHEEN. Where?

Secretary ESPER. At Carlisle, is my understanding. I'll get—I'll confirm and get back to you, though.

[The information referred to follows:]

Secretary ESPER. The Peacekeeping and Stability Operations Institute (PKSOI) will be reorganized and will remain at Carlisle Barracks, with the Combined Arms Center (CAC) at Fort Leavenworth, KS, taking command of both PKSOI and the newly established Army Irregular Warfare Proponent Office. The Army established the Irregular Warfare Proponent Office at Fort Leavenworth, KS in order to implement the National Defense Strategy; it will work alongside PKSOI to support Joint peacekeeping and stability operations issues. No military members or civilian employees currently at PKSOI will be directed to move to Fort Leavenworth as part of the reorganization. Regarding the Army's role and responsibility to the Women, Peace, and Security (WPS) mission, the CAC will assume all related tasks to WPS at Fort Leavenworth, Kansas. With the ongoing transition, CAC and PKSOI are making efforts to ensure there is minimal reduction in capability to support WPS during the transition. Both organizational transitions will take place no later than October 2019.

Senator SHAHEEN. Okay. Thank you.

Secretary ESPER. There's nothing—my understanding is, nothing is moving out of Carlisle, but there is a reorganization of the reporting chain to improve the connectivity, again, back with Army doctrine at Leavenworth.

Chairman INHOFE. Thank you, Senator Shaheen.

Senator SHAHEEN. Thank you—

Chairman INHOFE. Senator Fischer.

Senator SHAHEEN.—very much. That makes sense, Secretary.

Secretary ESPER. Yes, ma'am.

Senator FISCHER. Thank you, Mr. Chairman.

Mr. Secretary and General, I have the honor of representing the men and women of the Nebraska National Guard, and I want to take a moment to recognize their work. For the past week to 10 days, they've been active across our State, responding to the catastrophic flooding that Nebraska has experienced. They're working around the clock to save lives and protect property. They are truly the best representation of what it means to be a soldier in the United States Army National Guard, and all of us in Nebraska are deeply thankful for their efforts.

My question for you is, With the additional funding for modernization and rebuilding readiness gaps projected for fiscal year—2020, how will you be working to ensure that adequate investments are made across the Active, Reserve, and the Guard components?

Secretary ESPER. Yes, ma'am. First of all, our hearts go out the people of Nebraska for what they're going through right now. I'm sure it's going to take some time, so we really feel for them, and, you're right, a lot of kudos to the Nebraska Guard for what they're doing. It's a tremendous use of our Guard. I remember my days in the Guard, the same thing. It's a mission we're very proud of.

Our commitment is to man the total Army and to field the total Army with the equipment needed to do all the missions. So, we've

made that commitment, particularly with aviation assets, which are being in heavy—heavily used right now in Nebraska. That's our commitment.

The Guard is no longer a strategic Reserve. It is an operational force, and it's proved itself very well over the past many years, along with the United States Army Reserve.

Senator FISCHER. General?

General MILLEY. If I could just add one comment. The United States Army's tasked, within the broader national security establishment, to conduct large-scale ground combat operations, campaign quality over extended periods of time. The United States Army cannot execute that mission, that wartime mission, defense of the United States—cannot do it without the National Guard and the U.S. Army Reserve. We're the only one of the four services with over 50 percent of the force in the Reserve component. We have 53 percent in the Guard and U.S. Army Reserve. Navy has very tiny Reserve. Marines have a tiny Reserve. The Air Force, about 25 percent are in the National—Air National Guard. So, the Army is dependent upon the National Guard and the U.S. Army Reserve to execute our wartime mission. It cannot be done without it. So, we take that into consideration, and we ensure that, through the budgeting process and the prioritization, that the Guard and the U.S. Army Reserve are carefully considered and they're in all the meetings. We want to ensure that they are properly manned, trained, and equipped.

Senator FISCHER. Do you see the role of the Guard changing in any way as we transition to the goals of the National Defense Strategy? Do you see that component having to change in any way?

General MILLEY. Yes.

Senator FISCHER. How so?

General MILLEY. The—I think the OPTEMPO [Operational Tempo] of the Guard will increase for selected units within the Guard on our annual basis. We're already designating them with the head of the Army Guard, Tim—General Kadavy. Those units, the amount of training time they do per year will increase. We increased the Combat Training Center rotations from two to four. We intend to use those National Guard units on rotations to either Europe, Korea, Kosovo, the Middle East, wherever. So, fully incorporate the National Guard into the operational rotations.

Senator FISCHER. With that increase in tempo, do you see an increase needed for personnel, or is recruitment going to have to increase for the Guard?

General MILLEY. Yes, for both. Within this budget, as mentioned, a 2,000 modest increase, rise over run, a few thousand a year, for the regular Army, 500 a year for the Army Guard, and 250 for the Army Reserve. So, slight increases over time until we achieve our end-state objectives sometime in the 2028 period.

Senator FISCHER. Thank you.

Secretary ESPER. Senator, I think the other challenge for the Guard and the Reserve will be in future conflict with Russia and China, is the ability to mobilize and deploy quickly, much more quickly than they have, because I don't believe Russia and China will give us the time to build combat power in the future.

Senator FISCHER. I would assume you have plans on how to help the Guard do that.

Secretary ESPER. We have to work on that. That's—yes, ma'am.

Senator FISCHER. Are you working with General Kadavy? Does he then work with our local Guard?

Secretary ESPER. We——

Senator FISCHER. Our State people?

Secretary ESPER.—see General Kadavy every day, and——

Senator FISCHER. Who is also a Nebraskan.

Secretary ESPER. General Kadavy and his counterpart, General Luckey, of the United States Army Reserve. Again, we meet as one team, one Army, and they are fully involved in all of our considerations.

Senator FISCHER. Okay. Thank you.

Chairman INHOFE. Thank you, Senator Fischer.

Senator Heinrich.

Senator HEINRICH. Thank you, Chairman.

General Milley, in your opening statement, you mentioned that the Army is focusing on using directed energy for its mobile short-range air defense, or MSHORAD, capability. Is the Army still on track to field battalions of air-defense Strykers with directed-energy technology?

General MILLEY. We're on track, in terms of establishing prototype systems and in the overall program, yes. So, we're on track, on budget, and we still intend to do that.

Senator HEINRICH. What's the timeline look, moving into the future? How important is continued investment in directed energy——

Secretary ESPER. We're——

Senator HEINRICH.—to this project?

Secretary ESPER. We're looking at a couple of batteries deployed to Europe——

Senator HEINRICH. Secretary?

Secretary ESPER.—in fiscal year 2021, Senator.

Senator HEINRICH. Great.

Secretary ESPER. I think it's—so, it's very exciting. It reflects—directed energy is one of our big-five, if you will, technologies, along with hypersonics and artificial intelligence and robotics. We're—the Army's doing a lot of good work, and working with sister services, on directed energy.

Senator HEINRICH. I look forward to continued progress in that area.

Secretary, I also want to ask you—the Commandant of the Marine Corps recently warned Pentagon leaders that deployments to the southwest border and funding transfers under the President's emergency declaration have posed, quote, “unacceptable risk to the Marine Corps combat readiness and solvency,” end quote. Specifically, he stated that marines will not participate in planned training and exercises in Indonesia, in Scotland, in Mongolia, and will reduce their participation in joint exercises with Australia and South Korea. Have there been similar impacts to the Army when it comes to training exercises?

Secretary ESPER. Senator, I may defer to the Chief on this——

Senator HEINRICH. Okay.

Secretary ESPER.—because he's much more involved, in terms of watching training and readiness. But, we have spoken with commanders and with the 2800-or-so title 10 soldiers and 1900-or-so title 32 soldiers. In the scale of a 1.1-million-man Army, the impacts on readiness, if there are any, are negligible, if you will. It's not unlike when we deploy to tackle Ebola in western Africa or flooding in Puerto Rico. So, it's part of our mission set that we accept.

But, in terms of specifics, Chief, I don't know if you want to—

Senator HEINRICH. General Milley. Maybe you can speak to whether any Army units canceled either home-station training events or overseas participation.

General MILLEY. Anytime an Army unit goes on an unplanned contingency operation, whether it's Hurricane Katrina or Puerto Rico or Ebola or goes to Afghanistan or wherever—doesn't matter where it is—they're going to cancel whatever they were doing prior. So, the short answer would be yes, for the specific units. The larger answer, though—Does it impact the readiness of the Army? The answer is no, it doesn't have a significant impact at all. It's a very modest, negligible impact on the Army as a whole, because of—primarily because of scale, which is slightly different scale than what the Marines are talking about in that letter.

So, our assessment is that the units that are going down there, primarily engineers, MPs, some aviation, transportation, medical units, they're within their mission profile, in terms of what the tasks that they're actually doing, so we don't see a significant degradation in readiness at this time for the Army.

Senator HEINRICH. Can you provide us with just a list of what exercises may have been impacted, either at home or abroad?

General MILLEY. Absolutely. Sure.

[The information referred to follows:]

General MILLEY. The Army did not cancel any training exercises in fiscal year 2019 because of unplanned or unbudgeted factors.

Senator HEINRICH. Thank you.

Secretary Esper, I know last year you and I worked quite hard to accelerate a Military Construction (MILCON) project at White Sands Missile Range, and Congress actually appropriated \$40 million to replace the 57-year-old information facility that actually recently caught fire; it's so old. That facility is used in the development and testing of our most advanced weapon systems, things like the Standard Missile-2, the Patriot missile systems, and others. In the era of big data, this kind of technological facility is critical for transmitting the vast amounts of data generated during military testing. I am raising this simply because this is just one of the projects we've seen as potentially on the list for the chopping block to transfer those funds to the border wall. Do you believe that this is the kind of project that's at risk?

Secretary ESPER. Well, first of all, Senator, thank you. I did enjoy my visit to White Sands last year, and it was very helpful, instructive to me. I—thank you for that.

I'd have to look into the details of what you're referring. I'm sorry to hear about the fire. I was not tracking that. But, I'd have to get back to you.

[The information referred to follows:]

Secretary ESPER. I will work to preserve as many Army projects as possible, with a prioritization on projects that directly impact Army readiness, our ability to project power, military housing, and barracks, but ultimately the Army will follow direction and guidance provided from OSD.

Secretary ESPER. As I said up front, once we see the list of MILCON projects that may be put up for consideration, that'll be an OSD call. We'll have to assess that, based on the prioritization we put to them, and then get back with you.

I know one of the things that—in the OSD budget—in the DOD budget that OSD put in there was a—this \$3.6 billion, if you will, to backfill any type of MILCON that might be used to mitigate any type of thing—projects like that.

Senator HEINRICH. I think the sooner we can get our hands on what is really on the list, versus off the list, then we can have a much more informed conversation.

Secretary ESPER. Agreed.

Senator HEINRICH. I've got one more question on AI, which I will just submit for the record. But, I look forward to hearing the Army's plans on that front, as well.

Secretary ESPER. I'll just say one thing on Artificial Intelligence (AI), if I can have 30 seconds. I think the Chief and I would agree that AI has the promise of maybe fundamentally changing the character of warfare. Whoever gets there first will have overmatch for years to come. So, we are putting significant investments into AI. In fact, I was in Pittsburgh about 2 months ago, doing both recruiting for the Army and then also opening up our AI Task Force at Carnegie-Mellon University, which is pulling in industry and schools from all across the country. So, AI is very, very important.

Senator HEINRICH. I'm glad to hear that.

Thank you, Chairman.

Chairman INHOFE. Thank you, Senator Heinrich.

Senator Cotton.

Senator COTTON. Thank you, gentlemen.

I particularly want to compliment both of you, as well as Under Secretary McCarthy, for the very painstaking effort you put in, in going through the Army budget, line by line, to find the savings to fund so many of these critical modernization projects. One doesn't have to agree with every single decision you made, and I suspect there'll be some Members of this Committee that won't agree with every single decision, to realize it was a long overdue project and that it's responding to Congress's long-stated desire to see that we have that kind of effort. So, thank you very much for doing that for the Army. General Milley, maybe you'll have a chance to do that for the entire Armed Forces a few months from now.

General Milley, I want to return to something that you said to Senator Wicker. He was asking you about the presence of our troops in Poland—and, presumably, Baltics, as well—and the concept of permanent basing versus rotational forces. You made a pretty strong case for the advantages of rotational forces over permanent basing. Would that not apply to Germany as well as Poland?

General MILLEY. It could. In fact, we are rotating. We're rotating a brigade right now. There's two brigades in Europe, as you know, the 173rd, down in Italy, and then the Stryker Brigade, up in Ger-



many, and we rotate an armored brigade combat team through Germany right now. What is permanent, the two brigades plus some infrastructure—artillery, some aviation, some command and control. That's what's in Germany today. Compared to, say, the Cold War, where we had 300,000 troops, or something like that, in Germany. We're sort of doing a combination of both, rotational for the combat units, and permanent for the infrastructure. That's something similar to what I would recommend for any other part of Europe, for that matter.

Senator COTTON. Thank you.

General MILLEY. We're doing it—

Senator COTTON. Yeah.

General MILLEY.—in Korea, as well, by the way.

Senator COTTON. Thank you.

Just listening to your response to Senator Wicker, juxtaposed to the announcements in the last few days that Germany is going to slash its defense budget, I thought was pretty telling. In the end, I don't think we can expect Americans and American soldiers to care more about Germany's security than Germans do. It's troubling that they're going the opposite direction of so many other of our NATO allies.

Secretary ESPER. I want to talk about the THAAD missile defense system. Is the Army going to take full ownership of that from the Missile Defense Agency (MDA)?

Secretary ESPER. Senator, I know that's under consideration. It's being discussed in great detail. I think we could, but what's important is that the budget would come with that if that happens. So, we just can't accept the program without all the budget authority, to include the research aspects of it, as well. So, I think that's still being worked. But, we don't want to get stuck with a bill.

Senator COTTON. Yeah, sure. What's the timeline in which you think you might make that decision?

Secretary ESPER. I don't know, Senator. I think that's—it's really an OSD decision, if you will. But, we can get back to you on that.

[The information referred to follows:]

Secretary ESPER. Recent high-level discussions between the MDA and the Army have led to a unified position that no transfer of the THAAD and AN/TPY-2 programs occur. THAAD and AN/TPY-2 are BMD-purpose built systems that are fully integrated into the MDA Ballistic Missile Defense System (BMDS). Transfer would risk disruption to this tightly coupled integration into the BMDS architecture and MDA-managed configuration control of THAAD and AN/TPY-2. The THAAD and AN/TPY-2 programs are jointly managed with the Army and fully integrated as Army capabilities as demonstrated by multiple THAAD forward deployments and stationed batteries. MDA has initiated a modernization program for the AN/TPY-2 radar to increase the THAAD weapon system capability. If a transfer is directed, the Army has previously stated that all the upgrades must be completed prior to transfer and all associated funding for THAAD would need to be transferred as well. Additionally, any separation of funds between the MDA RDT&E and Army for Procurement would result in budgetary and programmatic inefficiencies for both MDA and the Army putting THAAD development and the force at risk. Finally, a transfer could also have adverse effects on Foreign Military Sales (FMS) such as delays and resultant higher costs which could jeopardize current and future agreements.

Senator COTTON. Okay.

I'm pleased to see that one of the big modernization prospectus—or lines of effort is long-range precision fires, what many just call "artillery," expanding the range and lethality of artillery. Could you please explain the concept for the so-called extended-range cannon,

what it would mean to have a gun that has that kind of range, that—those kind of fire power to it?

Secretary ESPER. I'll take the first shot, and then—

Senator COTTON. Sure.

Secretary ESPER.—no pun intended—and then let the Chief talk to it.

But, clearly, as the Chairman said up front, when it comes to artillery systems—the system, we are outmatched by the Russians. The extended-range cannon artillery—and I was able to go to Yuma, Arizona, and see it shoot—provides us incredible reach. When we talk about deploying to the Baltics or Poland, when you think about a gun that can shoot around 70-plus kilometers—and we think we can get further—it can be a game changer for us, in terms of reach, and, more importantly, in terms of deterrence, from the get-go. So, this is one of the—long-range precision fires is the top priority of the six, and we're moving out at both the tactical, the operational, and the strategic level.

General MILLEY. Yeah, I mean, we made it the number-one priority because fires are fundamental to the American way of war, which is all about maneuver warfare. Maneuver warfare is—fires with movement, in combination, equals maneuver. We have lost a little bit, relative to some near-peer adversaries—China, Russia, example—with respect to cannon and rocket artillery. So, we intend to regain the comparative advantage that we've had, at least in modern history, in that weapon system. That's really, really important to us. Extended Range Cannon Artillery (ERCA) is one of multiple programs in the entire concept of long-range precision fires that go everywhere from the tactical, the 30-to-40-kilometer range, the 70 for the ERCA, and beyond, up to 499, for the limits of the Intermediate-Range Nuclear Forces (INF), and beyond that for some other systems. So, it's an entire suite of capabilities to regain American dominance in the area of long-range fires.

Senator COTTON. Thank you.

One final question. Going to have a lot of vehicles, a lot of aircraft, a lot of guns coming online in the coming years. General Milley, you and I have discussed this before. No soldier wants to ride in or shoot an acronym. I hope there's a plan to come up with good names for all these things, like the Bradley and the Abrams.

General MILLEY. We were thinking the Inhofe and the Reed.

[Laughter.]

Senator COTTON. We'll have the—

General MILLEY. Or maybe the Cotton.

[Laughter.]

Senator COTTON. Have to stick with the Inhofe and the Reed, but I do hope that there are going to be cool names for our soldiers to ride in and shoot for many years to come, as they've had for so long. Not an acronym.

[Laughter.]

Chairman INHOFE. Thank you, Senator Cotton.

Senator Peters.

Senator PETERS. Thank you, Mr. Chairman.

Gentlemen, thank you for your testimony today.

I want to follow up on some of the questions related to the reprogramming of a billion dollars from the personnel accounts. You

know, this is—certainly it was the decision made without the approval of Congress. As you know, a majority of Congress has actually voted against the President's national emergency declaration. So, basically, this is an end-around Congress, which I think is unacceptable. But, I think it was also interesting that, as you're moving a billion dollars from personnel funds to the DHS, the Army, just yesterday, sent the Congress a list of 2.3 billion in unfunded priorities, included more than 1 billion for readiness requirements and 247 million for modernization. So, given you're reprogramming a billion from personnel and Reserve personnel accounts to DHS counternarcotics account, just curious, from both of you gentlemen, how is the southern border a greater priority than Army readiness and modernization?

Secretary ESPER. Senator, on the first part, the billion dollars from the military personnel was that—again, that delta of 6500 soldiers that we were unable to fill, along with others from the end-strength number. That was an amount of money that we—

Senator PETERS. I understand that.

Secretary ESPER. Okay.

Senator PETERS. I understand where it came from. But, still, you've reprogrammed that for the southern border. You haven't come to Congress to ask for it. So, that's an end-around.

Secretary ESPER. We returned it to OSD, and OSD is using it to meet the requirements set out in the—I think, the national emergency declaration established by the Commander in Chief.

Senator PETERS. That has been rejected by Congress. Correct?

Secretary ESPER. Yes, sir.

Senator PETERS. You sent a list for 2.3 billion in unfunded priorities that could have been met with this 1 billion that originated for the—as you described. So, my question is—you made that a priority, as opposed to readiness and modernization, and yet you're here, telling us readiness and modernization is a priority, and yet it seems as if you've prioritized the southern border over Army readiness and modernization. Tell me why.

Secretary ESPER. Senator, the fiscal year 2019 budget, even with—because the money was for the military personnel that we cannot fill, the fiscal year 2019 budget meets our readiness and modernization goals. As I said up front, the needs of the services will always exceed the means. So, that's just a state of—the state of things. It's always been that way. So, I don't see it the way you've characterized it, if you will.

Senator PETERS. Well, you had a billion dollars you could have transferred to your list of unfunded priorities that you submitted to us just yesterday.

Secretary ESPER. Yes. Well, that was for fiscal year 2020. This is fiscal year 2019 money we're talking about. But, you're correct, that's—as I said—

Senator PETERS. I mean, that's your—

Secretary ESPER.—as I said to Senator Reed up front, we could have used that money to continue to improve readiness. That's fair.

Senator PETERS. But, you're saying the southern border is more important than readiness.

Secretary ESPER. I'm not—I'm not saying that. I'm saying that we—the Department of Defense made decisions based on what the

President set out as priorities, and we are following through, we are executing.

Senator PETERS. General Milley, is readiness and modernization a priority over the southern border?

General MILLEY. Readiness is the Army's number-one priority; and modernization is future readiness, and that's our number-two priority. But, I—you know, Senator, I'm a soldier. Priorities and national security priorities are established by civilian control of the military. We're given those as matters of policy. When they're given to us, we execute. So, it is not for me to say one is more important than the other, relative to the entire national security of the United States. But, within the Army, we've said priority one is readiness, priority two is modernization. But, within the Nation, that's not our call.

That's the call of the United States Congress and the President of the United States. We were told to move that money. We gave it back to DOD. DOD's applying it in accordance with presidential priorities.

Senator PETERS. Of course, the Congress has spoken on this issue. We know that.

But, a question in the remaining time, for both the Secretary and General Milley, deals with the Army's Future Command. I just want to get a sense—a better sense of how you see that fitting in with existing Army activities. Particularly, how does the Future Command work with the Army science and technology (S&T) community? What do you expect to see happening, in terms of that Future Command, with what we have now?

Secretary ESPER. Senator, first of all, the acquisition enterprise, if you will, under Dr. Jette, Army Acquisition, works hand-in-glove with Army Futures Command. In the Army Futures Command, what he's given us is unit—what we say, unity of effort, unity of command. So, in the past, where the acquisition enterprise was spread out across the Army, with no clear one person in charge, there were multiple people in charge, what we've done with Futures Command, by standing it up last summer, was really unify it under General Murray, in Austin, and that—what that also did was, we moved out of—we moved, organizationally, our S&T enterprise under him, as well. So, now his responsibility is to think about the future, Futures Command. How will the Russians and Chinese, say, fight in the year 2035, 20—2045, if you will, and then, how does he start looking at the capabilities we will need to deter and defeat them at that point in time? Then he can think—he has the ability now to direct the S&T side of the house. In this budget, we shifted 80 percent—we continue to shift of 80 percent of our S&T dollars to those modernization priorities. That's his call, to make sure that we're all lined up, aligned, focusing on what the future threats are. That's his—that's a big part of his job. That eventually turns into requirements.

Senator PETERS. Right.

Thank you.

Chairman INHOFE. Thank you, Senator.

Senator Ernst.

Senator ERNST. Thank you, Mr. Chair.

Gentlemen, thank you so much for your leadership for our men and women in the Army. We certainly do appreciate that.

Increasing our warfighting readiness does remain the Army's number-one priority. Thank you for emphasizing that over and over again. However, we do understand that sexual assault within our Army formation is not only a serious criminal offense, but it also degrades our readiness. It also degrades discipline, morale, unit cohesiveness, and going back again to the combat readiness. So, to both of you, please. We'll start with you, Secretary. What is the Army doing to continue to combat the problem of sexual assault in the military? Are you seeing an increase in the leadership in our culture, where we are addressing the issue of sexual assault?

Secretary ESPER. Senator, thank you for that question. You've hit a number of good points.

Let me say up front, there is no room in the United States Army for sexual assault and sexual harassment, period. We will not tolerate it. It's not just a readiness issue. It's contrary to our values as an institution. We are working very hard to continue to get the—and we see it, statistically. Prevalence over the years is coming down, and reporting is going up. Those are good trend lines. We have another report coming out in a month or so. We'll see what that looks like. But, what we've done in the last year is, rather than focus on soldiers doing online training and sending them off to an auditorium to get a speech or whatever, we are putting the chain of command back involved in teaching the importance of dignity and respect for everybody, and not tolerating sexual assault and harassment. So, what we want to do is leverage the culture of the Army and the chain of command to get at this. My experience, my view, the commanders' view, as well, is, that's the way you get at this. I think we've set it aside for too long. It's much like housing. We—the chain of command stepped aside a little bit. We need to get back in the game. That, on top of all the education we're doing, the training, the stand-downs, I think will continue to move the needle on sexual assault and harassment until we get it down to zero.

Senator ERNST. Thank you. I do think that's important. We do need to focus on those issues. But, active engagement by our leadership is very, very important. Thank you, Secretary.

General Milley, would you like to make some comments?

General MILLEY. I would echo the comments of the Secretary, that it's not tolerated. We are deeply, deeply committed to that. From a soldier's standpoint, from a commander's standpoint, this is blue-on-blue. This is a friendly force inflicting a casualty on a friendly force. There's no room for that. There's no room for it with bullets on a live-fire range, there's no room for it with bullets in combat, and there's no room for it with sexual assault in a barracks or at a party or wherever.

There are some key things that we are doing. The chain of command here is absolutely critical. The ownership of the small-unit leader all the way up to the senior-most leaders of the Army, chain of command engagement is critical to resolving this. I know there are people who think the chain of command should not be involved in this, from a legal standpoint, UCMJ [Uniform Code of Military Justice]. I disagree 100 percent with that. The chain of command

has got to own it, wrap its arms around it, and prevent it. Alcohol, we know, is a contributing factor in almost 50 percent of the cases. We know that almost all of the cases occur on weekends, Fridays and Saturday nights, between midnight and 0300. We know that a lot of the victims, or most of the victims, are young women. There are male victims, but most of them are young women between 19 and 24 years old, newly assigned to a unit, in the first 60 days. We know that it normally involves a party and there's alcohol involvement.

So, there are things that we know we can do. We can control the barracks, we can control the night, we can ensure the chain of command are present at various functions—unit functions, et cetera. We can beat this. It is a cancer within the ranks. It destroys cohesion and discipline. It must be stamped out in the military, writ large—not just the Army; military, writ large. There are TTPs—tactics, techniques, and procedures—to do it, and we intend to do it.

Senator ERNST. Absolutely. Going back to something that you said, General—Secretary Esper, I'd like you to comment on it—you mentioned the chain of command. Very important. I would like to discuss section 541 of our fiscal year 2015 NDAA. This provision required relevant service secretaries to review sexual assault cases where the staff judge advocate has recommended referral of charges to a court-martial but where the commander who serves as the convening authority has refused to refer the case. To the best of your knowledge, Secretary, how many cases has the Secretary of the Army reviewed under this provision between its enactment in 2015 to the present?

Secretary ESPER. Senator, I can't speak for my predecessors. I'd have to go find that information. But, I don't believe I've reviewed any. I need to dig into this and come back to you.

[The information referred to follows:]

Secretary ESPER. Neither I, nor my predecessors, have been asked to review any cases under the provisions of section 541 of Fiscal Year 2015 NDAA or section 1744(c) of the Fiscal Year 2014 NDAA.

Senator ERNST. Okay. I believe that you are correct, sir, that there have been zero. Based on this, is it your assessment that commanders are following the legal advice provided by their staff judge advocates with respect to sexual assault cases?

Secretary ESPER. I'd have to check. The expectation is that, in most cases, they would. I can't speak to them all. There's—but, I'd have to come back to you with the numbers.

[The information referred to follows:]

Secretary ESPER. Yes, it is my assessment that Commanders are following the legal advice provided by their judge advocates with respect to all cases, including sexual assault. Commanders value the advice and counsel of their legal advisors. It is the Commander, however, who bears ultimate responsibility for making decisions about the proper disposition of a case. Legal advisors will often provide a range of options for the Commander to consider, and the Commander combines that advice with his or her training and experience to make a decision in the best interests of justice, good order, and discipline.

Senator ERNST. Yes. If they are not following, they would go—  
General MILLEY. Let me—

Senator ERNST.—to you, Secretary Esper.

General MILLEY. As a commander who's been a general court-martial convening authority on multiple occasions, I think the percentage is extremely high, like 99.9 percent, where commanders are following——

Senator ERNST. Follow——

General MILLEY.—the advice of their SJA [Staff Judge Advocate]. It would be a very stupid commander not to do that, in most cases. That's not—he has the authority not to follow it, but he—that wouldn't be a very smart commander.

The other thing, in terms of way ahead, we are partnering with Senator McSally and her initiative with the Department of Defense. We want to partner closely with that. We think there's a lot of promise in that initiative that we intend to fully participate in it over the next 90 to 120 days.

Senator ERNST. Very good. That would be a stupid commander that does not——

General MILLEY. It would be a stupid commander.

Senator ERNST.—follow his JAG's advice—his or her JAG's [Judge Advocate General] advice.

So, thank you. I appreciate that, gentlemen. Thank you very much for your service.

Chairman INHOFE. Thank you, Senator Ernst.

Senator Jones.

Senator JONES. Thank you, Mr. Chairman.

Thank you both for being here today. I really appreciate it. Thanks for your service, to both of you.

General Milley, I'd like to just kind of follow up on a question that Senator Cotton asked. Earlier, he asked about the Army taking THAAD over from the MDA, which came as a little bit of a surprise to me. Can you kind of explain that a little bit more to us, and what's going on there?

General MILLEY. I think what he's talking about is the money and the procurement, acquisition, and the way ahead for the prototyping, and the force structure of THAAD. I believe that's what Senator Cotton was talking about.

Senator JONES. All right, sir.

I guess this would be to both of you. I notice, in the—the requested \$63 billion in Overseas Contingency Operation (OCO) funding, which is a pretty big increase—89.8-percent increase from the amount that we enacted in fiscal year 2019. Going into that a little bit, I've noticed that a lot of line items in the budget request is kind of a mix of base and OCO funding, which really kind of makes it hard to tell what might be affected if Congress doesn't provide that level of OCO funding. So, how can we tell anything about your priorities by just digging into the OCO percentage for a particular item? How can we look and see what your priorities are and what you might be doing with that money?

Secretary ESPER. Senator, two things. I think the OSD Comptroller would say that there are two buckets of OCO, one that he would describe as “OCO for base,” which is about 31 billion, and then one is the pure base, which is about 31 billion. So, I think, for us, if you look at the 150 billion or so that is the base plus the OCO-for-base, in there you will see the prioritization the Army has placed on, number one, readiness. It's reflected in the maximization

of our CTC [combat training center] rotations, the flying-hour program for aviation, et cetera. Then, with regard to modernization, which is future readiness, you see the early stages of this big shift from legacy systems into future systems. In fiscal year 2020, I think it's over \$4 billion gets shifted, but, over the FYDP, over the 5-year period, you will see a 30-plus-billion-dollar shift, because most of that money is needed in the 2022, 2023, 2024 timeframe, when we start procuring things, as our S&T ripens into projects ready to harvest.

Senator JONES. All right.

General Milley, you have anything to add to that, or is—

General MILLEY. For me, as a Chief—and I've said this the last 3 and a half years, or three—previous three testimonies—the color of the money, whether it's OCO or base, I know that's important from a budgeting standpoint, it's important to Congress, but, as a recipient of the money, what we need is the money in order to train, man, and equip this Army, in order to defend the United States of America. However that is categorized and the color of the money, I won't say it's not important to me, but it's less important than getting the money. That is important.

The reason it's being done is because of BCA [Budget Control Act] and the continuing resolutions (CR) that have been done over the years. I would caution this Congress that, if we were to go to BCA levels of funding, we will place the United States of America at great risk. So, that's why it's being done the way it is.

Senator JONES. All right. Thank you, sir.

I also want to talk a little bit about the budget that calls for declines in support for AFRICOM and SOUTHCOM as well as USFK [United States Forces Korea], but a pretty big increase, about 35 percent, for EUCOM. I have two questions about that. One, I'm still a little bit—I am concerned as—about North Korea. Maybe not as much as Russia and China, but I'm still pretty concerned about North Korea, which remains pretty volatile. We've got decreased funding there. I'm wondering if we should take this as an indication that our troop levels on the Peninsula are going to be reduced. Also, as a different part of that question, the operational changes, what will we see as operational changes at EUCOM with a 35 percent increase?

General MILLEY. A couple of points. Over the previous, I guess, it was 18 months or so, the United States military—and the Army, specifically, as part of a broader effort—did many things, some in a classified setting, and others were open knowledge, that shored up military capabilities on the Peninsula of Korea and in the general western Pacific region. We think that today the United States Army capabilities that are forward-deployed in the Pacific are in pretty good shape to handle whatever might come.

Secondly is, the military's clearly in support of a diplomatic effort in the Pacific. Although there's various reporting about North Korean nuclear capabilities, et cetera, one thing we can say with certainty is, there has not, at least to date—over the last year, year and a half or so, that there has not been another nuclear test. There has not been another missile test. The rhetoric has died down considerably. The North Koreans are doing various things, along with the South Koreans, in engaging and interacting with



each other. There have been LPOPs [Listening Post/Observation Post] in towers that have been brought down along the DMZ [Korean Demilitarized Zone]. So, the situation today is different. There's been two meetings, of course, between the President of the United States and the leader of North Korea.

All of that diplomatic engagement, is pointing in a good direction. We are not done yet. There's a lot of—a lot yet to be done on North Korea. But, we're in a different place today than we were—we think we are in a different place today than we were, say, 18 months or more before.

The increase in Europe, we think—at least my estimation is that, as I said in my opening statement, Russia is still the only country on Earth that is actually an existential threat to the United States of America, they're the only ones who have the capability to bring that level of destruction to our country. They have been very aggressive in the last, call it, decade or so, in—with Georgia and Ukraine and Middle East and various other places. They are intentionally, with malfeasance and forethought, trying to undermine NATO on a daily, weekly, monthly basis, and with a variety of tactics, techniques, and procedures that are just below the level of war. They have clearly done various nefarious activities in the United States, as well. So, beefing up our capabilities in Europe is important to the defense of the United States.

Alliances still do matter. NATO is important to the United States. Our President has said NATO's important to the United States. We want NATO to belly up to the bar and pay their 2 percent. Clearly, we want that. But, at the same time, we know that we need to forward-defend in order to defend the United States, as well. So, there is some additional monies going into Europe just for the purpose of deterring further aggression by Russia.

Senator JONES. All right. Thank you General Milley. I really appreciate those responses.

Thank you, Mr. Secretary.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you.

Senator McSally.

Senator MCSALLY. Thank you, Mr. Chairman.

Thank you, gentlemen. Thanks for your leadership for the men and women in our Army.

You talked, in your testimony on page 7, about the need to increase unmanned aerial system (UAS) integration was related to future vertical lift. As you look at modernization, obviously unmanned aerial systems are going to be more and more important as to how we fight and integrate both manned and unmanned. Fort Huachuca houses the unmanned aerial system training right now, the only solely dedicated UAS training airspace. Unlike other places in the country, we're actually increasing that airspace, our 2303; whereas, other places, airspace is being encroached.

As you know, General Milley—you were down there when I hosted you—there's over 300 days of sunshine for the training there. It really is a unique location for this capability for our Army, never mind all the joint base and airspace and opportunities for joint training around it in the future, and it is along the border, so, in defense support to civil authorities, if they do see something,

they can pass that on. So, I really see this is a national security asset for us.

Do you agree that, as we grow our UAS training opportunities or grow UAS missions, that Fort Huachuca is a national asset that needs to have its training protected and potentially increased?

Secretary Esper, I'd love to host you down there so you can see that, firsthand.

General MILLEY. Senator, I—you know, Fort Huachuca is a great base. Arizona has 300 days of sunshine, as you noted. The airspace is mostly always clear. So, yes, Fort Huachuca and other capabilities and bases within Arizona are—and other States—are national assets. As far as UAS-specific, it's a great place to fly UAS. There are some other bases around the U.S. that do that. But, clearly, UAS has a role to play, and it is an intelligence, surveillance, reconnaissance asset. You've got the Intelligence School there. That's why it was there. Now, we have taken UAS and realigned it with the aviation community of the United States Army. But, in terms of where it bases, where it trains, we're taking a look at all of that. There's a variety of options. Arizona's clearly right on the top of the list.

Senator MCSALLY. Okay. I appreciate it. Again, if we're going to expand the capability that, you know, we continue to preserve that national treasure that we have there.

Secretary Esper, can I host you down at Fort Huachuca before any decisions might be made in the future?

Secretary ESPER. Yes, Senator. I think we're planning a trip for the fall. So, I'd love to—

Senator MCSALLY. Okay.

Secretary ESPER.—meet up with you down there and do soldier meetings and watching training and all those great—

Senator MCSALLY. Outstanding. Thank you.

I know you mentioned, in talking to Senator Cotton, that you were down at Yuma Proving Group, you know, watching some fires there. One of the challenges we have with long-range precision fires being your top priority is the range space that we have, and the need to modernize it and lengthen it. They actually have to shut down the road when they do longer-range fires. So, is part of your budget taking a look at—I know there's some initiatives in Yuma for land swaps and other things, but trying to modernize the ranges so that we can actually test these long-range fires for future?

Secretary ESPER. Yes, ma'am. You hit on an important point. We're looking at all of our training ranges to make sure that they can accommodate the future systems that we have under—that we're designing or developing. It's not just the range, itself, but it's the sensors, it's all the—

Senator MCSALLY. Exactly.

Secretary ESPER.—all the stuff you need. So, we're looking at that for Yuma, I think, White Sands, a number of locations, for all of these six priorities, as we need them.

Senator MCSALLY. Okay, fantastic. Is there any resources in this budget related to expansion of those training ranges?

Secretary ESPER. I'd have to get back to you and—with a note and tell you what is or is not. I just—I don't have that level of detail, Senator.

[The information referred to follows:]

Secretary ESPER. The Army is currently reviewing whether expansion is needed at both Yuma Proving Ground (YPG) and White Sands Missile Range (WSMR) to meet the needs of future weapon systems. The Army has funds for proposed YPG land expansion in the fiscal year 2020 budget to safely allow for air drop at higher altitudes. The Army is continuing to research the necessity of expansion at WSMR, and won't be in a position to seek funding for another 1 to 2 years.

Senator MCSALLY. Okay, great.

Another question on the precision-strike missile. Right now, it's being developed in accordance with the INF Treaty. We've made a notification to be withdrawing from the INF Treaty. I think that will happen in August, with a 6-month notification. Are there any plans to release—remove the previously imposed range restrictions in the development of that capability, based on us pulling out of INF?

Secretary ESPER. Senator, I've talked with our acquisition folks, and they've talked with industry. I think there are two competitors. I think, if and when we exit the treaty, they're prepared to adjust the ranges above 499 kilometers.

Senator MCSALLY. Great.

Secretary ESPER. We've got to see how far. But, that—clearly, again, long-range precision fires is something that's important to us, and the ability to do that with conventional means gives us that reach.

Senator MCSALLY. Great, thanks.

Oh, go ahead, General Milley.

General MILLEY. Nope.

Senator MCSALLY. Okay.

One last quick question. Nearly 75 percent of young Americans age 17 to 24 are not fit for military service, for a variety of reasons. I know you've had some recruiting challenges. This was already touched on. This is obviously concerning, if we're coming from such a small pool. Is there anything else that we can do innovatively to address this issue to make sure that we've got the best and brightest joining our military in the Army?

Secretary ESPER. Senator, you're right, it's—you know, 29 percent are not qualified, for mental, physical, behavioral reasons. For—on the physical side, it's mostly obesity. Then you take a look at that same population of—less than 4 percent have a proclivity to serve. So, we're trying to go out, by—we reorganized and overhauled our recruiting organization. One of the initiatives we have is the Focus 22 cities, where we go back to America's biggest cities, and we try and talk to kids, young men and women, where they are, and speak to the opportunities that the Army provides them. It's different in each part of the country. I was—I've been in Cleveland and in Boston and L.A., and I've been all over. But, you have to appeal to them where they are, and talk to them about what the Army brings.

The bigger challenge that we face—this is a national issue—is, fewer and fewer Americans—young Americans understand the military.

Senator MCSALLY. Right.

Secretary ESPER. There's no relationship, whether it's the Army, Navy, Marines, Air Force. That's—in our own little way, we're trying to reverse that by getting out and telling our story.

Senator MCSALLY. Great. Thank you.

I'm out of time. Appreciate it, Mr. Chairman.

Chairman INHOFE. Thank you, Senator.

Senator HIRONO.

Senator HIRONO. Thank you, Mr. Chairman.

I want to thank Senator Ernst for focusing on the continuing scourge of sexual harassment and assault in the military. In addition, we need to focus on retaliation that continues. I know that we need to change the culture, which doesn't happen overnight. It's an ongoing, continuous effort. I certainly share Senator Ernst's perspective and concerns.

Mr. Chairman, we spend a lot of time on this Committee talking about China as a near-peer competitor. But, of course, Russia is also a significant rival, and of—General Milley just talked about Russia as posing the only existential threat to the United States, undermining NATO, what they're doing in the Ukraine, Syria, their nefarious activities in the United States. So, we learned, Mr. Chairman, that the—President Trump has invited Putin to the White House. We don't know what they talked about during their Helsinki meeting. We have no idea what they will talk about this time. It should concern us that the Commander in Chief is talking to a near-peer adversary, and we won't know what they will talk about or what kind of understanding they may come to. So, I think this Committee should be seriously concerned.

I have a question for both of you regarding the Army's role in the Pacific. It is important that the United States projects strength, reassure our allies, and build partnerships in the Indo-Pacific, particularly in light of the actions of China and North Korea. Your fiscal year 2020 budget request specifically noted the goal of strengthening alliances and partnerships by funding multilateral exercises. How much money was added for those exercises in the 2020 budget?

Secretary ESPER. Senator, I'll have to get with—back to you on the exact numbers, but clearly we do want to strengthen our relationships and exercises. Pacific Pathways has been very successful. We were actually looking at—

[The information referred to follows:]

Secretary ESPER. In the fiscal year 2020 budget, the Army allocated approximately \$156 million in additional funding for Defender Pacific and a number of other, smaller, exercises.

Senator HIRONO. Thank you, because one of my subquestions was whether Pacific Pathways will be included in your budget—

Secretary ESPER. Yes, ma'am.

Senator HIRONO.—request.

Secretary ESPER. It is, and it's a very robust series of exercises. But, we're also looking at doing our own type of dynamic force employment as part of multidomain operations, where we do even bigger exercises out in the Pacific to reflect the shift to the National Defense Strategy.

Senator HIRONO. Can you tell me, Mr. Secretary, how many of these targeted multilateral exercises are in the Pacific?

Secretary ESPER. I can't, off the top of my head, Senator. We can give that to you. But, we've had soldiers, from National Guard to regular Army, training anywhere from Singapore and Indonesia to Thailand, all over.

Senator HIRONO. So, you'll get back to me.

Secretary ESPER. Absolutely.

[The information referred to follows:]

Senator HIRONO. I want to know how many of the—how much of the Army's funding for the exercises goes toward exercises on the Korean Peninsula, as a subpart.

[The information referred to follows:]

Secretary ESPER. There are five multilateral exercises and 23 bilateral exercises regularly conducted with partners and allies in the Pacific. Approximately \$8 million was budgeted in fiscal year 2020 for exercises on the Korean Peninsula.

Senator HIRONO. Has there been a change in the Army's funding for exercises in Korea, since larger joint and combined exercises have been canceled or modified, starting last year?

General MILLEY. Let me—

Senator HIRONO. General Milley?

General MILLEY.—help out a little bit here, Senator, if I could. There are dozens of exercises in the Pacific. We'll get you the exact list. You're familiar with the big ones—

Senator HIRONO. Yes.

General MILLEY.—Corporate Gold, Yama Sakura, Keen Sword, and so on, so forth.

Senator HIRONO. Rim of the Pacific (RIMPAC).

General MILLEY. Pacific Pathways. We are funding those. We, years ago—I guess it was 4 or 5 years ago now—made a commitment to pivot to the Pacific. We, the United States Army, have about 87–88,000 U.S. soldiers in the Pacific. We've got the—most of the 28,500 that are on the Korean Peninsula are Army soldiers. We've got United States Army, Japan. So, as you are well aware, we're—we, the Army, are very deeply engaged and very committed to the Pacific. It's not just all about Russia and Europe. We'll get you the exact number of exercises, and the money.

General MILLEY. With respect to the Korean Peninsula, there was, as you know—I guess it was within the last 30 days, there was a commitment to go ahead and reduce some of the major over-all exercises, in terms of large-scale CPXs [command post exercise] and stuff like that. Our estimate is, is that, from an Army perspective—and I've talked to General Abrams, as well—that the degree of readiness is modest—the degree of declining in readiness is modest. We don't think it's going to have a huge detrimental effect. Anything brigade and below, where the rubber meets the road, in terms of combat actions, those guys are still training every single day, and they're still capable of fighting tonight. So, we're comfortable with where we are, in terms of our training schedules and our training plans, on the Korean Peninsula.

Senator HIRONO. So, with our training in the Korean Peninsula, we are doing these in conjunction with the South Korean military—

General MILLEY. Absolutely.

Senator HIRONO.—are we not? Because we need to——

General MILLEY. Yeah.

Senator HIRONO.—coordinate, if anything——

General MILLEY. Yes.

Senator HIRONO.—happens there.

General MILLEY. Yes.

Senator HIRONO. I want to get to the need for childcare facilities and capacity, Mr. Secretary. When we met, there was a 7-month-old infant who passed away, what appears to be an unlicensed home daycare. I think that we have to pay a lot more attention to the need for childcare, as we have families now, more and more, in the military. Is access to safe, affordable childcare for military families an important readiness issue for you?

Secretary ESPER. Yes, ma'am. I've traveled the Army now for 18 months or so, talking about this. I was at Schofield Barracks last year. It's—the challenge is particularly acute in Hawaii, where we have probably an unmet demand—I'm trying to recall—anywhere between 20 and 40 percent. So, there are a number of things we're doing to tackle that. A big part of it is civilian hiring, spousal hiring——

Senator HIRONO. Yes.

Secretary ESPER.—to fill——

Senator HIRONO. We need to make sure that we decrease the delay in hiring appropriately trained people.

Secretary ESPER. So, we've taken about a dozen-plus initiatives, everything from allowing, after the background check by the FBI, within 72 hours, line-of-sight access. We see our numbers going up, which is very good. I can come brief you on a number of other things. But, we—it's trending in the right direction. We do need to actually expand authorized in-home childcare. That's another route. The other thing that I'm hearing lately that I want to go after is providing hourly childcare for folks, outside of the daycare centers, because it's a need for spouses, for moms and dads who need to—you know, maybe the spouse is on deployment, to be able to do that.

Senator HIRONO. So, we'll continue to work with you on these, thank you for recognizing our reality for many military families.

Secretary ESPER. Very important.

Senator HIRONO. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hirono.

Senator Hawley.

Senator HAWLEY. Thank you very much.

Mr. Secretary, I'd like to begin with a comment about something that is a little bit outside the jurisdiction of this Committee but is not outside your jurisdiction. I'm talking about the U.S. Army Corps of Engineers. As you know, large portions of my State is currently—are currently under water, which is true for other Members of this Committee. I was just in the State in recent days, surveying the damage from this historic flooding. It is quite significant. I have to say, I've heard from my constituents in the State over and over again that they have had significant trouble in working with the Army Corps, both in terms of responsiveness, but also in terms of significant concerns about, perhaps, misplaced priorities by the Corps and their management of the river systems. So, I look for-

ward to working with you on this. Like to visit about it and—whether that’s taking a look at the master manual or other reforms that we need to pursue to make sure, as we face a year of historic flooding, that this sort of thing does not keep happening, and that we’re able to meet the needs of folks who live in and make their living along the river.

Secretary ESPER. Senator, if I may, first of all——

Senator HAWLEY. Please.

Secretary ESPER. Well, again, our hearts go out for the folks affected by the flooding, your constituents. What I’d like to do is get the Corps of Engineers up here today to your office and find out——

Senator HAWLEY. Great.

Secretary ESPER.—what’s going on.

Senator HAWLEY. Great. Thank you very much. I appreciate——

Secretary ESPER. Then we can——

Senator HAWLEY.—that.

Secretary ESPER.—we can tackle it, and then we’ll take it back down to the district level and make sure we get it—get working on it ASAP.

Senator HAWLEY. Fantastic. Thank you very much.

I just want to offer a word of praise, Mr. Secretary, both to you and to you, General, for your leadership in reform, modernization, pursuit of the NDS priorities, I think, and really making the Army, perhaps, the leading service, in terms of pursuing reform and modernization. It’s really impressive what you have done in this most recent budget and your leadership overall. So, thank you for that.

Let me ask you an NDS-related question. I’m wondering about—thinking about the Indo-Pacific, does the Army have plans—what are the Army’s plans to contribute with INF-range conventional missile systems in that theater to restoring our conventional edge against China?

General, go ahead.

General MILLEY. The—I don’t want to go into classified briefings, but we’ve got a variety of capabilities that—emerging capabilities that we’re going to deploy to the Pacific theater that we think will have significant impact on any potential conflict that could emerge in that area. We are experimenting that with what we’re calling multidomain task forces. We’re establishing two of those. One of them is in the Pacific. They are experimenting with the doctrine or the new concepts of multidomain operations. That task force will be equipped with a variety of capabilities that’ll be able to establish dominance from the land, in space, cyber, perhaps maritime, as well—not subsurface, but surface, to be sure—as well as air. So, there’s a variety of capabilities that we’re going to deploy and a variety of cannon, rocket, and missile capabilities from the land that will have a significant impact. Just did a secure video tele-conference (SVTC) with—Admiral Davidson and Under Secretary McCarthy and Vice Chief of Staff McConville were out there just last week, and we were talking about that very issue, and we’ll be introducing some of that stuff in exercises over the course of the next 24 months.

Senator HAWLEY. Great. Thank you very much.

Let me switch theaters, but a similar set of questions about the NDS, thinking about, now, the Army in the context of the Joint Force in the Baltics and this Baltic scenario that the NDS talks about. How have you made progress on that? Where do you—what do you still need? What are your plans to get there?

General MILLEY. Again, most of those exercises that we've done, and then the analysis we've done, is classified. We are keenly aware of Russian capability with respect to the Baltics. We are shoulder to shoulder with the Baltic nations—Lithuania, Latvia, and Estonia—as well as Poland. The rotation of forces, the European Defense Initiative (EDI), the exercises we're doing and the capabilities that we're deploying, we think will be sufficient to cause pause for any further Russian aggression.

Senator HAWLEY. Mr. Secretary.

Secretary ESPER. Senator, you made a very important point. You said, "What do you need?" What we need is this budget. Because the Russians are building new tanks, the Russians are modernizing their fighting vehicles, they are modernizing their air defense systems. Across the board, they are doing things that we need to get on with doing. This budget, and the billions of dollars we shift, will get us there so we're prepared to deter them and, if necessary, defeat them, should war come.

Senator HAWLEY. Fantastic. Thank you, again, Mr. Secretary, General, for your leadership.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hawley.

Senator KAINE.

Senator KAINE. Thank you, Mr. Chair.

Thank you, to the witnesses.

I want to start with Secretary Esper, a thank you. Two Thursdays ago, you hosted Senator Warner and I at Fort Belvoir. I just want to commend you and the Army in the way that you're going after this very, very tough challenge on military housing. Secretary Esper escorted us around to a couple of homes, where we were able to visit with folks who live there, but then a roundtable session with many other families. I was very impressed, because, when problems came up and it seemed like there was a little bit of, "Well, that's the housing company's problem," or, "That's the garrison commander's problem," Secretary Esper was in a "Well, no, we're going not fix it" mode, and you just had a really good assuring demeanor to the families that were there that I know gave Senator Warner and I assurance, as well. The Army has also played the lead role in, I think, doing the initial draft of a Tenant's Bill of Rights that might be used more systemwide to protect folks who are living in military housing. So, I'm going to just begin with that. I know, Secretary Esper, you have a sense of urgency about this.

Secretary ESPER. Yes, sir.

Senator KAINE. General Milley, as well. We'll all be after it, focusing on it during the NDAA.

Secretary ESPER. Thank you for going down with me. Having the support of this Committee makes a big difference. We will fix it, because there's nothing more important than our soldiers and their families.

Senator KAINE. Thank you so much for that.



You—your last answer to Senator Hawley was, “What we need is this budget.” I’m going to ask budget questions. So, does your—does the fiscal year 2020 budget request include any funding for sustaining support activities on the southern border past September 30?

Secretary ESPER. I don’t believe, Senator, but I’d have to get back with you on that.

Senator KAINE. I think that’s an important one, just to—for my colleagues. So, can you explain what you mean by “sustaining”——

Secretary ESPER. Yeah.

Senator KAINE.—just the current deployment of any, you know, Army units. General Neller was talking about this recently with respect to the Marines. The current deployment of Army units to the border is something that is important, but I wonder if the budget that we are talking about here assumes that that will continue past September 30. My sense is, it doesn’t, from looking at it.

Secretary ESPER. I don’t believe so, but let me come back to you with a definitive response.

[The information referred to follows:]

Secretary ESPER. No, support to Customs and Border Patrol (CBP) began on October 26, 2018, was first extended through January 31, 2019, and has since been extended to September 30, 2019. The CBP has not requested and the Army has not been directed to deploy troops at the border past September 30, 2019. Therefore no funds were requested for the mission in this budget request.

Senator KAINE. So, I think that’s an important one, because if you’re here testifying about the budget, and you say, “What we need is this budget,” but the budget includes nothing for continued sustainment of these troops at the border, that also tells us something about what priorities are.

It’s more than just priorities. My understanding of the President’s authority under 10 U.S.C. 2808 to reprogram MILCON monies is that MILCON monies can be reprogrammed, but they have to be in support of military personnel. So, if we’re going to reprogram \$3.6 billion of fiscal year 2019 MILCON monies, they’re not going to be immediately put up. I mean, that’s going to take some time to put things under contract and do them. If we’re not assuming that we’re going to be having a sustained presence of military personnel at the southern border, sort of raises a question about, “If we need this budget, but those who put this budget together did not determine that that was a priority, then why use U.S.—10 U.S.C. 2808 to reprogram MILCON monies if we’re not going to have a sustained presence of military personnel there?” You can understand the question that I’m asking. I think it’s relevant to the vote that the House is going to undertake today. But, I’m sort of curious and may ask, for the record, Do you know why there was not a request, as part of this budget submission, to have sustained activities of the Army at the border?

Secretary ESPER. One of the challenges with the budget process, Senator—and it involves any number of things, which is—and it’s inevitably why we ask for reprogramming—is, the budget that you see before you today was developed this time last year and submitted in June of last year. That’s one explanation, if you will. And——

Senator Kaine. But, it was submitted, but it wasn't like unamended and unedited and unrevised—

Secretary ESPER. That's true. I'm—that's correct. Yes, sir. I mean, it's—but, pretty much it leaves our hands in June or July, and then it goes through its various iterations, and we have a chance every now to make some movements. But, that's—that is a factor I just wanted to point out. It involves weapon systems and what we—you know, we gain new knowledge on things, and that's inevitably why we come back to you—we, the Army and, I'm sure, the other services—come back to the Congress to ask for re-programming—

Senator Kaine. Well, just—at the end of the day, the budget that gets submitted to us, the final signoff, is by the President and the Office of Management & Budget (OMB) and the White House. It's just interesting that they would not have included funding for sustainment of activities at the border at the same time as they want to put in MILCON that is supposed to be in support of that personnel that, apparently, will not be at the border.

Let me ask you this. The fiscal year 2020 budget asks for 9.2 billion under the Department of Army account for emergency funding. My understanding is, that's 2 billion for hurricane relief, 3.6 billion to repay accounts from 2019. I'm assuming that's the MILCON monies that are being changed. Is that right? To refill those accounts?

Secretary ESPER. Senator, I believe so, but that was an OSD insert, if you will, on the Army budget for those purposes, as you outlined.

Senator Kaine. Then, I'll ask that one for the record, just to confirm that—

Secretary ESPER. Sure.

Senator Kaine.—our understanding about that is correct.

Secretary ESPER. We'll get back to you on that.

[The information referred to follows:]

Secretary ESPER. The Department requested \$9.2 billion in emergency funding in the Army's Military Construction, Army (Oversees Contingency Operations account of the 2020 President's Budget request for the following: Reconstruction from natural disasters (\$2.0 billion), restoration of funding from military construction projects used to support the declaration of national emergency (\$3.6 billion), and emerging fiscal year 2020 requirements in support of the declaration of national emergency (\$3.6 billion).

Senator Kaine. Thank you much.

Thank you, Mr. Chair.

Chairman INHOFE. Senator—Senator Kaine.

Senator King.

Senator KING. Thank you, Mr. Chairman.

First, General Milley, I haven't seen you since the Patriots won the Super Bowl. As a New Englander, I'm sure you share my delight that we had to suffer through a 3-month drought between world championships between the Red Sox and the Patriots.

Secretary ESPER. Don't get—please, Senator, don't get him going.

General MILLEY. I'm sitting here next to a guy from Pittsburgh, but, I agree, it's been 60 days since the world—

Senator KING. It was a very tough period—

General MILLEY. Yes.

Senator KING.—for us all.

General MILLEY. Agonizing.

Senator KING. Thank you.

First, I want to commend both of you. Both of you addressed the sexual assault question several times, and also, General Milley, your addressing of the—Russia's threat. Those were excellent statements, the most forthright, succinct, and powerful statements on those two subjects that I've heard in this Committee in a long time, and I want to commend you for making those statements.

Looking at the budget, as I understand it, we're talking about a total Army budget of 182 billion, of which 33—31 is what I call traditional OCO, and 31 and a half is OCO-for-base, a wonderful new phrase. I said, a week ago, that's like "rabbits-for-bicycles." I mean, these are two things that aren't really related. Wouldn't it be better if we just stepped up and had an honest budget, and said, "This is what the base budget needs to be, and OCO is for OCO, not for ongoing needs"? Isn't that a more honest way to present this? I'm not suggesting you're dishonest, but this is a sort of charade that we do around here instead of saying, "We need 182 billion for the Army."

Secretary?

Secretary ESPER. Well, Senator, I've, you know, spent my share of time on the Hill, as well, on the other side of the dais, and this is not new, if you will, in many ways, with regard to OCO and how you fund the base and all that. I think what's underlying this, too, is—the Chief said it very well earlier—is, certainly on the defense committees, nobody likes the Budget Control Act, and it's put us in a bind, where it impacts the readiness of the services, our modernization ability, et cetera. Frankly, if it were implemented, it would severely undermine—

Senator KING. Then maybe we ought to admit that—

Secretary ESPER. Yes, sir.

Senator KING.—change those caps to reflect the current reality. Those caps were established, 2011, 8 years ago. The world has changed dramatically since that—

Secretary ESPER. Yes, sir.

Senator KING.—time.

Secretary ESPER. Changed, and nobody thought that was ever going to happen. I remember the time. But, it is what it is. But, the—as the Chief said so well, all I look at is \$182 billion, because I know I have to organize, man, and train, equip an Army to defend the Nation.

Senator KING. I—and I agree with that, but I—but it does trouble me that 34 percent of that under an 82 billion is supposedly contingency money, and it really is, and everybody knows that. I just—truth in budgeting, I think, would be helpful.

Now, as I understand it—and I think you just testified to this—the 9.2 billion emergency is storms plus the funding going out of military construction for the southern border. Is that correct?

Secretary ESPER. Yes, sir, that's my understanding. It's—I think a share of it was for the—what happened at Tyndall and with the Marine Corps, some damage down there, and then the MILCON replenishment, if needed.

Senator KING. Well, what's troubling is—to us, is that we go through this process of budgeting and appropriating, and looking at

priorities and everything, and then 3.6 gets pulled out, and then it gets put back in, the next year. In effect, the Congress is funding something it refused to fund. I realize that wasn't your decision or your call, and you've got to abide by this, but it's a kind of shell game. I mean, we're—we said we're not going to fund this, the appropriations process didn't fund it. So, it's coming out as an emergency, and now we're being asked to, in effect, fund it, in retrospect. I think that's troubling.

One other question or—before I leave you, on—not on the budget. I'm concerned about recruitment, and concerned about not only recruitment in general, but the geography of recruitment. I'm worried about the military becoming isolated from the rest of the society and—for example, there are no significant military bases in the—in New England. We don't—and I think that's a loss for the country. We don't want the military to be a separate caste system over—and separate from the rest of the society. Could you speak to that?

Secretary ESPER. Yes, sir. I'm concerned, as well. I think you heard me say it a few minutes ago. I spoke to this particular issue, that we risk having a society that's increasingly—or a military increasingly isolated from the people it serves. That concerns me. The Army's trying to do its part. We have, maybe, two dozen initiatives to improve our recruiting, make sure we can meet our numbers. One of them includes what we call the Focus 22 cities, so it's 22 of our biggest cities, many of them in the Northwest and Northeast, where maybe upper—under-representative—under-represented. It's our efforts to kind of go to there, go to those cities and talk to those kids. So, I was in Boston 2 weeks ago, met with the mayor, met with the Governor. I was in Cleveland last week. I've been to L.A. I'm going to be going back up to Seattle, here, soon. But, it's our effort to go out to these cities and really speak to America's youth and appeal to them in whatever way resonates most. For many, it's jobs, it's skills, it's opportunity. For others, it's college money. For others, it's adventure. It's different, depending on where you go. So, in Cleveland, for example, it's about learning the trades, getting skills that you could use elsewhere. If you go to Seattle, it's about STEM [Science, Technology, Engineering and Math]. They want to see how it applies. So, I think this is our effort to go to America's cities where the young men and women are, and reengage in those places where—like you said, are, maybe, under-represented.

Senator KING. Well, I think part of that is that we also have to work with the States on credentialing to accept—

Secretary ESPER. Yes, sir.

Senator KING.—the credentials so a person that has all the skills in the world coming out of the Army doesn't have to go back through an apprenticeship program, or whatever is required. That's a separate issue.

Secretary ESPER. As I said, in both Boston and Cleveland, if you don't want to go regular Army, the Army Reserve and the Army Guard are great opportunities well—as well, where you can learn those skills and still stay home, in your local area, and be with your friends and family, or whatnot. Those are all great options. If you don't want to go Army, you can go another service. But, I think

reengaging in these areas is very important to the future of the country.

Senator KING. You may want to go back and revise your testimony, "If you don't want to go Army, you want to go one of the other"—I'm—you may not want that on the record.

[Laughter.]

Secretary ESPER. Well, they should go—if they want to go to the best branch, they should go Army, but I think—you know—and this generation, there is appeal to serving something bigger than themselves—

Senator KING. Thank you.

Secretary ESPER.—their communities. I think we should tap into that.

Senator KING. Thank you for that work. It's very important.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator King.

Senator Warren.

Senator WARREN. Thank you, Mr. Chairman.

So, I know that you're aware of the crisis in the military's privatized housing program. The private companies that were put in charge of managing military housing failed to provide safe and clean homes to military families. Nonetheless, they managed to rake in millions of dollars in profits. The services have fallen short in their oversight responsibilities by allowing military families to live in hazardous and unhealthy conditions.

I want to focus, this morning, on just one part of that problem. When repairs to military housing are either poorly made or not made at all, it can threaten the health of servicemembers and their families. We now know that many of them have developed chronic medical conditions from exposure to mold, lead paint, and other hazards. So, I want to ask both of you, as a matter of principle, do you think the United States Government has the responsibility to cover the lifetime costs of treating servicemembers and their families for health problems that are connected to unsafe military housing?

General Milley, maybe I should start with you.

General MILLEY. Absolutely yes.

Senator WARREN. Thank you.

Secretary Esper?

Secretary ESPER. Yes, ma'am. But, frankly, I'd like to see the companies pay, first.

Senator WARREN. Well, I'm fine with that. But, I want to know whether or not the military should be on the hook, whether or not the Federal Government should be on the hook, for its failure to having supervised those—

Secretary ESPER. Yes, ma'am, I agree. For that reason, I agree.

Senator WARREN. Good.

General MILLEY. To that extent, Senator, we have established—we are establishing a housing registry to make sure that, (a) we know all the houses that have had any life, health, or safety issues—lead, asbestos, or whatever, to include mold; and we want to make sure that we backtrack, as many years as it takes—

Senator WARREN. Good.

General MILLEY.—to go back and make sure that we know the names of all of those inhabitants of those houses, both adults and children. We want to track them throughout their life. If, at any point in time in the future, they have a serious health issue that can be directly related, cause and effect, to having lived in that house, it is our belief that the Federal Government and the RCI [Residential Communities Initiative] partner should be on the hook for the payment of that.

Senator WARREN. Good. I'm very glad to hear this. This is very reassuring. I also want to make sure that we memorialize this in law. I am introducing a broader military housing reform bill that will ensure that no member of the military or military family will have to pay for medical care as a result of unsafe housing. When a servicemember or that servicemember's child or spouse gets sick because the military failed to hold these companies accountable, then it is time for the military to step up and fix the problem. That means making sure this never happens again and paying the ongoing medical bills. So, thank you.

I want to take my remaining time and ask a critical question about readiness facing the Army. Climate change. The Defense Department's most recent report on climate change discussed the impact of this human-caused problem on our military operations in bases. This report included a statement by the Chairman of the Joint Chiefs of Staff, General Dunford, who said—and I'm going to quote, here—"When I look at climate change, it's in the category of sources of conflict around the world and things we'd have to respond to."

General Milley, just a simple yes or no is fine, 'cause I'll have some followup questions. Do you agree with General Dunford?

General MILLEY. I do, Senator.

Senator WARREN. Good.

General MILLEY. If I could just make an additional—

Senator WARREN. Sure.

General MILLEY.—comment. I think what we're talking about here are the effects—the potential effects of climate change. Clearly, there'll be military implications as well as other implications down the road.

Senator WARREN. Good. So, is adapting to climate change necessary for Army readiness?

General MILLEY. I'm not sure exactly what you mean by "adapting to climate change."

Senator WARREN. Well, taking this into account, if you're thinking about—

General MILLEY. Of course. It's a—

Senator WARREN.—readiness.

General MILLEY.—consideration.

Senator WARREN. Good.

General MILLEY. For example, there could be resource shortfalls in various parts of the world, which will increase stress on the society, which could increase insurgency, revolution, terrorism, or a wide variety of other factors. So—

Senator WARREN. Well—

General MILLEY.—there's a variety of effects that we'd have to take into consideration.

Senator WARREN. So, do you think it would be prudent for the Army to incorporate climate change into operational and strategic planning?

General MILLEY. We already do.

Senator WARREN. Good. How would you rate Army installations, as a whole, in terms of their climate-change resiliency?

General MILLEY. That is a work in progress. So, we're evaluating those and coming up with a list. There's some—the Army is—by its nature, is more inland than on the coast, so the climate change, as it affects some of the Army installations, varies. The coastal ones tend to, probably, have greater impact. But, that doesn't mean the ones on the interior of the country don't. So, we're evaluating all the variety of bases we have. We do have a list—that was mentioned earlier by one of the Senators, but we do have a list, and we'll get that list promptly to the—

Senator WARREN. Good. I appreciate that. You know, it's clear that climate change is a threat to our military's infrastructure and operations. It's critically important for the Army and other military services to incorporate climate change into their operational plans. It's a readiness issue, and I'm very glad to see that the Army takes this seriously.

Thank you, General.

Chairman INHOFE. Thank you, Senator Warren.

Senator Tillis.

Senator TILLIS. Thank you, Mr. Chairman.

Gentlemen, thank you for being here, for your service.

General Milley, thank you for rearranging your calendar and participating in the sensing session we had done at Fort Bragg on Friday. I think it was illuminating. What I paid particular attention to is just how many notes you've taken, so I have no doubt that, in those particular cases, then we're going to make progress. I think that we still have to take a look at the broader issue. We've got a footprint out there we haven't yet figured out.

Secretary Esper, thank you and your wife for coming down and being a part of a sensing session, about a month ago. Because I think we're making progress there. The command's taking it seriously. They've got a good strategy for putting resources on the ground. We need to make sure we do everything we can, as members of Congress, to support that.

But, maybe very briefly, could you guys give me an idea of how the housing issue and—could actually affect—have an impact on readiness?

Secretary ESPER. Senator, I think—if you submit to our foundational principle that there's—the importance of the soldier and their family—I think if a soldier is deployed—and I—you—when we—you and I, I think, have spoken to families—the last thing you want is a soldier, particularly facing a lethal situation, to be distracted, worrying about his or her wife and children being impacted by mold in the house, or having to—dealing—deal with a broken tub, or whatever the case may be. So, in that regard, it becomes very acute. Having done my share of deployments during my Army days, you do worry about your families. That's—at that point in time, you want them focused on the mission, focused on

being successful and coming home safe. For that matter, you don't want the distraction.

Senator TILLIS. I—one of the two houses that I visited last week down on Fort Bragg, the husband's deployed, the mother is there with two—he's an officer—the mother is there with two kids. You walk down a fairly narrow hallway, and there is about a foot reserved for you to walk through, because the other 2 feet are taken up by an industrial-sized dehumidifier that is sucking so much moisture out of this particular unit that they had to run a hose into the tub. I just saw it dump I don't know how many quarts of water while I was sitting there talking to them. That's a distraction, when you get on the phone with a spouse and you're talking about that kind of environment that they're living in.

So, we're going to continue to focus on it. I'd tell any military families who may be watching these hearings that we're not going away until it's fixed. I know that I have you-all's commitment to be there every step of the way. So, thank you for that.

Mr. Secretary, when you and I had breakfast several months ago, you were talking about your top-to-bottom review of programs that would—you know, that are either critical, nice to have, or not necessary. Can you give me an idea where you are on that review now, and what specific actions you've taken?

Secretary ESPER. So, the second round of that review—it's—in layman's terms, it's being called "Night Court"—is underway right now for the fiscal year 2021 budget build. The fiscal year 2020, which was the one that the Chief and I initiated this time last year, again, has resulted in this budget. What we did was, we ended up canceling, reducing, or delaying nearly 200 programs. It began with—we began on the opposite end of the table. That is, What do we need to modernize the Army? That began with our 31 cross-functional team programs that show our six modernization priorities. Then we knew we had another 50 or 60 programs that were also critical to readiness. We filled those buckets first. Then, when you get to the end of the list, there were programs that we knew—not that they didn't have value, but, relative to everything else, they just either didn't cut the—didn't make the cut.

Senator TILLIS. General Milley, I was here earlier in the Committee. I'm sorry I couldn't be here longer. I've got four committees meeting concurrently. But, you were talking about the dramatic increase in readiness. I think you said, at one point, we had three BCTs [Basic Combat Training], and then you said in the upper 2020s that are at a ready state. You said, "Provided that we get the resources, we'll continue to build on that." You know, when you get them to the state, though, there's a certain cost associated with keeping them there. So, as we move into future budgets, what worries you most about being able to sustain that level and not see a downward trend over the near-to-intermediate term?

General MILLEY. Well, you just said it, Senator. It's the ability to sustain that. Once we get to the level we want to get to in—sometime in 2022, which is 66 percent of the regular Army and 33 percent of the Guard and Reserve, we have to sustain that. We recognize—we, in the Army, but, more broadly, in the military—we recognize that we are a very, very expensive endeavor. We appreciate the support of Congress and the American people. But, there



is one thing that's a lot more expensive than what we do on a day-to-day basis, and that's having a war. By funding us, we deter war. By making sure that we have large, capable, competent, excellent military that is dominant on any field of battle, that goes a long way towards telling any potential adversary, "Don't mess with the United States." If we underfund that in the future years, or if we do two steps forward, one step back constantly, then that, I think, provides opportunity and encourages aggression on the part of any potential adversary.

Senator TILLIS. Well, thank you. I'll submit some questions for the record regarding end strength and some of the great work I think you're doing on modernizing, recruiting. Like to know how you're doing on hitting the goals this year.

But, thank you, Mr. Chair.

Chairman INHOFE. Thank you—

General MILLEY. We'll make it—

Chairman INHOFE.—Senator Tillis.

Senator Blumenthal.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

I'd like to ask about the units in—or the military construction projects that may be defunded in Puerto Rico. I think there are ten Army National Guard projects and two Army Reserve projects in Puerto Rico. The total value of the projects potentially in jeopardy is about \$550 million. I'm concerned that defunding these projects will detract from the effort of the island to recover. In this panel, at the time of the hurricane, we heard very unmistakable commitment to the recovery efforts. I would like your commitment that these projects will not be cut and that there will be a continued commitment to the recovery efforts on the island.

Mr. Secretary?

Secretary ESPER. Senator, I cannot make that commitment, because it's not my decision to make. It's going to be made, I think, by at least the Acting Secretary of Defense.

Senator BLUMENTHAL. Can you commit to encouraging Acting Secretary Shanahan to avoid selecting any projects in Puerto Rico to be defunded and diverted to the border wall, given the natural disaster that happened there and the continuing disarray on the island?

Secretary ESPER. I think what will happen, here, next is, the Army will look at all that those—all those projects that are up for consideration, and then I'd—we need to assess each one of them. Candidly, our prioritization will be readiness and the ability to project force, going forward. Then we'll certainly consider other factors, as well, as we build a prioritization list.

Senator BLUMENTHAL. But, you're aware of the continuing needs and challenges of recovery on the island, and the very important role of the National Guard.

Secretary ESPER. Yes, sir. Puerto Rico National Guard does a great job, and there are a lot of needs out there. I recognize that. It was—you know, the hurricanes that hit there, it was tragic what it did to the island.

Senator BLUMENTHAL. I saw firsthand, perhaps you have, the critical role that the National Guard has played there.

Secretary ESPER. They do.

Senator BLUMENTHAL. Mr. Secretary, I know that Senator Kaine has asked about the budget item for deployment of troops at the border if their deployment there is extended. Can you explain why the budget request does not include funding for those border deployments?

Secretary ESPER. My best explanation, as I said to him, was that, at the time this budget was built—was last summer. This was not on anybody's radar screen, so that would be the first thing I would say. Even going into the fall, where we had a chance to amend, it just was not on our radar screen.

I don't know if you have anything to add.

Senator BLUMENTHAL. Would you want to amend it now? If so, for what period of time would you contemplate—

Secretary ESPER. I don't think—

Senator BLUMENTHAL.—that deployment?

Secretary ESPER. Yes, sir. I think much more needs to—we under—we need to understand that—and it's going to be driven largely by Department of Homeland Security (DHS), because DOD is in support of Department of Homeland Security, of what they will need, how long they will need it, and in what numbers. I think time will tell what that mission looks like.

Senator BLUMENTHAL. How much time will tell?

Secretary ESPER. I don't know. That's—we're all waiting, I think, to understand what DHS will need in the coming weeks and months.

Senator BLUMENTHAL. Do you have a timeframe for that decision being made?

Secretary ESPER. No, sir, I don't. I'd have to ask the Acting Secretary of Defense.

Senator BLUMENTHAL. Do you know the factors that will go into that decision?

Secretary ESPER. I don't. I think that they—you know, they're considering what it takes in order to secure the border. And—

Senator BLUMENTHAL. Do you know who will make that decision?

Secretary ESPER. I think it's Secretary Nielsen. I think it begins with her.

Senator BLUMENTHAL. But, the troops are your responsibility, are they not?

Secretary ESPER. So, DHS would make the request of DOD, and then DOD would have to assess whether it can—can or cannot meet that request, depending on the law and resources, et cetera, et cetera. At that point in time—and this works through Northern Command—eventually, it gets tasked down to the military to see if we can fill that need. Right now, I think, on the border, all the services are—it's more than just the Army on the border, and it—that's the process by which these taskings happen.

Senator BLUMENTHAL. I know it's more than just the Army, but right now the Army's budget and its plan for the future is before us—

Secretary ESPER. That's correct.

Senator BLUMENTHAL.—for oversight. We have no idea, as we sit here—

Secretary ESPER. Right.

Senator BLUMENTHAL.—when and how and whether that review will occur.

Secretary ESPER. Yes, sir. I can't tell you authoritatively, either, whether or not we would need funding to sustain forces on the border beyond September 30th, 2019.

Senator BLUMENTHAL. My time is expired. Thank you very much.

Secretary ESPER. Yes, sir.

Chairman INHOFE. Thank you, Senator Blumenthal.

Senator Duckworth.

Senator DUCKWORTH. Thank you, Mr. Chairman.

Go Army, hooah.

Gentlemen, an interesting find as I examined your budget request was a \$24 million decrease in logistics operations. I—in my conversations with both of you, I have discussed what I view as the important role of logistics in any type of future operations with our Army as well as when it comes to our positioning for great-power competition. I—my sense was that you both agreed with me on the role, the importance of logistics. Yet, I'm left assuming that your analysis now is that logistics operations from infrastructure to delivery are resilient against threats posed by great-power competitors and violent nonstate actors because you think that you can cut 24 million from that budget. Otherwise, you would either request the same amount as enacted in fiscal year 2019 or you would increase it. This is in light of the fact that you had the NDS that came out and you're talking about, you know, we have increased great-power competitions, we need to spend more money on these things, and yet, you're cutting logistics. So, that doesn't seem to make sense to me. I would love for both of you to respond. You can choose who goes first.

Secretary ESPER. So, Senator, in the—we talk a lot about “Night Court” and Army's reform efforts with regard to equipping. But, frankly, this process went through everything. It went—it included training, it included our manning budgets, it included our installations. Part and parcel, this was logistics. We have a great commander at Army Materiel Command, in General Perna. He proposed a number of things, where he thought he can accomplish his mission and, in some cases, do it better, by making adjustments. We've—for example, we've consolidated all classes of supply underneath him at Army Materiel Command. We've looked at logistics readiness centers, how we can improve them.

So, I'm fully confident that we can meet the needs. I wouldn't infer, necessarily, that, just because we made cuts here and there, that we lost capability. Like I said, there are a lot of efficiencies gained. We've reduced headquarters, we've reduced—we've pushed people out of headquarters, both military and civilian. We've really devolved operations down to the brigade and division level and corps level. So, there's a lot that's going on, where we save money, but yet we're still able to accomplish the mission. I—again, I think this is what Congress has asked us to do.

Senator DUCKWORTH. Is it the current mission, or are you talking about positioning yourself for great-power competition, though?

Secretary ESPER. It's both. So, we have the current mission. We have to sustain, obviously, operations in Iraq and Afghanistan, and we have any number of brigade combat teams deployed presently,

but we're also thinking ahead. So, he's doing some very innovative things down there as we build our ammunition stocks, as we think about, in the future, for example, How do we do additive manufacturing on the battlefield, behind the forward line of troops, to reduce the amount of time it takes to reequip heavy vehicles, for example, or helicopters? So, a lot of innovative things as he looks forward into the future.

Senator DUCKWORTH. General?

General MILLEY. I would echo what the Secretary said, Senator. I don't think the 24 million is—as we look to the future and the great-power competition, is going to have any kind of significant negative effect on our logistical capability to sustain the force. We, through this “Night Court” process, went through a huge amount of due diligence. Based on the recommendations of General Perna—and that's not all one type of logistics, that's a wide variety of nickels and pennies that we've cut in various programs across the Army in the logistics world. I think it's an acceptable degree of risk, and I don't think it's going to have any detrimental effect with respect to great-power competition.

Senator DUCKWORTH. Okay. I tend not to agree with you, but I would love to take a closer look at how you got to this number, because I am deeply concerned that we are cutting, here, and then you're going to be back and saying, “Now we need to increase it, and now we're falling behind.” That's a real concern.

I want to touch on something that one of my colleagues talked about a little bit, which was the Army Corps of Engineers. It now has a 31-percent cut in its budget, as you've presented. The President says that he is committed to improving the aging domestic infrastructure, which some say is a national security risk. As a representative of this administration, can you explain the discrepancy, Mr. Secretary, between the policy and statements in this issue, and especially, you know, as—look at the problems along the locks and dams on the Mississippi River, as a great example of where we actually should be putting in more money in order to help the Corps of Engineers do its job.

Secretary ESPER. Yes, Senator, I can. I think there was some confusion that came out of a press story a few weeks ago about this, about a 31-percent decrease. I think what it was is, the story spoke to what was enacted in fiscal year 2019 versus what was requested. So, in fiscal year 2019, the Army, for civil works, the request was actually 4.785 billion. The request for 2020 is 4.827 billion. So, you see an increase. What happened is, last year, in fiscal year 2019, Congress enacted a \$6.9 billion budget. That's not unusual, to see Congress put more money in for MILCON or civil works—I'm sorry, for civil works. So, I think what you have to compare is, not enacted, but you have to compare requested versus requested. You'll see, frankly, we have a—we have an increase there.

Senator DUCKWORTH. Barely an increase.

Secretary ESPER. Yes, ma'am, barely an increase, but, again, within a budget constraint, but it doesn't reflect a 31 percent decrease. It's just a difference between what Congress enacted in 2019 and what we requested in 2019.

Senator DUCKWORTH. Can you explain why, then, there's not much—barely an increase, then? Let's go with that number. Be-

cause from everything that I've heard from the Corps of Engineers, what I've heard from the White House is that there's actually a need for great increase in the Army Corps of Engineers budget so that they can meet the infrastructure needs of this Nation.

Secretary ESPER. Yes, ma'am. There's a long list of civil works projects out there. In the billions, for sure. But, it's a matter of—as I said, in any number of programs, the needs and wants seem to always exceed the means. Where do you draw the line? This is another case.

Senator DUCKWORTH. I think my farmers would disagree with you. But, thank you.

I'm out of time, Mr. Chairman. Thank you.

Chairman INHOFE. Thank you, Senator Duckworth.

Thank both of our witnesses for your tolerance and your patience today.

We are adjourned, before someone else shows up.

[Laughter.]

Chairman INHOFE. Thank you.

[Whereupon, at 11:34 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR ROGER F. WICKER

##### FUTURE ATTACK RECONNAISSANCE AIRCRAFT (FARA)

1. Senator WICKER. Secretary Esper, we know that the Army is exploring new rotary wing programs to modernize its aging airframe fleet. One of those programs, FARA, is meant to fill a capability gap that the Army has in the role of armed reconnaissance and attack in complex degraded operation environments. Can you describe what type of capabilities that FARA will bring to the Army and how such an aircraft will fare against Russian and Chinese threats?

Secretary ESPER. Optimal manning with revolutionary increases in reach (speed and range), protection, lethality, and agility at the objective will allow Future Attack Reconnaissance Aircraft (FARA) to fly and fight in any environment leveraging multi-function sensors and payloads as well as extended range munitions that are affordable and rapidly tailorable via aircraft agnostic, open mission systems architectures.

Advanced teaming FARA with next generation unmanned aerial systems (UAS) delivering lethal and non-lethal air launched effects enables cross-domain fires to penetrate and dis-integrate enemy A2AD systems and exploit expanded maneuver to overmatch peer adversaries.

Based on High-Fidelity modeling against peer adversaries in highly contested environments, FARA will enable the joint force to operate dispersed over wide areas with the ability to rapidly converge to penetrate the multiple layers of stand-off employed by the threat, disintegrate A2/AD systems, and exploit this advantage to achieve strategic objectives to return to competition.

#### QUESTIONS SUBMITTED BY SENATOR DAVID PERDUE

##### IMPROVED TURBINE ENGINE PROGRAM (ITEP)

2. Senator PERDUE. Secretary Esper, the Improved Turbine Engine Program (ITEP) remains the Army's #1 Aviation Modernization priority program that will save a combined \$1 billion per year in reduced fuel, maintenance and operating costs while increasing the capability of today's Black Hawk and Apache helicopters and provide engines for the Future Vertical Lift (FVL) program. On February 1st, the United States Army awarded an Engineering and Manufacturing Design (EMD) contract for the ITEP program to the General Electric Company. On February 19th the Advanced Turbine Engine Company (ATEC) a 50/50 joint venture between Honeywell and Pratt & Whitney, filed a protest with the General Accountability Office (GAO) on the award. I understand DOD cannot comment on the award due to the

protest, but I request clarification on ITEP specifically. What is the purpose of this program?

Secretary ESPER. The purpose of the ITEP is to deliver the next generation turboshaft engine for the Black Hawk (H-60), Apache (AH-64E), and for the future the Army's Future Vertical Lift Future Attack Reconnaissance Aircraft (FARA). Compared to the current H-60 and AH-64 engine, the Improved Turbine Engine will increase operational reach and lethality and provide increased power, fuel efficiency, and reliability while fitting in the current engine bays of the Black Hawk and Apache aircraft.

3. Senator PERDUE. Secretary Esper, will ITEP improve the overall performance of the Army's Apache and Black Hawk fleets?

Secretary ESPER. Yes, the ITEP is expected to improve the overall performance of the Army's Apache and Black Hawk fleets by regaining lost capability due to aircraft weight growth, significantly increase aircraft range, payload, and endurance over the current engine.

4. Senator PERDUE. Secretary Esper, how does ITEP impact the Army's Future Vertical Lift program?

Secretary ESPER. The requirement is for Future Attack Reconnaissance Aircraft to include the ITEP Engine as program efforts mature.

5. Senator PERDUE. Secretary Esper, were engine power, fuel consumption, reliability, and maintenance key elements for ITEP?

Secretary ESPER. Engine power, engine growth, specific fuel consumption, reliability, and maintenance were all considered for ITEP. All technical requirements/key elements were thoroughly evaluated by the Army and they were included in the System Requirements Document (SRD) which was attached to the ITEP EMD Request for Proposal (RFP).

6. Senator PERDUE. Secretary Esper, were there any other key elements?

Secretary ESPER. All technical requirements/key elements were included in the System Requirements Document (SRD).

7. Senator PERDUE. Secretary Esper, how were these factors prioritized?

Secretary ESPER. The EMD contract award is currently under a protest with GAO. Until this is resolved, specifics regarding evaluation criteria cannot be provided. Engine power, future engine improvements, fuel consumption, reliability, and maintenance, however, were all considered for ITEP. The Army evaluated all technical requirements/key elements and they were included in the System Requirements Document which was attached to the ITEP EMD Request for Proposal.

8. Senator PERDUE. Secretary Esper, what is the status of the Army's turbine engine-manufacturing industrial base, and specifically, for combat helicopters?

Secretary ESPER. The commercial and military rotorcraft turboshaft engine industrial bases are healthy with no identified lower tier supply chain risks that are of significant substance to program execution risk. All identified supply chain risks are being managed and/or mitigated through normal industrial base surveillance and risk mitigation techniques. The Army's turbine engine industrial base consists of turbo shaft engines and does not include turbine fan engines. For turbo shaft engines, the industrial base includes several diverse companies.

9. Senator PERDUE. Secretary Esper, how does the industrial base impact innovation and cost?

Secretary ESPER. A healthy industrial base, which exists for turbine shaft engines, will increase competition and drive down costs. Combat helicopter turboshaft engine innovation and cost are driven by DOD requirements (e.g., better fuel efficiency, power, etc.) and the industrial base's ability to meet those requirements. The commercial sector continuously utilizes advanced manufacturing techniques and processes, such as additive manufactured parts, ceramic matrix composites, and other advance materials, to achieve key performance requirements. While many factors impact cost, key innovation items mentioned above will reduce piece part count, streamline manufacturing, and improve performance and reliability, which will have direct impacts on production and operations and sustainment costs.

10. Senator PERDUE. Secretary Esper, do we have a sufficiently robust industrial base to meet future turbine engine requirements?

Secretary ESPER. The combat helicopter turbine engine industrial base was examined in-depth in 2012, 2016, and twice in 2018 with focus on support of the ITEP program and the Future Vertical Lift. Commercial and military engines are usually very similar in configuration, which leads to a stronger industrial base as a manufacturer will be supporting both users at the same time. These examinations consistently determined that this industrial base segment is healthy and prepared to support upcoming and emerging Army aircraft programs.

#### SIGINT, EW, CYBER AND EMS

11. Senator PERDUE. Secretary Esper, what strategy is the Army implementing to integrate SIGINT, EW, and Cyber and what does that strategy mean for the development of the EMS?

Secretary ESPER. The Army is developing a framework for an implementation plan that guides the integration and harmonization of the approved strategies for SIGINT, EW and Cyber Operations capabilities in support of multi-domain operations. The resulting plan will describe the actions to accomplish the major objectives from each strategy. Coordination with the cross-functional teams will ensure the development of a comprehensive integration plan. The governance plan for this framework will include (a) assessment during the Army Cyberspace Council; (b) updates during the intelligence senior initiatives group, and; (c) updates at the Intelligence Center of Excellence, Cyber Center of Excellence Home-on-Home series. Employing cyberspace and EW capabilities under a single planning, integration, and synchronization methodology increases the operational commander's ability to understand the environment, project power, and synchronize multiple operations using the same domain and environment. Synchronizing offensive and defensive activities allows a faster response to enemy and adversary actions. The EMS is the common denominator for both cyberspace and EW operations, and also impacts every operation in the Army.

12. Senator PERDUE. Secretary Esper, what does the Army's new SIGINT strategy mean for the development of future systems/capabilities?

Secretary ESPER. The SIGINT strategy provides ends, ways, and means required for U.S. Army SIGINT capabilities to be flexible, agile, and rapidly adaptable to keep pace with the threat in a multi-domain operational environment. The strategy describes agile processes required to acquire and adapt SIGINT equipment to address new threats leveraging conventional acquisitions processes as well as Army rapid acquisition approaches (Information Technology Box, Quick Reaction Capability, Army Tactical Exploitation of National Capabilities, Rapid Capability Office.)

The Army's new SIGINT strategy incorporates capabilities pertaining to the cyberspace domain. This new strategy also improves the rapid acquisition process to keep better pace with the changes happening with computing.

The inclusion of the entire electromagnetic spectrum (EMS) as part of SIGINT ensures that Electronic Warfare is integrated into SIGINT capability design.

13. Senator PERDUE. Secretary Esper, in complex EMS environments, the legal partition between title 10 and title 50 can generate inefficiencies in acquisition with respect to combined tactical EW and SIGINT systems. How are Army acquisition officials managing this divide and what steps is the Army taking to bridge it?

Secretary ESPER. Titles 10 and 50 each have their respective authorities with regard to command and control of EW and SIGINT systems. This includes how each system is used, whether it is employed in support of tactical military operations (title 10) or in support of national intelligence/covert operations (title 50). The Army builds materiel solutions to approved requirements. Any issues are worked out as the Army develops the requirements for each system. Army SIGINT / EW Program Managers work closely with various intelligence and security organizations to ensure materiel solutions are accredited by cognizant authority prior to their employment.

14. Senator PERDUE. Secretary Esper, how are the Army's EMS-related activities (Cyber operations, EW, Spectrum Management, and SIGINT) aligned?

Secretary ESPER. The Army has aligned SIGINT, EW, and CO capabilities to produce fully integrated staff processes to improve mission execution at every echelon. This alignment is consistent with the Joint Cyberspace Concept and the Army Concept Framework. Alignment concepts are continuously being developed in partnership between the Intelligence and Cyberspace Centers of Excellence to coordinate and, where applicable, consolidate force and capability development efforts with an

integrated approach. This will ensure that SIGINT, EW and CO capabilities are interoperable, deliver more versatility, and are mutually supporting.

15. Senator PERDUE. Secretary Esper, what changes across DOTMLPF-P is the service pursuing to “Man, Train, and Equip” our combatant commanders for modern operations in complex EMS environments?

Secretary ESPER. The Army must fight and win in a contested electromagnetic operational environment. Cyberspace and the EMS will grow increasingly congested, increasingly contested, and will be critical to successful multi-domain operations. Success will be measured by the ability to execute operations freely in cyberspace. On May 17, 2014, the Chief of Staff of the Army (CSA) directed U.S. Army Training and Doctrine Command (TRADOC) to develop a framework focused on providing increased cyberspace support to corps level and below commanders titled, “Cyber Electromagnetic Activities (CEMA) Support to Corps and Below” to address specific electronic warfare concerns and issues. In April 2017, CSA directed Cyber and Intelligence Centers of Excellence to conduct an assessment to identify gaps and solutions associated with the integration of Signal Intelligence (SIGINT), Electronic Warfare (EW), and Cyber capabilities, the findings of which will be incorporated into a mission strategy.

#### EMERGENCY PREPAREDNESS

16. Senator PERDUE. Secretary Esper, you previously testified before the Senate Appropriations Committee (May 5, 2018) that the Department would place increased emphasis on a range of business reforms, specifically addressing acquisition reform, contract management, and budget execution. Private sector solutions have historically played a critical role in ensuring that the Department has access to top quality, cost effective products and services. It has been brought to my attention that the Department is using funds to research, build and deploy an emergency preparedness and response technology (the Protection Services Infrastructure Framework (PSIF) produced by the United States Army Combat Capability Development Center). This emergency preparedness and response technology already exists in the market today, and has proven effective in other state, local and federal agencies that have acquired it. What factors are considered when the Department evaluates whether to expend these resources versus deploying a Commercial Off the Shelves (COTS) technology?

Secretary ESPER. Between 2002 and 2010, the Combat Capability Development Center Armament Center (CCDC AC) adapted its combat decision aids technologies for dual-use applications to address situational awareness and emergency management to bridge the information gap between Defense and Civil agencies. Combat decision aids allow commanders to identify decisions and solutions to reduce decision timelines as situations develop in the operational environment. Following the 2009 Fort Hood shooting, Joint Project Manager Guardian (JPM GUARDIAN) received a directed requirement from the working group organized to study what happened during the shooting to provide an installation common operating picture, mass warning and notification, and enhanced 911 system. A standalone commercial product capable of bridging the aforementioned gap in a “plug-and-play” open-architecture framework did not exist at that time. Given this requirement and knowledge of a separate CCDC AC effort to enable interagency information sharing at the Port Authority NY/NJ, JPM Guardian selected CCDC AC in 2010 as the lead system integrator for the Physical Security Integration Framework—Interconnection Capability Suite (PSIF ICS).

In accordance with the Federal Acquisition Regulation, and Title 10 USC § 2377, when the Army evaluates whether to pursue a developmental program in lieu of a COTS technology, the Army must first determine if a COTS or non-developmental product exists capable of satisfying the requirements, or whether the COTS/NDI product could be modified to meet the requirements, or determine if the COTS/NDI product could meet the requirements if the requirements were modified to a reasonable extent. Numerous factors are considered, including: threshold and objective capability performance specifications, breadth of capability to meet unique U.S. Army requirements, potential reasonable modifications to the requirements, open vice closed/proprietary architectures (to enable interface with multiple COTS/ Government off the Shelf Solutions [GOTS] solutions), performance, and schedule as well as overall lifecycle sustainment costs. Lifecycle sustainment costs consist of maintenance, licensing fees, replacement costs, and technological refresh rates. In addition to the economic and specification measures noted above, potential COTS/GOTS capabilities undergo operational and developmental testing and evaluation to deter-



mine optimal functionality, durability, and the ability to meet operational mission requirements, and possible COTS/NDI modifications to meet the requirements.

17. Senator PERDUE. Secretary Esper, current policies in place require all federal agencies, including DOD, to comply with the Emergency Planning & Community Right-to-Know Act. The Mutual Obligations in Statute were specifically designed to allow government entities to communicate with one another during times of crisis. Emergency response and preparedness is crucial to our national security. It's my understanding that most Federal installations, including the United States Army, are connected to each statewide system—but there are several that are not. Has the Department made efforts to close this gap, and ensure that the Army has a technology in place that allows for the sharing of information and personnel during times of crisis?

Secretary ESPER. The Army has fielded mass warning and notifications (MWN) systems that are Emergency Planning & Community Right-to-Know Act compliant at 100 of 144 installations. The Army plans to field MWN at all installations in early 2020.

---

QUESTIONS SUBMITTED BY SENATOR MARTHA MCSALLY

WAATS/APACHE PILOT THROUGHPUT

18. Senator MCSALLY. Secretary Esper and General Milley, I understand Ft. Rucker is having a hard time processing Apache pilots on schedule. Is the Army is still experiencing a pilot shortage? How is throughput at Ft. Rucker for attack pilots progressing? For AH-64 pilots specifically? Has the Army considered locating a Mobile Training Team (MTT) at the Western Army Aviation Training Site as a way to speed up throughput in the short-term? As part of the replacement for the 24 AH-64 helicopters/Attack Reconnaissance Force Structure lost due to ARI, Arizona is on track to receive 13 replacement UH-60A/L for an Assault Helicopter Battalion (AHB) by the end of the month. Arizona now has two AHBs in the state (w/ 10 UH-60A/Ls each) and two Med Evac detachments (w/ 3 UH-60A/Ls each). Arizona has also been identified to receive an accelerated upgrade of the AHB's UH-60A/Ls to the UH-60M by August 2020. Is that plan still on track? I also understand these the Med Evac detachments are scheduled to be upgraded to UH-60V models—what is the timeframe for delivery of these variants?

Secretary ESPER and General MILLEY. The Army is short 647 Aviation Warrant Officers (AWO) across all components. The Army under-produced pilots between the years 2010–2017 due to reduced budgets and subsequent reductions to force structure. As a result, a shortfall developed among junior AWOs in those year groups. The Army is mitigating the shortfall by retaining a surplus of senior-level AWOs. The Army's strategy to address the shortage is two-fold: incentive programs to retain pilots beyond their initial Active Duty or Reserve Service Obligation, and increasing throughput capacity at Fort Rucker.

The Army is not yet meeting its AH-64 pilot training requirements at Fort Rucker for all components, but AH-64 pilot throughput is progressing in a positive direction. We have both improved the maintenance readiness levels of the AH-64s and increased the number of AH-64s at Fort Rucker, both of which were limiting factors. Additionally, we are increasing the number of Instructor Pilots and the amount of funding at Fort Rucker to meet pilot training requirements. The overall shortage of AH-64 aircraft across the Army will continue to challenge the training of pilots.

Historical analysis shows that the U.S. Army Aviation Center of Excellence (USAACE) at Fort Rucker is the most efficient training location due to economy of scale. USAACE can train over twice as many pilots per aircraft as compared to the Western Army Aviation Training Site (WAATS), which has not conducted AH-64 training since 2013.

The current timeline for the Arizona National Guard to receive UH-60Ms is by 2020. The timeline for UH-60V fielding is being developed.

YUMA PROVING GROUND (YPG) LONG RANGE FIRING EXPANSION:

19. Senator MCSALLY. Secretary Esper, I appreciated our discussion during the hearing regarding the need to update and expanding our testing ranges, like the Yuma Proving Ground, to be able to accommodate Army's top modernization priority of long range precision fires testing? In your answer, you mentioned there are some specific resources in the Army's fiscal year 2020 budget regarding these updates. Are resources to update our testing and training ranges reflected in Army's fiscal

year 2020 budget? If so, how specifically? Army's Electronic Proving Ground (EPG) @ Ft. Huachuca is looking into expanding electromagnetic spectrum access in order to allow for additional military training within channels where adversaries may try to target government and civilian communications. With modernization a top priority, is the Army also prioritizing updating and investing in its electronic testing facilities, like the EPG at Ft. Huachuca? In the face of growing grey-zone threats, is expanding electromagnetic spectrum access for more testing and training is a priority for the Army? If so, how? If not, why not?

Secretary ESPER. The Army annually plans and programs investments in test capability modernization and sustainment for its test ranges that support the testing required for legacy and modernization priorities. The fiscal year 2020 budget has targeted investments in infrastructure and instrumentation at Army test ranges which will support modernization efforts including Long Range Precision Fires systems. The Army is investing in test capabilities such as range fiber optics, radars, telemetry, and support vehicles to support all Yuma Test Center (YTC) testing efforts including Long Range Precision Fires at the YTC on U.S. Army Yuma Proving Ground, Arizona. In addition, the Army is leveraging Office of the Secretary of Defense funding to develop optical instrumentation and autonomous flight safety systems for future YTC testing needs.

The Army is specifically investing at the U.S. Army Electronic Proving Ground on Fort Huachuca, Arizona in electronic test capabilities for Network, Radio, and GPS systems as well as threat emulation capabilities which include threats typically found in grey zone conflict.

Department of Defense (DOD) ranges, including those on Fort Huachuca, are faced with challenges in spectrum access, airspace restrictions, and land use. For example, the Federal Aviation Administration (FAA) and the Federal Communications Commission have curtailed DOD's access to the spectrum while the global wireless broadband industry is seeking to reallocate spectrum from Defense use to commercial use. The Army is working with the following to address some of the challenges:

- 1) DOD to establish provisions for assured and dynamic access to the spectrum including spectrum that is already in use.
- 2) Fort Huachuca, other Services, and FAA to convert the Tombstone Military Operations Airspace into restricted airspace that would better support DOD training and provide the airspace necessary to test sensing technologies.
- 3) Fort Huachuca and its Sentinel Landscapes partners to expand its Electronic Warfare Test Range to enable electronic testing and training operations with a brigade size element.

#### FUTURE VERTICAL LIFT

20. Senator MCSALLY. Secretary Esper and General Milley, I appreciate the Army's fiscal responsibility in trying to cut less promising programs in order to pay for its modernization priorities, including Future Vertical Lift (FVL). However, how you chose pay for those programs is critically important. I'm concerned that some Army National Guard (ANG) aviation programs may be seen as a pay-for for some of these priorities and, as a result, ANG's modernization budget may be disproportionately affected. When is the Army planning to begin receiving new rotary-wing aircraft based on your Future Vertical Lift initiative? Is the Army expecting a topline budget increase to fund FVL, or are you planning to cut existing programs to fund FVL development and procurement? Which programs does the Army plan to cut, when, and which units (or components) will be affected? (For example, we understand that UH-60M production from fiscal year 2024-2028 is planned as one offset for modernization programs, and this modernization will primarily affect primarily the Guard because if the Active component is modernized first, UH-60V production/delivery for the ANG may never occur).

Secretary ESPER and General MILLEY. Regarding whether we expect a topline budget increase to fund FVL, at this time we do not. We are planning for defense budgets to stay relatively flat or potentially decline so we are choosing to reprioritize resources within our expected topline to pay for near term readiness and future modernization requirements.

The Army is at an inflection point as procurement of its AH-64 and UH-60 fleets wind down while developing the Future Vertical Lift (FVL) acquisition programs: Future Attack Reconnaissance Aircraft and the Future Long Range Assault Aircraft. The Army must balance continued modernization of the current fleets with the requirement to field new, more advanced aircraft capable of operating effectively on the Multi-Domain Battlefield against near-peer adversaries to maintain overmatch in this domain. The Army will not turn to Army National Guard (ANG) aviation

programs to pay for FVL. Additionally, the Army will not impact ARNG and USAR rotary wing modernization. UH-60M, AH-64E, and UH-60V programs are currently funded and on schedule.

---

QUESTIONS SUBMITTED BY SENATOR JEANNE SHAHEEN

PEACEKEEPING AND STABILITY OPERATIONS INSTITUTE (PKSOI)

21. Senator SHAHEEN. Secretary Esper, I understand that the Army plans to downsize or eliminate the Peacekeeping and Stability Operations Institute (PKSOI) located at the Army War College in Carlisle, Pennsylvania as part of an effort to restructure your over Irregular Warfare enterprise. I also understand that Assistant Secretary Owen West has requested that the Army delay any decision regarding PKSOI until the Irregular Warfare review is complete, but the Army has not agreed to honor that request. I am particularly concerned about these changes because PKSOI is currently the Army's lead on Women, Peace and Security. Can you provide an update as to the Army's plan for PKSOI and specifically, what does that mean for the Army's implementation of Women, Peace and Security if it is transferred to the Combined Arms Center at Fort Leavenworth, Kansas?

Secretary ESPER. The Peacekeeping and Stability Operations Institute (PKSOI) will be reorganized and will remain at Carlisle Barracks, with the Combined Arms Center (CAC) at Fort Leavenworth, KS, taking command of both PKSOI and the newly established Army Irregular Warfare Proponent Office. The Army established the Irregular Warfare Proponent Office at Fort Leavenworth, KS in order to implement the National Defense Strategy; it will work alongside PKSOI to support Joint peacekeeping and stability operations issues. No military members or civilian employees currently at PKSOI will be directed to move to Fort Leavenworth as part of the reorganization. Regarding the Army's role and responsibility to the Women, Peace, and Security (WPS) mission, the CAC will assume all related tasks to WPS at Fort Leavenworth, Kansas. With the ongoing transition, CAC and PKSOI are making efforts to ensure there is minimal reduction in capability to support WPS during the transition. Both organizational transitions will take place no later than October 2019.

PRECISION GUIDANCE KIT—ANTI JAM (PGK-AJ) PROGRAM

22. Senator SHAHEEN. Secretary Esper and General Milley, given the threat posed to our armed services in GPS denied environments, the Army is funding the Engineering and Manufacturing Development phase of the Precision Guidance Kit—Anti Jam (PGK-AJ) program. The goal of this program is to bring affordable, degradation resistant precision to our artillery forces. The funding planned in the latest budget drops sharply after fiscal year 2020. What is the Army's plan to continue to fund this critical capability improvement to complete its full qualification and reach an Initial Operational Capability by 2025 or sooner?

Secretary ESPER and General MILLEY. The Precision Guidance Kit—Anti Jam program is fully funded in fiscal year 2020, and the Army is committed to funding PGK—Anti Jam development and delivering the Initial Operational Capability to our Warfighters by fiscal year 2025.

---

QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

SOUTHERN BORDER WALL

23. Senator BLUMENTHAL. Secretary Esper, have you made any recommendations regarding any Army construction projects that could be diverted to build the wall?

Secretary ESPER. On March 19, 2018, the Department identified a complete pool of unawarded military construction projects from which funding could be reallocated to support the construction of a border barrier should the Secretary of Defense decide to use 10 USC 2808 authority. To support his determination on utilizing this authority, the Army and the Department are reviewing the pool of unawarded projects with award dates in fiscal year 2020 or later to minimize potential impacts of delays of resourcing. No military housing, barracks, or dormitory projects will be impacted. No definitive date has been set for the Acting Secretary of Defense's determination on the use of section 2808 authority or for identifying a final list of military construction projects that could be deferred.

24. Senator BLUMENTHAL. Secretary Esper, what is your criteria for evaluating and prioritizing Army construction projects? How will you formulate recommendations for projects to be defunded?

Secretary ESPER. The Secretary of Defense has not yet decided to undertake or authorize any barrier construction projects under section 2808. We are carefully considering whether and which MILCON projects could be deferred, applying these criteria:

- No MILCON projects that have already been awarded, and no MILCON projects with fiscal year 2019 award dates will be impacted;
- Only MILCON projects with award dates after September 30, 2019 will be considered;
- No military housing, barracks, and dormitory projects will be impacted; and
- MILCON projects would be selected to minimize the impact on readiness and take into account the National Defense Strategy.

#### PUERTO RICO

25. Senator BLUMENTHAL. Secretary Esper, will you commit to encouraging Secretary Shanahan to not select any Army projects in Puerto Rico to be defunded and diverted to the border wall given the recent natural disasters and economic disarray?

Secretary ESPER. No definitive date has been set for the Acting Secretary of Defense's determination on the use of section 2808 authority or for identifying a final list of military construction projects that could be deferred. MILCON projects would be selected to minimize the impact on readiness

#### TROOPS AT SOUTHERN BORDER WALL

26. Senator BLUMENTHAL. Secretary Esper, will troops be deployed to the border for as long as it takes to build the wall?

Secretary ESPER. The U.S. Army will provide support to U.S. Northern Command as directed by the Secretary of Defense in response to requests made by the Department of Homeland Security.

27. Senator BLUMENTHAL. Secretary Esper, is construction of a border wall under section 2808 contingent on extending the deployments of troops at the border, even beyond the current extension through September 2019?

Secretary ESPER. The Secretary of Defense has not yet decided to undertake or authorize any barrier construction projects under section 2808.

28. Senator BLUMENTHAL. Secretary Esper, if you anticipate that deployment orders for troops at the border will be extended, why does the President's budget request fail to include funding for border deployments?

Secretary ESPER. To date, the Army does not anticipate troop deployments extending past 30 September 2019. Further, the Acting Secretary of Defense has not ordered the Army to deploy troops to the Southwest Border beyond 30 September 2019.

#### GENERAL NELLER CONCERNS WITH READINESS

29. Senator BLUMENTHAL. General Milley, do you share the concerns that General Neller articulated? Do you agree that the border deployments, among other factors, are compromising Army readiness and solvency?

General MILLEY. The Army has managed several unplanned and unbudgeted events, to include support to the Department of Homeland Security along the Southwest Border, support to hurricane relief efforts in the Southeast, and support to flooding relief efforts in the Midwest. From an Army-wide perspective, the readiness impact of these unplanned and unbudgeted factors has been negligible.

30. Senator BLUMENTHAL. General Milley, have you communicated any concerns to Acting Secretary Shanahan?

General MILLEY. No.

31. Senator BLUMENTHAL. General Milley, in the memos made public, GEN Neller lists 4 Marine Corps exercises that have been decisively cancelled or reduced, and 7 potential cancellations. General Milley, has the Army also been forced to cancel readiness exercises? How many?

General MILLEY. The Army did not cancel any training exercises in fiscal year 2019 because of unplanned or unbudgeted factors. There have been some planned

training events, not exercises, disrupted by support to the border, but all are recoverable after units return to home station and Commanders reschedule that training. The border commitment has represented no more than 5,000 soldiers, or 0.5 percent of the total Army. Additionally, we took mitigating steps to reduce any risk to readiness such as rotating forces frequently to prevent disruption in training.

32. Senator BLUMENTHAL. General Milley, are you concerned that these troop deployments will continue indefinitely? If that is the case, can you estimate the impact on readiness?

General MILLEY. No. Given the Army's large size in proportion to the support mission, and our ability to rotate units for the mission, continuation of deployments at the current level would have a negligible impact on readiness of the Army.

#### FUTURE VERTICAL LIFT

33. Senator BLUMENTHAL. General Milley, the Sikorsky-Boeing SB-1 Defiant conducted its first flight last week. Can you please provide an update on how the Army's Future Vertical Lift (FVL) program is progressing?

General MILLEY. The flight of the Sikorsky-Boeing SB-1 Defiant is another step in the Joint Multi Role Tech Demonstrator (JMR-TD) process that is helping us reduce risk. The Future Vertical Lift Cross Functional Team is on schedule to field both Future Attack Reconnaissance Aircraft and Future Long Range Assault Aircraft to units in the 2030 timeframe. We will accomplish fielding by capitalizing on existing, mature technology and through a modular open systems architecture (MOSA) enabling Future Vertical Lift to integrate the most reliable and capable technical solutions available from government efforts and commercial industry. No later than June 2019, the Army will award four to six initial Future Attack Reconnaissance Aircraft design contracts. No later than March 2020, the Army will select two vendors for final design and competitive prototypes. November 2022 is the target date for the prototypes to first take flight followed by a year-long "Fly-Off" competition in 2023. The Army will decide whether or not to buy one of the prototype designs by 2024.

34. Senator BLUMENTHAL. General Milley, do you believe—as your Future Vertical Lift Cross Functional Team leader BGEN Rugen does—that the Army is at an inflection point in aviation modernization and should now pursue a new design or concept for power lift?

General MILLEY. Yes, I agree with BG Rugen. We had to make a decision as to whether we keep incrementally upgrading our current rotary wing fleet that were designed in the 1970s or go with a "clean sheet" design. The current rotary wing fleet is as capable as ever and now is the time to build an Army aviation force that is optimized for large-scale combat operations against a peer or near-peer competitor.

35. Senator BLUMENTHAL. General Milley, are you satisfied with the progress Future Vertical Lift Program? How can Congress best support your aviation modernization efforts?

General MILLEY. While I am satisfied with where we are with Future Vertical Lift, we are always looking for opportunities to accelerate the programs to deliver advanced capabilities to our Army sooner. We've enjoyed recent successes under the Other Transaction Authorities that Congress has provided the Services and look to continue to leverage those authorities to deliver advanced capabilities to our Army.

36. Senator BLUMENTHAL. General Milley, do you believe the Cross Functional Team organization is effective in leading modernization efforts in powered lift for the Army? What are the challenges and how are you addressing them?

General MILLEY. Yes. The Cross Functional Team construct allows us to consolidate warfighter, technical, programmatic, and acquisition communities to fuse time and investment of readiness priorities. The Future Vertical Lift Cross Functional Teams (FVL CFT) are designed to rapidly integrate and synchronize critical solutions across the modernization enterprise and deliver timely solutions to the warfighter. As we have demonstrated in Future Long Range Assault Aircraft (FLRAA) and Future Attack Reconnaissance Aircraft (FARA) schedules, the FVL CFT has literally cut years off the normal procurement schedule by working with the acquisition and contracting community to maximize the use of Other Transaction Authorities; worked with the Science and Technology community to capitalize on existing, mature technology as well as the Joint Multi Role Tech Demonstrator (JMR-TD) program to reduce risk in the accelerated timeline. The FVL CFT is

working hand in hand with the Program Manager—Unmanned Aerial Systems and applied the “Buy, Try, Decide” method to accelerate the replacement for the Shadow Unmanned Aerial Systems. Overall, we are very happy with all of our Cross Functional Teams’ performance but we are always looking for ways to improve and, in turn, accelerate the process to get the next generation of equipment into our soldiers’ hands as soon as possible.

---

QUESTIONS SUBMITTED BY SENATOR TIM KAINE

DEPARTMENT OF THE ARMY BUDGET REVIEW

37. Senator KAINE. Secretary Esper, does your fiscal year 2020 budget request include any funding for sustaining support activities along the Southern Border?

Secretary ESPER. No, support to Customs and Border Patrol (CBP) began on October 26, 2018, was first extended through January 31, 2019, and has since been extended to September 30, 2019. The CBP has not requested and the Army has not been directed to deploy troops at the border past September 30th. Therefore, no funds were requested for the mission in this budget request.

38. Senator KAINE. Secretary Esper, have you been informed that you will need to sustain your deployment of forces to the southern border past September 2019?

Secretary ESPER. No, the Army has not been informed to sustain troop deployments to the Southwest Border past September 2019.

---

QUESTIONS SUBMITTED BY SENATOR ELIZABETH WARREN

WHITE SUPREMACY

39. Senator WARREN. General Milley, white supremacy is rising in the United States. The Anti-Defamation League found a 182 percent increase in propaganda efforts by white supremacist groups in the U.S. in 2018, compared to the previous year. That same group found that white supremacist murders in the U.S. more than doubled in 2017, with white supremacists responsible for 53 percent of extremist-related murders in the United States. A recent Huffington Post investigation found that two marines, two Army ROTC cadets, an Army physician, a member of the Texas National Guard and one member of the Air Force belong to a white supremacist group called Identity Europa. This group reportedly helped organize the white supremacist rally in 2017 in Charlottesville, Virginia and spews racist, anti-Semitic, and anti-immigrant views. I believe that Army values are American values, and that the vast majority of our soldiers live those values every day and represent the best of America. I do not blame the Army for every offensive thought or act by every soldier. How does the Army ensure a command climate of zero tolerance for white supremacist or white nationalist views and acts, including how soldiers are disciplined for such behavior?

General MILLEY. All soldiers are prohibited from supporting extremist organizations or extremist activities, and participation in extremist organizations and activities by Army personnel is inconsistent with the responsibilities of military service. Enforcement of this policy is a responsibility of commanders at all levels, is vitally important to unit cohesion and morale, and is essential to the Army’s ability to accomplish its mission. Further, Commanders have the authority to prohibit military personnel from engaging in or participating in other activities that the commander determines will adversely affect good order and discipline or morale within the command.

Commanders have several options for dealing with violations of the prohibitions, which include punishment under the UCMJ or administrative actions such as separation for unsatisfactory misconduct, or for conduct deemed prejudicial to good order and discipline or morale; reclassification actions; bar to reenlistment; or other administrative or disciplinary action deemed appropriate by the commander based on the specific facts and circumstances of the particular case.

40. Senator WARREN. General Milley, in recruiting quality soldiers, how does the Army ensure that recruits do not have an association or participation with white supremacist or white nationalist groups or causes of any kind?

General MILLEY. The Army uses a comprehensive set of policies and procedures to identify extremism during the accessions process. These checks include screening with the National Crime Information Center which checks the Gang File and the

Known or Appropriately Suspected Terrorist File which provide the Army identifying information about violent criminal gang and terrorist organization members.

Army accessioning agencies complete, for each applicant, tattoo screening for tattoos or brands that are extremist, indecent, sexist, or racist; they also require applicants to complete numerous questionnaires and be subject to interviews with Army leaders in the accession process, credit checks, and also be subject to a Personnel Security Investigation (Tier 3 PSI).

Many applicants are also subject to an even more in depth Single Scope Background Investigation comprised of additional screening including interviews by security screeners with persons who know the applicant (neighbors, coworkers or former supervisors or teachers). A particular area of emphasis in the screening process is to detect and deter those with a history of gang or extremist activity, which is often found to be an indicator of racist behavior.

41. Senator WARREN. General Milley, Military Times “conducted a voluntary, confidential online survey” of Active Duty U.S. servicemembers in September 2017, in which “[t]he questions focused on President Trump’s time in the White House and national security issues facing American leaders.” That survey found: “Nearly one in four troops polled say they have seen examples of white nationalism among their fellow servicemembers.” Furthermore, according to the survey, “When asked whether white nationalists pose a threat to national security, 30 percent of respondents labeled it a significant danger.” Has the Army conducted a voluntary, confidential survey of soldiers regarding the presence of white supremacy or white nationalism in the ranks, or the threat of white supremacy or white nationalism to the United States?

General MILLEY. The U.S. Army has not surveyed soldiers regarding the presence of white supremacy or white nationalism in the ranks, or the threat of white supremacy or white nationalism to the United States. During the 1997 to 2011 timeframe, the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) conducted a biannual survey that contained items asking soldiers about their experiences with extremist organizations/activities. The survey also asked soldiers for their perceptions of the seriousness or the extent of extremist/hate group activities within their unit. In 2013, the Department of Defense’s Office of People Analytics (OPA) also asked soldiers to what extent racist/extremist organizations or individuals were a problem at their installation.

Overall, the vast majority of Active Duty soldiers said extremist activities were not a problem at all or only a slight problem.

42. Senator WARREN. General Milley, how many soldiers were discharged each year for the last 10 years for association or participation with white supremacist or white nationalist groups or causes?

General MILLEY. The Army doesn’t track discharges for association or participation with white supremacy or white nationalist groups or causes. The Army tracks the overall basis for which a servicemember is separated (e.g., civil conviction, court-martial conviction, misconduct, unsatisfactory performance). Army policy prohibits participation in extremist, terrorist, and criminal gang organizations and activities.

---

#### QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

##### APACHE HELICOPTERS

43. Senator MANCHIN. General Milley, after the Aviation Restructure Initiative the Army National Guard was left with four Apache helicopter battalions. Each of these battalions is manned by only 18 aircraft instead of the traditional 24 required aircraft per battalion. This means that the National Guard units must constantly share aircraft to ensure adequate training for combat operations or are forced to borrow aircraft from Active Duty or accept reduced readiness. Is this plan sustainable for long term readiness of our National Guard Apache fleet or do we need another restructuring of assets?

General MILLEY. The four ARNG Attack Reconnaissance Battalions are scheduled to reach full authorization of 96 total aircraft by the end of fiscal year 2026. The first battalion will be fielded with 24 AH-64Es in fiscal year 2022, the second in fiscal year 2023, the third in fiscal year 2025, and the fourth in fiscal year 2026. All 96 aircraft are scheduled to be the Version 6, which is the most advanced, capable, and lethal version of the AH-64E. Regular Army units are also short of AH-64 aircraft, and must also cross-level them for deployments. Given the aforementioned plans to field more Apache aircraft in the future to the National Guard (and

the Regular Army), this plan is sustainable and does not require another restructuring of assets.

44. Senator MANCHIN. General Milley, after a limited procurement of new build AH-64E Apache block IIIB helicopters over the last few years, the service has elected to shift this year's budget for Apaches entirely into remanufacture of airframes for the Apache block IIIA. Given the already significant service of some of these Apache airframes, if we ignore cost numbers which are not significant in the long term are we making the correct investment now to facilitate long term reliability of our attack helicopter assets?

General MILLEY. Yes, we are making the correct investment. The remanufactured Apache has a new airframe, comes off the production line as a zero-hour new aircraft, and it costs less than procuring a new build aircraft. There is no difference between the life or capability of a REMAN and new build Apache. Both will serve the Army through 2050.

#### BUDGET PRIORITIES

45. Senator MANCHIN. Secretary Esper and General Milley, we are currently in a period of the highest defense budgets we have ever seen. Last year's enacted Department of Defense budget was the largest in history, only beat by this year's request in the President's budget. This trend of increasingly massive defense budgets is unsustainable. Do your budget priorities laid out in the request adequately take advantage of the large budgets now to prepare the force for a likely time in the future where we will see decreasing budgets and the inability to fund every project you want?

Secretary ESPER and General MILLEY. The fiscal year 2020 budget resources the Army's essential support of the National Defense Strategy. It furthers the Army's total readiness recovery goal by 2022 and puts the Army on a path to achieve our modernization objectives by 2028. The Army needs timely, adequate, predictable, and sustained funding now and in the future to ensure we meet these goals. Any reduction now or to future budget requests would likely impact the Army's fiscal year 2022 readiness goals and the fiscal year 2028 modernization goals. The Army has/is taking a holistic approach to modernization for the future which is demonstrated by the establishment of AFC and the six modernization priorities—which drive our future objective of achieving multi-domain dominance by 2028. The Army's six modernization priorities will not change and they demonstrate the Army's commitment to innovate for the future.

#### PROPORTIONAL AND CONCURRENT EQUIPMENT

46. Senator MANCHIN. Secretary Esper and General Milley, a top priority of the National Guard year in and year out is the acquisitions of proportional and concurrent equipment. Having the same equipment on the same timelines as Active Duty massively enhances the total force's ability to train and fight alongside the Active Duty and overall enhances our national security. Do your current and future budgets support National Guard acquisition of items such as Bradley and Abrams mods, and Joint Lightweight Tactical vehicle in the short term as well as projects like Future Vertical Lift in the long term?

Secretary ESPER and General MILLEY. The Army National Guard's equipping focus is on deployability, sustainability, and interoperability. The Joint Lightweight Tactical Vehicle is fully funded through fiscal year 2025 to support Army National Guard requirements. The Abrams modifications are fully funded through fiscal year 2025, which supports all Army National Guard requirements. The potential reduction in Bradley modifications to COMPO 1 would result in delaying the cascade of the A3 variants to COMPO2. Future Vertical Lift fielding plans are not developed; however, the Army has an obligation to ensure soldiers going into harm's way, regardless of component, have the best equipment available.

#### WEAPONS OF MASS DESTRUCTION CIVIL SUPPORT TEAMS

47. Senator MANCHIN. Secretary Esper, National Guard Weapons of Mass Destruction Civil Support Teams (WMD-CST) are a critical component of domestic ability to respond to acts of violence here at home. Congress has made this a priority and our Governors and Adjutant Generals in the states depend on the funding of these assets to ensure we maintain this capability. Does the fiscal year 2020 budget request and the Future Years Defense Program (FYDP) include the necessary funding levels and resources to ensure that this capability is fully sustained?

Secretary ESPER. The Department of the Army recognizes the importance of the National Guard Weapons of Mass Destruction Civil Support Teams (WMD-CSTs)



in supporting civil authorities' efforts to counter weapons of mass destruction. The Army decided not to pursue certain upgrades in order to fund more urgent and important modernization priorities. In coordination with the NGB, the Army is currently reviewing funding levels for the WMD-CST program in the fiscal year 2021–2025 POM build.

#### MQ–1C GRAY EAGLE PROCUREMENT

48. Senator MANCHIN. Secretary Esper and General Milley, in May 2017 the Army updated its MQ–1C procurement requirement to 204 aircraft based on the decision to man your brigades with 12 MQ–1C aircraft versus 9. However, your budget request allots for only six War Replacement Aircraft in fiscal year 2020 and fiscal year 2021, with no procurements listed in fiscal year 2022, fiscal year 2023 or fiscal year 2024. This action leaves your force short of the overall 204 aircraft. What is the plan for future requests and utilization of MQ–1C Gray Eagle aircraft?

Secretary ESPER and General MILLEY. The entire MQ–1C Gray Eagle Army Acquisition Objective (AAO) of 204 is procured with the fiscal year 2019 appropriation. The fiscal year 2020 request is for pre-planned battle losses which shortens the timeline to acquire replacement aircraft to reduce risk to the Gray Eagle fleet.



**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**THURSDAY, MARCH 28, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**THE DEPARTMENT OF ENERGY'S ATOMIC ENERGY  
DEFENSE PROGRAMS**

The Committee met, pursuant to notice, at 9:29 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee Members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Cramer, Scott, Blackburn, Hawley, Reed, Blumenthal, Hirono, Kaine, King, Heinrich, Warren, Peters, Manchin, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. We will come to order. Consistent with our policy of starting on time, it is now time.

I appreciate your being here. I want to say one thing to Secretary Perry. You have a lot of fans here that you did not know you would have because just 28 and a half miles north of Texas is Fort Sill, and Fort Sill is in Washington this week, and so we were talking about the fact many of them are going to come and see. A lot of people are not aware of what the Senate Armed Services Committee (SASC) has to do with this whole issue that we are going to be talking about today. This will be an opportunity to do that. We thank you for being here and for your service.

The Committee meets to receive testimony on the fiscal year 2020 budget request of the Department of Energy's (DOE) atomic energy defense activities.

I would like to welcome our witnesses, Rick Perry, former Governor of Texas, and Lisa Gordon-Hagerty. Both of you distinguish yourselves in your fields, and we are very fortunate to have your service.

The Committee's top priority is to support an effective implementation of the National Defense Strategy (NDS). The NDS, which is this manual right here—the commission that put this together—just as a reminder, this is equally two Democrat and Republicans. It is something that is the blueprint for everything that we are

doing in the military right now. That commission made it clear that maintaining a nuclear deterrence is required. In recent years, since the Cold War ended, Russia and China have increasingly prioritized nuclear programs, while our lack of focus on these programs—we are paying for it now because they have caught us in many areas.

We heard a few weeks ago from General Hyten at STRATCOM [U.S. Strategic Command] about the need to modernize our nuclear triad, and as he mentioned, it includes the Department of Energy's warheads and infrastructure.

Secretary Perry, about three-quarters of your Department's fiscal year 2020 budget request is in this Committee's purview and will help us continue this vital work.

I was pleased to hear that NNSA [National Nuclear Security Administration] recently assembled the first W76–2 low-yield warhead, which was recommended by the Nuclear Posture Review (NPR) and authorized by Congress last year. This is an excellent example of how responsive the nuclear enterprise should be. From a requirement to production, it happened in just 1 year. You do not see that very often.

But we cannot be responsive when half of our facilities are more than 40 years old and a quarter of them date back before World War II. We need to modernize infrastructure across the complex. I was disappointed to learn that we have workers in buildings with chunks of concrete falling off the ceiling and flooding damage—rooms and expensive equipment that cannot be quickly repaired.

We have some pictures at each of the desks up here and also with the two of you, who have seen this many times, just to kind of get a visual of how bad things are.

[The information referred to follows:]

## **Beta-2, Y-12 National Security Campus**

Beta-2 is a facility where lithium components for canned subassemblies in nuclear weapons are produced. It has been operational since 1943.



Chunks of concrete have spalled from the ceiling into operational areas, putting workers and equipment at risk. These pictures are from March 2014, but the ceiling cannot be fixed and now has netting to prevent further concrete falls. Beta-2 will have to operate until 2030, when a replacement facility will be ready.

## **Power Infrastructure, Nevada National Security Site**



There are 23 miles of vulnerable electrical power lines that serve a facility at the Nevada site where explosive testing is conducted. This photo from 2017 shows failed power lines at the site as a result of windstorms in the area, which can affect power and communications in critical facilities.

## **Chemistry Metallurgy Research (CMR) Building, Los Alamos National Laboratory**



CMR is the largest laboratory facility at Los Alamos and houses plutonium science research. It has been operational since 1952. These are some of the many examples of failing lab equipment and structural components in the facility.

## CMR Building, Los Alamos National Laboratory (Cont.)



Chairman INHOFE. We are going to have to correct that. We owe it to the men and women who work across the nuclear enterprise to provide state-of-the-art 21st century facilities to work in. I am glad to see that the Department is requesting substantial funding for infrastructure modernization. I hope that we are going to be able to maintain the bipartisan consensus to fund this work in the future.

I look forward to your testimony, and thank you for being here. Senator Reed?

### STATEMENT OF SENATOR JACK REED

Senator REED. Thank you very much, Mr. Chairman.

Let me join you in welcoming Secretary Perry back to the Committee, and I also want to welcome Administrator Gordon-Hagerty who is appearing for the first time. Thank you both for your service.

The President's fiscal year 2020 budget request for defense-related activities at the Department of Energy is \$23 billion. This is a 4.3 percent increase over last year's enacted level, and it is approximately 73 percent of the entire \$31 billion request for the Department of Energy. The specific request for the National Nuclear Security Administration, or NNSA, is \$16.5 billion, an increase of \$1.2 billion, or an 8.3 percent increase, over last year. Given that defense-related activities comprise such a large percentage of the Department's budget and the large proposed increases to the NNSA budget, I want to particularly thank the Chairman for asking these witnesses to testify before our Committee today.

Administrator Gordon-Hagerty, the requested \$1.2 billion increase to the NNSA budget is intended to help meet the requirements of both the 2010 and 2018 Nuclear Posture Review. The NNSA's workload is at its highest peak since the 1980s with plans

to overhaul five weapons systems over the next 15 years. These projects include a cruise missile warhead first built in 1980; the B61 gravity bomb, which first entered production in 1961; and an ICBM [intercontinental ballistic missile] warhead, which entered service in 1978. All of these programs will require nuclear and non-nuclear parts from your complex at the same time. The NNSA is also preparing to product 30 pits per year at Los Alamos which will require extensive new equipment while, at the same time, NNSA is building a \$6.5 billion building at Oak Ridge to handle uranium. I am interested in your approach to ensuring all these projects can be accomplished on time and on schedule and on budget. It is quite a challenging list.

Also, in anticipation of this increased workload, the fiscal year 2016 National Defense Authorization Act (NDAA) authorized a cost estimating and program evaluation office to provide an independent review on programs and their cost estimates. I am interested in hearing if this office is being funded and staffed appropriately.

Secretary Perry, your Department recently revised the environmental cleanup liability of former atomic weapons production sites from an estimated \$163 billion to \$377 billion, a jump of \$244 billion over the next 30 years. I would note, for example, at the Hanford Washington Reservation, there are approximately 55 million gallons of radioactive liquid sludge in 177 underground storage tanks, some of which are leaking. I would like to know why the cost of cleanup has grown so much. In addition, I would like to understand why it is taking so long to clean out the Hanford underground tanks while the Savannah River site cleanup of underground storage tanks is well on its way.

On a final point, Secretary Perry, proposals to sell United States nuclear technology to Saudi Arabia have generated significant interest and could have broader repercussions for the Middle East and global nonproliferation efforts.

In May of last year, Saudi Crown Prince Mohammed bin Salman stated that if Iran developed a nuclear bomb, we will follow suit as soon as possible. That statement, combined with apparent Saudi insistence on the right to produce fissile material, whether it be enriched uranium or plutonium, requires that we carefully evaluate whether we could unintentionally encourage a nuclear arms race in the Middle East by selling Saudi Arabia nuclear reactors and associated technology.

Since the passage of the 1954 Atomic Energy Act (AEA), the United States has promoted the peaceful use of atomic energy. Section 123 of the Atomic Energy Act requires the United States and any country seeking a transfer of nuclear technology to sign a non-proliferation agreement that is reviewed by Congress. Part 57b of the Atomic Energy Act (AEA) requires that you, Mr. Secretary, review any transfer of technology that could lead to the production of special nuclear material outside the United States. Clearly the intent of Congress for over 70 years has been to balance the peaceful use of atomic energy against the possibility it might be used to make a nuclear weapon. We have serious questions in this regard, Mr. Secretary, and I hope you will respond to them. We would appreciate your update on this issue and many more.

Again, let me thank both of you for appearing here today. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Both of you know what is going on here, what we want to get to. What we are going to do is start with your opening statements, and we would like to have you confine that to around 5 minutes because we have a good attendance up here. We are going to get all of our questions asked. We will start with you, Secretary Perry.

**STATEMENT OF THE HONORABLE J. RICHARD PERRY,  
SECRETARY OF ENERGY**

Secretary PERRY. Chairman Inhofe, thank you very much for the invitation, and to Ranking Member Reed, it is good to be in your presence, and thanks for allowing us to come earlier in the year to sit down with you and your staffs to discuss before we came here. The other members, it is a privilege to be with each of you, and a number of you who have served as governors, it has been a great privilege to share that executive spirit with each of you.

So my work today and discussing the President's fiscal year 2020 budget for the Department of Energy—and I just want to say it continues to be a great privilege for me. Many of you have this before, particularly those governors in the audience there, that this is the coolest job I have ever had before. It is not the best job I ever had before, but it is the coolest job.

I am pleased to be joined with the Under Secretary of the Nuclear Security and NNSA Administrator, Lisa Gordon-Hagerty. Each of you have had the opportunity to work with her, and you know the incredibly high quality intellect and experienced individual that we have running that side of the shop.

I am blessed to get to have a front row seat, if you will, and some of the most remarkable innovations that are bringing us energy independence, greater prosperity, a more robust national security position.

The Department's overall budget request of \$31.7 billion is designed to further our progress by providing funding for the National Nuclear Security Administration. It directly supports our national security. By funding our Office of Environmental Management (EM), it helps us clean up the environmental legacy of the effort dating to the Manhattan Project, and this budget request seeks to build upon the progress we made in both of those areas, both NNSA and the EM, over the last year.

Thanks to NNSA's diligent efforts, along with congressional support, I, along with the Secretary of Defense, was able to certify to the President once again the reliability of our nuclear weapons stockpile as we extended the service life of a key warhead by 30-plus years by completing the W76-1 life extension program in December of last year.

We continue our regular safe and reliable nuclear propulsion and naval fleet support, while contributing expertise to the U.S. Navy's new *Columbia*-class program, ensuring sea-based deterrent capabilities for decades to come.

We are also seeking to replace our aging nuclear security infrastructure. You made mention of that, both Senator Reed and you,



Mr. Chairman, much of it that is older than I am, and so that is getting a little age on it since even before the 1950s.

Behind all of this is a bedrock belief that we continue to embrace at DOE. Given the rising threats to our Nation and the world from both state and non-state actors, we must maintain our nuclear deterrent. Ultimately, we would like to eliminate nuclear weapons from the face of the earth, but until that becomes feasible, we must continue to pursue through strength that peace that we all desire by keeping nuclear weapons out of the wrong hands, supporting nonproliferation efforts. Through NNSA, we seek to minimize the number of states that possess nuclear weapons; deny nuclear access to terrorists; control weapons usable material; related technology, and expertise; and help ensure arms control agreements can be verified and enforced. As I have said many times, we have a moral obligation to defend our country by strengthening our nuclear deterrent.

But we have an equal duty to address the environmental legacy left at the sites that produced the materials that helped defeat tyranny and secure peace. That is exactly why the EM program, which marks its 30th anniversary this year, exists. To date, EM has completed cleanup activities at 91 sites in 30 States and the Commonwealth of Puerto Rico. The 16 EM sites in 11 States that remain are home to some of the Nation's toughest and most complex cleanup challenges. Recently we made significant progress from coast to coast from the Hanford site, Jack, that you mentioned, in Washington to the separations process research unit in New York. We are working to ensure that EM is prepared to safely and effectively tackle these challenges in a sustainable manner going forward.

In conclusion, this budget represents a commitment from all of us at the Department of Energy to serve the American people with stewardship, accountability, and service. In partnership with our national labs, we will continue to support the world class scientists and engineers who ignite America's ingenuity and drive our competitiveness.

I look forward to working with each of you, your colleagues, and your excellent staff in the weeks and months ahead on these important funding details.

Thank you, Mr. Chairman, and with that I will attempt to answer any questions you have.

[The joint prepared statement of Secretary Perry and Secretary Gordon-Hagerty follows:]

JOINT PREPARED STATEMENT BY SECRETARY RICK PERRY AND UNDER SECRETARY  
LISA E. GORDON-HAGERTY

Chairman Inhofe, Ranking Member Reed, and Members of the Committee, it is an honor to appear before you on behalf of the Administration and the Department of Energy ("the Department" or "DOE"). We appreciate the Committee's strong support for DOE's environmental management program and enduring national security missions and the opportunity to testify in support of the President's budget request for fiscal year (FY) 2020.

The Department's budget request supports America's continued rise as an energy independent Nation, and advances U.S. national security by modernizing our indispensable, yet aging, nuclear deterrent, and promotes economic growth by making investments in transformative science and technology innovation to promote afford-

able and reliable energy. It also includes funding to meet our national security and environmental cleanup challenges.

#### ACCOMPLISHMENTS IN THE PAST YEAR:

Thanks to strong support from the Administration and Congress, over the past year, DOE has made significant progress in advancing America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.

- Last year, the National Nuclear Security Administration (NNSA) continued to maintain the safety, security, and effectiveness of nuclear weapons through the Stockpile Stewardship Program (SSP), enabling the Department of Defense and the Department of Energy to certify to the President once again the reliability of the nuclear weapons stockpile. While we are confident in the state and effectiveness of our nuclear deterrent today, we must—as General Hyten of STRATCOM recently testified—provide sustained and reliable funding for nuclear modernization so that future Secretaries and commanders can brief future Congresses with the same confidence. In addition to its critical role in sustaining and modernizing the U.S. nuclear stockpile and its supporting enterprise, NNSA also continued its important work to advance U.S. nonproliferation, nuclear security, counterterrorism, arms control objectives, and naval nuclear propulsion.
- In December 2018, NNSA completed the W76–1 Life Extension Program (LEP), extending the warhead's service life another 30+ years. The B61–12 LEP, W80–4 LEP, W88 Alteration (Alt) 370, W87–1 Modification, and the W76–2 Modification continue to remain on budget and on schedule. These achievements are a testament to NNSA's ability to deliver on commitments we have made to the Department of Defense (DOD) and Congress.
- The highest NNSA infrastructure priority is re-establishing a robust plutonium pit production capability to meet military requirements, supported by numerous studies and analyses, of no fewer than 80 war reserve pits per year by 2030. Last May, the Nuclear Weapons Council (NWC) endorsed NNSA's recommended alternative calling for plutonium pit production at Los Alamos National Laboratory (LANL) and the Savannah River Site (SRS). This two-site approach bolsters the nuclear security enterprise's responsiveness and resiliency.
- The Uranium Processing Facility (UPF) project continues to make timely progress with the recent commencement of the construction of the main buildings at the Y–12 National Security Complex (Y–12). UPF will be delivered by the end of 2025 for no more than \$6.5 billion. This project is on budget and on schedule. NNSA also broke ground on the new Albuquerque Complex in New Mexico, which will house 1,200 employees when complete.
- Working with the International Atomic Energy Agency (IAEA), China, and Nigeria, NNSA was instrumental in the conversion of a Nigerian research reactor to low-enriched uranium (LEU) fuel. This marks NNSA's 74th research reactor or isotope production facility conversion, which was followed by the repatriation of the highly enriched uranium (HEU) fuel to China, making Nigeria the 33rd country, plus Taiwan, to become HEU free.
- NNSA's Office of Naval Reactors continued its record of safe and reliable nuclear propulsion and nuclear fleet support, while contributing expertise to the U.S. Navy's new *Columbia*-class program. This next generation nuclear-powered submarine will ensure required sea-based deterrence capabilities for decades to come.
- The Office of Environmental Management (EM) broke ground on a new ventilation system at the Waste Isolation Pilot Plant (WIPP) facility in New Mexico. WIPP is the lynchpin to the final disposition of transuranic waste across the cleanup complex and the new ventilation system will increase airflow in the WIPP underground for simultaneous mining and waste emplacement operations.
- The EM program successfully completed safe demolition of the 10,000-square-foot vitrification plant at the West Valley Demonstration Project in New York.
- In June 2018, DOE's Office of Science (SC) Oak Ridge Leadership Computing Facility's Summit system reclaimed the top spot for the United States in the global "Top 500" list of high performance computing systems and held the top spot in the November list, which included five DOE systems among the top 10.

- The Summit system is also launching the Exascale computing era by enabling researchers to break the Exascale barrier, achieving a peak throughput of more than two exaops—faster than any previously reported science application.
- Lawrence Livermore National Laboratory (LLNL) unveiled the Sierra supercomputer, ranked the second-fastest in the world according to the Top 500 list.
- In May 2018, the White House's National Science and Technology Council (NSTC) established an interagency committee on Artificial Intelligence (AI) to advise the White House on Government-wide AI research and development priorities and will work to establish partnerships among government, private sector, and independent researchers. The DOE serves a leading role on this Committee.
- On February 11, 2019, the President signed Executive Order 13859, Maintaining American Leadership in Artificial Intelligence. The Initiative focuses Federal Government and Department resources toward developing AI technology, while ensuring that the next great AI inventions are made in the United States.
- In support of the Executive Order and building on our core competencies in science and technology, DOE is developing a coherent, long-term strategy to maximize the capabilities and scientific benefits of transformative AI technologies to all of our mission, business and operational areas.
- Our approach includes development of innovative AI technologies, aggregation of DOE mission-related data that together can foster innovative advancement of next generation hardware and software technologies.

#### BUILDING A STRATEGIC CAPABILITY

The U.S. nuclear deterrent has been the cornerstone of our national strategy to keep the American people safe and secure for more than 70 years and its credibility backstops all U.S. diplomatic and military activities around the globe.

While the ultimate goal of eliminating nuclear weapons has been an aspiration for many for generations, we must recognize the reality that foreign nuclear threats are growing. Russia and China are investing massive resources into upgrading and expanding their nuclear arsenals, all at a time when they seek to challenge United States interests and unravel U.S. alliances around the world. It is imperative that we undertake prudent efforts to modernize the U.S. nuclear stockpile and enterprise—ensuring that the United States can continue to speak from a position of strength and that tensions—regardless of where or how they arise—do not escalate into all-out war.

DOE is building on the previous year's achievements with new activities tailored to 21st century threats. In fiscal year 2020 and beyond, the Department will pursue initiatives to ensure the necessary capability, capacity, and responsiveness of the nuclear weapons infrastructure and the needed skills of the nuclear enterprise workforce. This includes the ability to produce strategic materials (uranium, plutonium, tritium, and lithium) associated with nuclear weapons, as well as refurbish and manufacture components made from these materials.

Consistent, robust, and predictable funding and authority from Congress are essential for the Department's nuclear weapon and infrastructure modernization efforts. These modernization efforts are aligned with the needs outlined in the 2018 Nuclear Posture Review (NPR) and approved by the NWC.

#### MODERNIZING OUR NUCLEAR FORCES:

The Department is modernizing our nuclear enterprise to ensure that we have the scientific, engineering, and manufacturing capabilities necessary to maintain an effective and safe nuclear triad and respond to future national security threats.

Unique, state-of-the-art capabilities for research, development, testing, evaluation, and production enable this critical effort. In coordination with DOD, we have fully integrated the scope, budgets, and schedules of the LEPs, infrastructure modernization, and nuclear delivery systems.

We are making significant progress in the full set of LEPs, modifications, and alterations while remaining aligned with DOD through the NWC.

- *W76-1 LEP*: The W76-1 LEP, which directly supports the sea-based leg of the nuclear triad, completed its last production unit in December 2018. Close-out activities in fiscal year 2020 include archiving production tooling and program records, and completing component overbuilds to support hardware provisioning for the life of the warhead system.
- *W76-2 Modification Program*: The W76-2 modification is currently on schedule, on budget, and the program achieved First Production Unit (FPU) in February

2019. This low-yield option is a measured way to reinforce deterrence in the face of Russia's large, diverse, and modern stockpile of non-strategic nuclear weapons, which facilitate Moscow's mistaken belief that limited nuclear first use, potentially including low-yield weapons, can provide Russia a coercive advantage in crises and at lower levels of conflict.

- *B61-12 LEP*: The oldest weapon system in the U.S. nuclear arsenal, the B61-12 LEP will consolidate four variants of the B61 gravity bomb and improve the safety and security of that vital weapon system. Currently in Phase 6.4, Production Engineering, this LEP has demonstrated system performance in over 60 integrated ground and flight tests, including eight joint flight test drops with the U.S. Air Force. The B61-12 LEP will enter Phase 6.5, First Production, in the fourth quarter of fiscal year 2019, following completion of system qualification and Pantex Plant production readiness activities.
- *W88 Alt 370*: The W88 Alteration 370 is on track for FPU in fiscal year 2020. This program, which also supports the sea-based leg of the nuclear triad, is currently in Phase 6.4, Production Engineering, and will enter Phase 6.5, First Production, in September 2019.
- *W80-4 LEP*: In February 2019, the NWC approved the W80-4 LEP to transition into Phase 6.3, Development Engineering. The fiscal year 2020 request for \$898.6 million will allow the W80-4 LEP to remain on track to achieve FPU in fiscal year 2025 in support of the Air Force's Long-Range Stand-Off (LRSO) cruise missile.
- *W87-1 Modification Program*: The W87-1 program will replace the aging W78 warhead, with planned first production in 2030 to support fielding on the Air Force's Ground Based Strategic Deterrent (GBSD) missile system. In September 2018, the NWC authorized restart of Phase 6.2, Program Feasibility Study, activities on the W78 replacement warhead and renamed it the W87-1. The W87-1 program will improve safety and security, addressing antiquated design, material obsolescence, evolving performance expectations, and emerging survivability threats.

#### RECAPITALIZING OUR COLD WAR ERA INFRASTRUCTURE:

As stated in the 2018 NPR, "an effective, responsive, and resilient nuclear weapons infrastructure is essential to the U.S. capacity to adapt flexibly to shifting requirements. Such an infrastructure offers tangible evidence to both allies and potential adversaries of U.S. nuclear weapons capabilities and can help to deter, assure, hedge against adverse developments, and discourage adversary interest in arms competition."

More than a third of NNSA's facilities are over 60 years old. It will take sustained investments to modernize NNSA's nuclear weapons infrastructure.

With Congress' support, NNSA is making these investments, including:

- An enduring capability and capacity to produce plutonium pits at a rate of no fewer than 80 pits per year by 2030. The time to move forward is now. Repurposing the Mixed Oxide Fuel Fabrication Facility (MFFF) at SRS to produce 50 war reserve pits per year and continuing to invest in LANL to produce 30 war reserve pits per year is the optimal path forward to meet pit production requirements while managing the risks and costs associated with increasing production rates and maintaining existing plutonium missions at LANL.
- Investing at LANL to provide all the tools necessary for the enterprise to successfully support an enduring plutonium pit production mission to produce 30 pits per year by 2026. NNSA anticipates \$3 billion in total funding over the next five years, and LANL is actively installing pit production equipment and has begun hiring to meet future work scope. As the nation's plutonium center of excellence for research and development, LANL plays a critical role in early design efforts for pit production.
- Investing \$774 million at SRS in fiscal year 2020, a 75.8 percent increase over fiscal year 2019. NNSA will continue termination activities of the MFFF project at SRS, continue to pursue a dilute and dispose strategy to fulfill U.S. commitment to dispose of 34 metric tons (MT) of plutonium, and modernize SRS infrastructure to support the tritium supply chain.
- Fully funding the Uranium Processing Facility.
- Ensuring availability of sufficient unobligated low-enriched uranium and the necessary reactor capacity to produce an adequate supply of tritium.

- Investing over \$900 million in fiscal year 2020 to sustain and recapitalize NNSA's mission-enabling infrastructure to support mission needs and improve facility reliability, sustainability, productivity, and efficiency.
- Disposing of several high-risk process-contaminated excess facilities. Many of NNSA's excess process-contaminated facilities will ultimately be transferred to the Environmental Management (EM) program for disposition. In the interim, NNSA is focusing on reducing risks where possible. For example, NNSA has made critical investments to stabilize high-risk process-contaminated facilities until ultimate disposition, including at Y-12's Alpha 5 and Beta 4 facilities.
- Commencing an effort by the EM program to remove Building 280 Pool Type Reactor and ancillary facilities at Lawrence vLivermore National Laboratory. The Department identified five (including Building 280) of the top ten list of the highest risk excess facilities at Lawrence Livermore National Laboratory.
- Oak Ridge National Laboratory's (ORNL) EM program has been able to remove risks and stabilize a portion of the 220 excess, contaminated, and deteriorating facilities at the Y-12 National Security Complex (Y-12) and ORNL. While Oak Ridge has more high-risk excess contaminated facilities than any other site, crews continued addressing this issue in 2018 by tearing down two high-risk buildings, preventing more than 6,000 pounds of mercury from entering the environment, completed characterization for future demolition projects, and immobilizing contamination in hot cell facilities.

#### PREVENTING GLOBAL NUCLEAR THREATS:

Effective nuclear nonproliferation and arms control measures support U.S., allied, and partner security by controlling the spread of nuclear materials and technology; placing limits on the production, stockpiling, and deployment of nuclear weapons; reducing misperception and miscalculation; and avoiding destabilizing nuclear arms competition. The 2018 NPR reiterates the U.S. commitment to effective non-proliferation and arms control measures, both of which are vital to our Nation's ability to have a credible deterrent.

In 2018, the U.S. Government interagency coordination on nuclear nonproliferation and nuclear counterterrorism programs and strategy enabled NNSA to:

- Remove or confirm the disposition of nearly 352.4 kilograms of excess highly enriched uranium (HEU).
- Partner with the U.S. healthcare industry, which resulted in the first domestic production of molybdenum-99 (Mo-99) in 30 years. Mo-99 is a vital medical radioisotope used in approximately 40,000 patient procedures daily in the United States.
- Downblend or ship for downblending, 2.5 MT of surplus HEU, for a cumulative total of 160.4 MT, which after downblending cannot be used in a nuclear weapon.
- Deploy a total of 48 radiation detection systems to prevent the smuggling of nuclear and radioactive materials worldwide.
- Secure 87 domestic and international civilian buildings containing high-priority radioactive material.
- Provide technical reviews of 5,973 U.S. export license applications and 3,053 interdiction cases to facilitate legitimate nuclear cooperation and prevent the illicit transfer of nuclear and dual use goods.
- Hold over 40 international nuclear safeguards engagements including training, and technical meetings with foreign partners.
- Conduct 84 export control trainings for U.S. enforcement agencies and foreign partners.

All of the aforementioned work was completed by NNSA's Office of Defense Nuclear Nonproliferation (DNN). DNN is committed to continuing its efforts to: (1) minimize the number of nuclear weapons states; (2) deny terrorist organizations access to nuclear weapons and materials; (3) strictly control weapons-useable material, related technology, and expertise; and (4) support the Department of State to make sure arms control agreements enhance security, and are verifiable and enforceable.

#### COUNTERING GLOBAL NUCLEAR THREATS:

The Office of Counterterrorism and Counterproliferation (CTCP) provides effective capabilities to respond to any nuclear or radiological incident in the United States or abroad by applying the unique technical expertise found in NNSA's nuclear security enterprise. Highly trained personnel with specialized technical equipment main-

tain readiness to support lead federal agencies to find and render safe potential nuclear and radiological threat devices, to effectively manage the consequences of a nuclear or radiological emergency, and to support enhanced security operations at large national public events.

CTCP also maintains operational nuclear forensics capabilities to enable the attribution of a nuclear attack against the United States. These capabilities allow the U.S. Government the ability to collect evidence if a device is rendered safe prior to detonating, or to characterize and identify the material used if the device detonates, allowing policymakers to hold those accountable for the attack. CTCP will also implement the National Nuclear Material Archive program within NNSA to identify, consolidate, and analyze historical nuclear material samples of value to the technical nuclear forensics program.

NNSA, in conjunction with the Federal Bureau of Investigation (FBI), supports render safe teams at FBI field offices in 11 major American cities that are specially trained and equipped to identify and mitigate the function of a nuclear or radiological device. Over the next few years, CTCP will continue to provide training and conduct operations in support of these FBI teams and begin transitioning to the Capability Forward initiative, under which life-saving responses to a nuclear threat device will be accelerated. As part of this initiative, NNSA will provide additional training, equipment, and technical support to the current 11 U.S. cities—eventually growing to 14 cities by fiscal year 2022—to allow FBI teams to execute render safe operations more rapidly. CTCP will also improve and expand NNSA training facilities to accommodate the increased training requirements associated with regional render safe capabilities.

#### RESPONSIBLE STEWARDSHIP OF THE ENVIRONMENT

The government's nuclear weapons and nuclear energy research programs made significant contributions to our Nation's defense for decades. The EM program is tasked with the safe disposition of radioactive wastes; the management of spent nuclear fuel and special nuclear material; the cleanup of contaminated soil and water; and the decontamination and decommissioning of thousands of excess facilities. As DOE continues to open new horizons in innovation, national security and American energy production, we also remain focused on addressing the environmental liabilities accrued while ending World War II and keeping the peace in the Cold War.

This year marks the 30th anniversary of the EM program. DOE is making great progress toward reducing and eliminating legacy waste in a safe, efficient and cost-effective manner that is protective of human health and the environment.

With a track record of demonstrated results, EM has reduced the footprint of the cleanup program from 107 sites comprising a total of 3,100 square miles to just 16 sites, with an active cleanup footprint of less than 300 square miles.

Over the past year, EM has made significant progress, including the following:

- At the Hanford site in Washington State, workers are making real progress towards Direct Feed Low Activity Waste vitrification of tank waste with a milestone to complete hot commissioning of the Low Activity Waste facility by December 31, 2023.
- Work performed by Oak Ridge's EM program brought the site closer to its ambitious goal to complete major cleanup at the East Tennessee Technology Park (ETTP) in 2020.
- EM published the Final Environmental Impact Statement at Energy Technology Engineering Center (ETEC).
- Workers in South Carolina consolidated more than 400,000 cubic yards of coal ash and ash-contaminated soil at the SRS. They completed it safely and 14 months ahead of schedule, saving \$9 million.
- The EM Los Alamos (LA) Field Office safely ramped up operations during the initial months of the new legacy cleanup contract, and successfully completed 13 milestones under the Consent Order with the State of New Mexico.
- And, project crews at EM's Separations Process Research Unit (SPRU) in New York completed the last phase of building demolition with the removal of Building H2. The SPRU facilities were built in the late 1940s and operated through the early 1950s to conduct pilot tests for recovery of uranium and plutonium.

The EM sites that remain are home to some of the Nation's toughest and most complex cleanup challenges. The Department is working to ensure that EM is prepared to safely and effectively tackle these challenges in a sustainable manner going forward. To that end, the Department has reinvigorated the completion mindset that has been the foundation of EM's greatest successes.

EM is taking lessons learned from three decades of cleanup and institutionalizing a strengthened and robust results-driven approach that protects our Nation, continues risk-based cleanup progress and drives down liabilities to the American people through close collaboration with regulators and stakeholders.

EM is now managing capital projects and procurements with a greater degree of rigor and consistency. With billions of dollars in procurements coming up over the next few years, the Department has the opportunity to implement improved contracting approaches that ensure that safety remains paramount, while incentivizing results and allowing for great flexibility.

As the Department looks to best position EM to meet long-term challenges, innovative ideas and approaches are necessary. The greatest incubators of innovation are the DOE National Labs. The Department is focused on fully utilizing the capabilities of our National Labs to get cleanup to completion safer, sooner and more efficiently.

#### RECRUITMENT AND RETENTION OF HIGHLY QUALIFIED PEOPLE

Across the Department, our greatest asset will always be our workforce. DOE's challenging national security missions require it to recruit, train, and retain highly skilled and dedicated federal employees and Management and Operating (M&O) contract workforce. DOE and Congress must continue to provide these highly-talented men and women with the tools necessary to support their work as they carry out complex and challenging responsibilities. Funding alone is not the only thing needed. The Department will also need to have the necessary human resource authorities to attract and retain the best and brightest people from around the country. These positions are not just in science, technology, and engineering but also manufacturing, maintenance, project and program management, and construction.

A skilled federal workforce is required for appropriate program and project oversight as the nuclear security enterprise is busier than it has been since the end of the Cold War. Over the past nine years, NNSA's program funding has increased 50 percent, while staffing has decreased 10 percent. Last year the Office of Personnel Management and NNSA's Office of Cost Estimating and Program Evaluation both independently determined the need to significantly increase NNSA federal staffing. Therefore, for NNSA to meet its growing nuclear security mission requirements, as described in the 2018 NPR, it will need the funding to hire aggressively for the next two years.

#### FISCAL YEAR 2020 BUDGET REQUEST

The President's Budget for fiscal year 2020 requests \$31.7 billion for DOE to advance U.S. national security and economic growth through transformative science and technology innovation that promotes affordable and reliable energy through market solutions and meets our nuclear security and environmental cleanup challenges. The fiscal year 2020 budget request provides: \$16.5 billion to modernize and restore the nuclear security enterprise and to maintain the safety and effectiveness of the nuclear stockpile, a \$1.3 billion increase over fiscal year 2019 enacted levels; \$6.5 billion to continue our commitment to cleaning up the Cold War nuclear legacy; \$5.5 billion to conduct cutting-edge, early-stage scientific research and development (R&D) and build state-of-the-art scientific tools and facilities to keep U.S. researchers at the forefront of scientific innovation, including achieving exascale computing in 2021.

This budget request demonstrates the Administration's strong support for NNSA, EM, and SC. For the Nation to retain a credible deterrent and prevent, counter, and respond to global nuclear security threats, NNSA will require significant and sustained investments in its nuclear security mission.

The fiscal year 2020 budget request for NNSA's Weapons Activities account is \$12.4 billion, an increase of \$1.3 billion or 11.8 percent over fiscal year 2019 request levels. The programs funded in this account support the Nation's current and future nuclear defense posture and the associated nationwide infrastructure of science, technology, engineering, cybersecurity, and production capabilities.

The majority of weapons in today's stockpile have surpassed their intended design life, thereby accumulating increasing risk. The United States has reduced its stockpile by 25 percent since 2010, while potential adversaries have increased their numbers of nuclear weapons and significantly modernized their nuclear capabilities.

The fiscal year 2020 budget request for NNSA's DNN account is \$2 billion, an increase of \$63.3 million, or 3.3 percent above the fiscal year 2019 request. DNN account activities address the entire nuclear threat spectrum by helping to prevent the proliferation of nuclear weapons, counter the threat of nuclear terrorism, and respond to nuclear and radiological incidents around the world.

NNSA's Office of Naval Reactors' fiscal year 2020 budget request is \$1.65 billion, a decrease of \$140.2 million or approximately 7.8 percent below the fiscal year 2019 enacted level.<sup>1</sup> The funding supports Naval Reactors' mission to provide militarily effective nuclear propulsion plants for Navy vessels and to ensure their safe, reliable and long-lived operation.

<sup>1</sup> Amounts do not reflect the transfer of funds to the Office of Nuclear Energy for maintenance and operation of the Advanced Test Reactor in fiscal year 2019.

The President's Fiscal Year 2020 Request includes \$71 million in combined AI funding for SC's Advanced Scientific Computing Research (ASCR), Basic Energy Sciences (BES), Biological and Environmental Research (BER), Fusion Energy Sciences (FES), and High Energy Physics (HEP) programs, and \$48 million for NNSA.

The EM program represents one of the top financial liabilities to the American taxpayer. As EM is put on a sustainable path forward, the fiscal year 2020 budget request provides the resources necessary to build upon recent successes, bring a renewed sense of urgency to the program and enable meaningful, measurable progress to projects and sites throughout the cleanup complex. Resources provided for in the fiscal year 2020 budget request will:

- Advance construction on the Outfall 200 Mercury Treatment Facility, progress deactivation and demolition of remaining facilities at the East Tennessee Technology Park, and continue preparation of Building 2026 to support processing of the remaining uranium-233 material at ORNL in Tennessee.
- Initiate two transuranic waste processing lines, complete characterization of the high explosives plume in Canon de Valle and implement the full interim measure for the chromium plume at Los Alamos in New Mexico.
- Complete verification of cleanup, site restoration, and closeout activities at SPRU in New York.
- Ramp up efforts to address radioactive tank waste at the SRS in South Carolina through start-up of the Salt Waste Processing Facility and continued construction activities for necessary Saltstone Disposal Units.

Together, these investments for environmental management will make significant progress in fulfilling our cleanup responsibilities while also starting to address our high-risk excess facilities at NNSA sites.

#### PROJECT MANAGEMENT EXECUTION—SAFE QUALITY CONSTRUCTION ON BUDGET:

NNSA is driving continued improvement in contract and project management practices. Since 2011, NNSA has delivered approximately \$2 billion in projects under budget—a significant portion of NNSA's total project portfolio. Some of NNSA's acquisition and project management achievements include:

- Over \$500 million in cost savings via M&O contract competitions.
- Small Business Administration score revised from "F" to "A."
- Government Accountability Office narrowed the focus of its High Risk List to projects greater than \$750 million.
- Delivered \$2 billion project portfolio eight percent under budget.
- U.S. Strategic Command requested NNSA's best practices for project management.

NNSA is continuing to encourage competition and increase the universe of qualified contractors by streamlining its major acquisition processes. NNSA will continue to focus on delivering timely, best-value acquisition solutions for all programs and projects, by using a tailored approach to contract structures and incentives that are appropriate for the special missions and risks at each site.

#### CONCLUSION

This budget request represents a commitment from all of us at the Department of Energy to serve the American people with stewardship, accountability and service. We commit to ensure that DOE performs efficiently and effectively as we pursue our mission-driven goals.

We are at an extraordinary moment in American energy. In partnership with our National Laboratories, we will continue to support the world-class scientists and engineers who ignite American ingenuity and drive our competitiveness. The President's fiscal year 2020 budget request for the Department of Energy positions us to seize opportunities and prioritize investments. We look forward to working with you and your colleagues in Congress in the coming weeks and months on these im-



portant funding details. Thank you, and we look forward to answering your questions.

Chairman INHOFE. Well, thank you very much. Excellent statement.

Secretary Gordon-Hagerty, we are very pleased to have you here, and please proceed with your opening statement.

**STATEMENT OF THE HONORABLE LISA E. GORDON-HAGERTY,  
UNDER SECRETARY OF ENERGY FOR NUCLEAR SECURITY  
AND ADMINISTRATOR, NATIONAL NUCLEAR SECURITY AD-  
MINISTRATION**

Secretary GORDON-HAGERTY. Good morning, Chairman Inhofe and Ranking Member Reed. I have no opening statement this morning. I defer to Secretary Perry. Thank you.

Chairman INHOFE. Okay. What I want to do is get into a couple of the things just to kind of set them out because I know they are going to be covered by questions, general questions.

Last year, the NNSA proposed to repurpose the half-built MOX [mixed oxide] building. Of course, that has been the main discussion for a long period of time and an area of confusion. That is the one that is located in South Carolina to produce plutonium pits. Los Alamos National Lab would still operate the current facility in New Mexico producing 30 pits a year while South Carolina I think would be in the neighborhood of some 50 more to meet the STRATCOM requirement which is for 80 by what year, 2030?

Secretary Perry, explain why the Department chose last year to construct a plutonium pit production facility in South Carolina and what advantages would this option bring in addition to the current smaller capability in Los Alamos.

Secretary PERRY. Mr. Chairman, I think for so many years, as you know as well as anyone in this room, the challenge that we have had with the mixed oxide facility in South Carolina—I do not want to relitigate that at all. What I would like to do is say thank you to the Members who agreed that this was not a program that needed to go forward, and you had the courage to work with us and others to terminate that and then to transition that facility.

Chairman INHOFE. Yes, because you are talking about a very large investment that we have had in the past. We are interested in seeing what is the most we can get out of it now.

Secretary PERRY. Yes, sir. I think we are on a track that will take us to a reasonable development there. Los Alamos is and, as Senator Heinrich knows, will always be the center for pit production, the center of excellence in the world for plutonium pit production. Pits 0 through 30 will be done there. There is an additional \$5 billion that is headed towards that facility in Los Alamos. It will be a substantial buildup. They are going to continue to play, I will suggest, the lead role in the immediate out-years. As you mentioned, Mr. Chairman, by 2030, there will be the requirement to do 50 pits. The decision was investigated, decision made that you could bifurcate that effort with the continual focus on Los Alamos and have pits 31 through 80 be done at the Savannah River site. We can discuss further about that decision-making, but both the DOD, those in the nuclear weapons world agree that that is a legitimate, thoughtful way to go forward with the pit production.

There are some other potentials at Savannah River, but the main legacy program that would come out of the repurposing of the MOX facility will be the development of those pits 31 through 80 at Savannah River.

Chairman INHOFE. I understand that, and I appreciate that very much.

Secretary Gordon-Hagerty, there are a lot of people speculating that we may not be able to reach those goals. In fact, in NNSA's own analysis, it suggests that reaching the 80 by 2030 is going to be a problem. No matter what the location of the production, how do you plan to mitigate in the event we do not make it?

Secretary GORDON-HAGERTY. Thank you, Mr. Chairman.

As the Secretary said, this is going to be a challenging undertaking for the NNSA and for our entire nuclear security enterprise. When the Nuclear Weapons Council determined that based on STRATCOM requirements, that we needed to produce not less than 80 plutonium pits per year by 2030, it was a challenge. I need not remind Members of this Committee that the United States has not had a plutonium pit production capability since the early 1990s, and it is well past time that we provide a resilient infrastructure for our nuclear weapon deterrent. The focus of that is on plutonium pit production now and in the future. In order to do that, we believed that a two-pronged strategy is the most affordable and optimal way to get to the 80 pits per year by 2030. Again, it is not less than 80 pits.

We have a lot of challenges ahead of us. We believe that our two-pronged approach where we are undertaking the investments, the significant investments, as the Secretary stated, at Los Alamos which will provide several hundred million dollars over several years in order to increase the production capacity, as well as the infrastructure necessary at Los Alamos, and the facility at South Carolina. We are making significant investments in that to undertake the preconceptual design, and we are seeking \$410 million to continue that repurposing of the facility at South Carolina.

Chairman INHOFE. My time has expired, and I want to make sure that we get everyone here.

But let us do this for the record. When we see a staggering figure like \$677 billion, referring to the Hanford site, that does not seem achievable to me. Right now, we are in the middle of a budget, and that is overwhelming.

I would like for the record for each one of you to spend some time to analyze how that can be diminished. I am talking about using grout instead of glass or any number of things. For the record, not at this time. Thank you very much.

[The information referred to follows:]

The Department of Energy continues to thoughtfully and deliberately work toward determining the best path forward to safely and successfully treat all of Hanford's tank waste. We continue to make progress towards commissioning of the direct feed low-activity waste facility and we recently initiated an Analysis of Alternatives to evaluate options for the high level waste fraction of the tank waste. We fully recognize the challenges we face and we are addressing these challenges head-on with an eye toward getting waste out of tanks and disposed of sooner, safely and at a reasonable cost.

Chairman INHOFE. Senator Reed?

Senator REED. Well, thank you very much, Mr. Chairman.

Administrator Gordon-Hagerty, as I mentioned in my opening remarks, you have undertaken the overhaul of at least five weapons systems. You are building two multibillion nuclear facilities, uranium and plutonium. You are employing and performing inspections of the deployed stockpile with a federal workforce of about 1,700 people. Are you at all concerned about too much work and too little capacity?

Secretary GORDON-HAGERTY. Thank you, Senator Reed.

As I mentioned previously, this is a challenge ahead of us, but we are taking on this challenge throughout our entire 44,000-person workforce and throughout our entire nuclear security enterprise. We recognize the challenges ahead of us. When we talk about pit production, that is only 11 years away. This a major challenge. We have five modernization programs, as you stated today.

We also have challenges with hiring workforce. Right now, in the next 5 years, we are expecting 40 percent of our workforce to be retirement eligible.

So we have got a number of challenges ahead of us, but I believe we can—with the robust staffing plan and robust funding that we are seeking from Congress, I believe we can get through the systems and continue to be on time and on budget, which we are finding we are in right now, in alignment with the Department of Defense (DOD).

Senator REED. Can I ask very quickly, what is the biggest risk? Is it the pit production at Los Alamos?

Secretary GORDON-HAGERTY. The biggest risk right now is sustained and supported funding to recapitalize and modernize our infrastructure. In terms of programs, yes, it is plutonium pit production, but we have our eye on that, and we are focused specifically on plutonium pit production.

Senator REED. The first critical point is 30 pits by 2026.

Secretary GORDON-HAGERTY. Correct.

Senator REED. One of the concerns I will put on the table is that as we start to build up the facility in South Carolina, there will be at least a temptation to pull resources out of Los Alamos at a time when that is a critical—the first critical action will be made there. If we cannot get those 30 pits by 2026, then we have a serious nuclear security problem.

Secretary GORDON-HAGERTY. I absolutely agree with you, Senator Reed. One of our challenges, however, is to put together what we call integrated product teams in an implementation strategy across our entire enterprise. So this does not just involve South Carolina and the facility we are repurposing there, as well as Los Alamos, but it also affects all of our other parts of our enterprise whether it is Y-12 for sub assemblies or the actual production complex at Pantex in Amarillo, Texas. We are working across our entire enterprise as an integrated approach.

Senator REED. Thank you.

Mr. Secretary, I mentioned in my opening comments the ongoing negotiations with Saudi Arabia. Saudi Arabia is a non-nuclear weapons state under the Non-Proliferation Treaty (NPT). That is correct. Is it not?

Secretary PERRY. That is correct.

Senator REED. Does it concern you that the Crown Prince has made statements that they are prepared to obtain an atomic weapon if Iran particularly gets one? That would violate their standing under the Non-Proliferation Treaty.

Secretary PERRY. I share your concern with any world leader that we are doing or we are not doing business with, for that matter, that would say that their intention was to do that.

Senator REED. Part of the negotiation involves ensuring that they are not able to enrich fissile material or keep fissile material. That seems to be a non-waiverable condition in any arrangement. Is that correct?

Secretary PERRY. That is correct.

Senator REED. For further depth, we have an arrangement with the United Arab Emirates (UAE). They have, indeed, agreed not to enrich nuclear materials. Is that accurate?

Secretary PERRY. That is correct.

Senator REED. There is a fear that if we did not have the same arrangement with the Saudis, that the UAE might feel that they are unconstrained. Is that a concern that you have?

Secretary PERRY. I think you would be correct in that analysis.

Senator REED. Thank you very much.

Quickly following up, the Chairman made comments about the significant increase in cost, as I mentioned, at Hanford particularly. We have a problem and we have a huge increase in resources we have to devote to it. I would concur with the Chairman's request that you provide us more information and more details as we go forward.

Secretary PERRY. Coming your way.

Senator REED. Thank you very much, Mr. Secretary.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Senator Fischer?

Senator FISCHER. Thank you, Mr. Chairman.

Administrator, I am trying to take stock of the progress that we have made in achieving the goals that were laid out in the New START's ratification, and the Nuclear Posture Review makes the point that despite a longstanding goal and one that was particularly reinforced during the debate on the New START, quote, the United States has fallen short in sustaining the modern infrastructure that is resilient and has the capacity to respond to unforeseen developments.

That treaty was signed in 2010, and since that time, we expected a pit production facility to be completed by 2023 and work is just now beginning with the optimistic target, I believe, of reaching full capacity at 2030.

After years of delay, the uranium production facility is moving forward, but its scope is reduced to one-third of its original capacity, and several warhead life extension 16 programs were delayed. Revised schedules appear to be holding, but the stockpile is older than anticipated.

In my view, we have a lot of work ahead of us if we are going to achieve the vision that was articulated in 2010 and really be able to attain a responsive nuclear complex. Would you agree with that?

Secretary GORDON-HAGERTY. Absolutely.

Senator FISCHER. Do you see us moving in that direction, a more positive direction, at this point?

Secretary GORDON-HAGERTY. I do, Senator Fischer. I believe that our entire complex has our eye on our goal, and the goal is to continue to modernize our five nuclear weapon systems that we are currently undertaking. I am happy to say that they are all on schedule and all on budget. However, a minor slip in any of those could cause a rippling effect across all of the different modernization programs.

With regard to UPF [Uranium Processing Facility], the facility to which you alluded, our uranium processing facility, to date we have spent \$2.5 billion in construction activities. This year, we have undertaken the actual construction of the main processing building. That building will cost \$6.5 billion and be completed by 2025. Again, I am glad to say that we are on schedule and on cost for that.

Senator FISCHER. Thank you.

You and I—we talked a lot about pit production, and the two questions previous to mine dealt with some pit production issues as well. NNSA's goal has been to be able to produce those plutonium pits per year 2030. I know that you do have a strategy to accomplish this and you are pursuing it.

But it is my understanding that as a result of the years of delay that this effort has faced, I guess you could say plans are extremely fragile at this point, and achieving this goal is going to be challenging for you. I am pleased you are focused on it.

But my question is, to what extent has NNSA thought about any contingencies or any supplemental plans should it face delays or any kind of disruption to your current strategy that you hold?

Secretary GORDON-HAGERTY. We have a number of different options available to us. We are, obviously, focused on the most optimal, which is to go with the two-pronged strategy for pit production, which will be, as the Secretary said, Los Alamos producing pits 1 through 30, and as we repurpose the former MOX facility in South Carolina, that we will look to have an aggressive plan for that.

One of the historical notes about NNSA is that I like to say we used to do things in serial. Well, now we are doing things in parallel. We have a lot of work on our plate, but I am absolutely confident in the men and women of the NNSA enterprise that we can get this done. We have no further time to delay.

In addition to everything else we are doing, we have a massive infrastructure and recapitalization program. As the Chairman mentioned, more than 30 percent of our facilities were built during the Manhattan Project, and it is long time past that we do something to modernize our infrastructure and give the tools to our workforce that are necessary to maintain our nuclear deterrent.

Senator FISCHER. I know you are trying to do things in parallel and not step by step, but as you view your next major strategic materials challenge, what comes after the plutonium pit production for you?

Secretary GORDON-HAGERTY. High explosives.

Senator FISCHER. Thank you very much.

Chairman INHOFE. Thank you, Senator Fischer.

Senator Kaine?

Senator Kaine. Thank you, Mr. Chair.

Thanks to the witnesses for your service and testimony.

Secretary Perry, Reuters broke a story last night, "United States Approves Secret Nuclear Power Work for Saudi Arabia." Just to read the opening paragraph, United States Energy Secretary Rick Perry has approved six secret authorizations by companies to sell nuclear power technology and assistance to Saudi Arabia, according to a copy of a document seen by Reuters on Wednesday.

Is the story accurate?

Secretary PERRY. Senator, as you probably know, as well as any of us, from time to time, the media may get a story wrong.

Senator Kaine. That is why I asked.

Secretary PERRY. It is always good to hear in the public, and I hope that there is some good reporting going to be going on about this conversation you and I are about to have relative to that because it is important to have a little understanding of the history of the part 810.

Senator Kaine. Part 810. These are part 810 authorizations that we are talking about. Correct?

Secretary PERRY. That is correct. These go all the way back to the 1970s, about the same time that the Department of Energy was created in 1977.

Frankly, I think the word "secret" is what gets everybody spun up when they see the word "secret" in there. What we are talking about here is something that goes on every day in this town and across the country.

Senator Kaine. If I can lead the witness a little bit, I do understand these part 810 authorizations are common. They have happened for a long time. The Reuters story suggests, though, that in the past, part 810 authorizations have been publicly available to be reviewed at the Department of Energy office, but in this case, these six authorizations have not been subject to any review by the public.

Secretary PERRY. Here is what I will suggest to you, is that the proprietary information that these companies, these U.S. companies, that are going to be doing this work want to keep that proprietary information from being out in the public domain. I totally understand that. When we were governors, our business model from time to time—well, not from time to time, generally speaking, they were not interested in putting out and having their competitors look at it.

Senator Kaine. Let me not ask anything about any proprietary information. I do not want to do that.

Is it accurate, though, that six part 810 authorizations have been issued to American companies to do this prep work for a potential nuclear power deal with Saudi Arabia?

Secretary PERRY. Well, since January of 2017, here is what I think is really pretty important from my perspective.

Senator Kaine. How about just really quick. Is it true that six part 810 authorizations have been issued to companies—

Secretary PERRY. Here is what is true. Since 2017, there have been 65 applications for part 810's, and we have issued 37 of them, with nine of them to the Middle East.

Senator KAINE. Okay, and six to Saudi Arabia?

Secretary PERRY. That is correct, and two to Jordan.

Senator KAINE. When was the last one issued? Give me the date. You said since 2017. When was the last one done to Saudi Arabia?

Secretary PERRY. Let me get back with you on that.

Senator KAINE. Do you know whether or not it was done before or after October 2, 2018?

Secretary PERRY. I do not. I do not want to give you a date specific.

Senator KAINE. That was a date that a constituent of mine, a Virginia resident, was murdered, Jamal Khashoggi, by the Saudi Government in a Saudi consulate in Istanbul. I would be very interested to see whether the United States was signing deals, part 810 authorizations, to enable nuclear work for Saudi Arabia after that date.

Secretary PERRY. We will get you that specific date.

Senator KAINE. We will ask that for the record, the record of all six of the authorizations.

[The information referred to follows:]

The international commercial nuclear power industry is a highly competitive market. Due to the high stakes and low number of competitors, even the name of a company and the market they are competing in can be harmful to an American company seeking to market their products. Certain companies can be easily identified by the technology associated with them, thus revealing the name or technology associated with such a company would reveal that they were competing in a certain market.

Due to the sensitive, business proprietary nature of the information in question, the Department has been working with Congress to provide access to this information in the appropriate setting and manner.

Senator KAINE. Let me switch topics quickly.

The Department of the Navy is recommending that the USS *Harry S. Truman* be decommissioned rather than overhauled in the next few years. I serve on the Seapower Subcommittee of this Committee. We had a hearing about this yesterday. Has the Department of Energy been given any direction to fund or plan for the decommissioning of the *Truman*?

Secretary PERRY. Let me let the Administrator have a bite at that.

Senator KAINE. Indeed.

Secretary GORDON-HAGERTY. What I could say, Senator Kaine, is that obviously part of that comes under the Office of Naval Reactors, which falls under NNSA. I can get back to you on that information to let you know specifically what we are providing.

Senator KAINE. That would be helpful. It would not be surprising I think. There is just a little bit of an effect in the SASC budget this year on it, and it may be that the DOE portion of it would be downstream from fiscal year 2020. I am just curious to see whether there has been any instruction given to DOE about potential decommissioning. If so, what effect would that have on the budget? I will ask that question for the record.

Secretary GORDON-HAGERTY. Thank you.

Senator KAINE. Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Kaine.

Senator Scott?

Senator SCOTT. Secretary Perry and Under Secretary Gordon-Hagerty, thank you for being here and thank you for your hard work. I know it is a lot of work to get done, what everyone expects you to do.

I want to thank Secretary Perry for not running for reelection in 2014. I was never able to beat you in job creation in my first 4 years as Governor, but your departure was welcomed and we were able to beat you for quite a bit. I hope you appreciated those phone calls every month when I let you know how we were doing.

Secretary Perry, the National Defense Strategy focused on our national security efforts, more on the threats of China and Russia. How does the National Nuclear Security Administration's—how do you address these threats through your mission and programs?

Secretary PERRY. Senator, thank you.

The NNSA, as I said in my opening remarks, keeping our nuclear deterrent at a position that clearly modernizes it, clearly sends the message that the United States is going to defend itself against any threats. That is one aspect of what the Department is involved with.

I will suggest to you an equally important part of this is through some of the work that goes on at our national labs in the super computing side of things. The ability to protect the grid against any attacks that could come from a cyber standpoint—statutorily the Department of Energy is the sector-specific agency that deals with that. The Idaho National Lab and the grid, the test grid, that they have there is a great example of that. Our super computing en route to exoscale computing, the first exoscale machine will be at the Argonne Laboratory, up and running by 2021. Then we have the number one, number two fastest computers in the world, most powerful computers in the world today at Oak Ridge in Tennessee and at Lawrence Livermore. When that Argonne facility in Chicago comes up—its name is Aurora—then we will be at the exoscale level. Senator Cotton, you know the importance from a cryptology standpoint, the ability for us to use our super computing capacity and abilities.

I will suggest to you those are two of the things, Senator Scott, that DOE is directly involved with. What Lisa has over on her side of the house is the single most important part of our deterrent, but also our ability to serve multiple agencies of government, whether it is the DOD, whether it is the Secretary of State, whether it is the other three letter agencies of government, with our cryptology, with our ability of using the super computers that the Department operate in that National Security Council (NSC) environment, DOE plays a monumental role in the acquisition, interpretation, and other engagements that are very important to sending the message to those who would not necessarily have America's best interests in mind, that we are prepared, we are substantially engaged, and we have both offensive and defensive capabilities to keep this country free and secure.

Senator SCOTT. Thank you.

The budget that you propose—is that sufficient for you to meet your needs?



Secretary PERRY. Yes.

Senator SCOTT. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Scott.

Senator Heinrich?

Senator HEINRICH. Thank you, Chairman.

Secretary, I would like to ask you about the role of the Defense Nuclear Facility Safety Board (DNFSB). I have to say that I am hearing from communities in New Mexico that DOE's unilateral revision of Order 140.1 will significantly affect the board's ability to meet its statutory oversight responsibilities at NNSA and the EM facilities, including obviously the three in New Mexico.

In light of this new order, talk to me about how you can assure me of your commitment to preserving both the board's oversight responsibility but, more importantly, to ensure public health and safety for workers and for local communities around the complex.

Secretary PERRY. Senator Heinrich, thank you.

I do not think there is a more important relationship between the Department of Energy than through the labs, through the contractors with the local communities. I will say having the great privilege over the last year, I think last fall I visited the 17th of the 17 labs and to be in those communities to see the great support that comes from the communities to the labs—and it is one of our goals to make sure that that is the case, recognizing the highly technical work and sometimes the contentious public issues that come out of whether it is on the weapons side or what have you—

Senator HEINRICH. Why change the order when you had built up all that credibility with the local communities?

Secretary PERRY. I do not think we have. You know, there may be certain individuals who think that we like to do it the way that we have always done it. What I have always found was that anytime you kind of make a change in the way things have historically run, somebody is going to go, wait a minute, I am losing some of my authority, I am losing some of my what have you.

But what I would like to do is I would like to get Lisa to weigh in here as well and share with you her aspect of it.

I think it is very healthy to have conversations about here is why we are going to change this and have that public input, and I think we are having that. I think we are having some good back and forth on this and find a reasonable solution.

But if I may, Senator, can I ask Lisa to—

Secretary GORDON-HAGERTY. Good morning, Senator.

Senator HEINRICH. Good morning.

Secretary GORDON-HAGERTY. First of all, let me say that the DOE order is just updating a 17-year-old order that is, quite frankly, antiquated. What it does is it more clearly defines the roles and responsibilities of the Department of Energy where it is related to the independent oversight of the Defense Nuclear Facility Safety Board. We enjoy a very strong and solid relationship and continue to have one with the DNFSB, and we continue to interact with them.

However, we do need to clearly define and redefine the responsibilities of Department of Energy because if in fact health and safety situations do occur, the roles and responsibilities and the ac-

countability rests solely with the Department of Energy and NNSA and not with the Defense Board. So that is what we are looking at.

Senator HEINRICH. Administrator, I do not want to cut you off, but I am really getting short on time here. So I do want to pivot real quickly and ask the Secretary one more quick question, which is, Secretary, you mentioned the Manhattan Project, which is something we are incredibly proud of in New Mexico and the role that we played in it. But 75 years later, we still have not cleaned up all the waste. Once again this year, in the proposed budget, there is a \$25 million cut to that cleanup. Why cut cleanup at Los Alamos?

Secretary PERRY. Senator, I will share with you that some of the reductions on the EM side is because we have successfully been able to make some cleanups and finish those and transitioning over to some others.

Senator HEINRICH. That is not the case here, though, because the more we stretch this out, I mean, we could be there for another 20 years or we could be there for a much shorter period of time. So I just want you to know that I will work with Senator Udall to, once again, restore that funding like we did last year. But we are making good progress. We have a new contractor on board. This is an opportunity to show to the State, to whom commitments have been made, that we are going to keep those commitments. So I would just urge you to look at that.

Secretary PERRY. We will, sir.

Chairman INHOFE. Thank you, Senator Heinrich.

Senator Cramer?

Senator CRAMER. Thank you, Mr. Chairman.

Thank you, Secretary Perry and Secretary Gordon-Hagerty, for being with us today and, of course, for your ongoing access. It is really very helpful.

If there is time at the end, I will maybe get into some plutonium pit production questions, but it sounds like we have covered it pretty effectively.

So let me focus, first of all, on something that is very important specifically to my home State of North Dakota, and that is warhead modernization efforts. Obviously, it is important to us in Minot. Our B-52's, of course, carry the long-range standoff weapons, and then of course, the ICBMs and whatever might replace them. They are both hosted at Minot. They really are depending on getting the new warheads on schedule so that we can continue to provide the strategic deterrence that our country and our allies need and depend on.

Let me just put it real straightforward. I am going to maybe ask three questions in one, Secretary Gordon-Hagerty, and then you can answer all of them probably in one breath.

If you were forced to delay, for example, the W84, what would the impact of the program be—on the program be? Would it introduce challenges to integration with the LRSO [Long Range Stand Off]? Likewise, would there be similar concerns with a delay in the W87-1 as it relates to our Minuteman III's and future ground-based systems? I will just open the door for you to walk through that and answer.

Secretary GORDON-HAGERTY. Certainly. Thank you, Senator Cramer.

Yes, obviously, our programs are all—all five of our modernization programs are currently on cost and on schedule, and they are completely aligned with our customer, the Department of Defense. If we see any slippage whatsoever in any of our programs, that could obviously affect or impact and will impact the LRSD or the GBSB [Ground Based Strategic Deterrent] programs—excuse me—the W80—4 or the 78 replacement programs. Again, we are thoroughly aligned with the Air Force right now and with the Department of Defense. So we need the additional funding, the resources necessary to continue those programs so they are on schedule, on budget so we can deliver them on time to the Department of Defense.

Senator CRAMER. Any chance of doing it faster than that?

Secretary GORDON-HAGERTY. We have our challenges, and of course, as Senator Reed had said, we are busier than we have been the 1980s. We are working every possible way to slim up the margins to do whatever we can to move faster, quicker, and speedier, as General Hyten often likes to say. We are thoroughly aligned with the Air Force, and where we can make commitments to improve those processes and those timelines, we will do so. But we are working as closely as we can with the Air Force to make sure that we can deliver on our commitments.

Senator CRAMER. Secretary Perry, anything you would want to add to that?

Secretary PERRY. Well, I will just say that they restarted phase 6, which activates the W87—1 modification program. That obviously supports the ground-based strategic deterrent.

Again, I am comfortable that the funding stream is appropriate.

Here is my concern, is if the Department gets tasked with some other areas—and I will make reference to what is going on in North Korea. Knock on wood, if that goes forward and we get tasked with verification issues and what have you, DOE would play a very, very leading role in a verification of the weapons that are there and then the obvious next steps past that. Were that to be the case, then I would remind this Committee that the funding that would be required for DOE to take those additional duties on would be substantial, and at that particular point in time, Administrator Gordon-Hagerty's job becomes incredibly challenging. I have total faith that she can keep a lot of balls in the air at one time, but just looking out over the horizon, sir, and saying here is what you need to be prepared for, something coming out of left field that you may not have had in your line item that was not funded for, that is one that I think, Mr. Chairman, we need to kind of just keep in the back of our mind. If this goes forward, the DOE's requirement will be substantial, incredibly important, and it could affect our other programs as we are trying to get those addressed as well.

Senator CRAMER. Secretary Perry, thank you for that observation and for that warning because would we not all love to be able to have too much to do with regard to the Korean Peninsula?

Secretary PERRY. It would be a good problem to have.

Senator CRAMER. It sure would. But I, like you, am confident that Secretary Gordon-Hagerty is capable of a lot of multi-tasking. That has been my observation. I thank you both for keeping the main thing the main thing. Thank you.

Chairman INHOFE. Thank you, Senator Cramer.

Senator Blumenthal?

Senator BLUMENTHAL. Thanks, Mr. Chairman.

Welcome to you both and thank you for your service.

I want to ask a question about fuel cells. As you know, they are highly efficient and clean technology that use domestically available resources to advance our security goals and efforts to create a more resilient and reliant source of electricity generation.

In Connecticut, the United States Navy has agreed to install a 7.5 megawatt fuel cell park on the United States submarine base in New London, which is home to about 16 fast attack submarines. This move is going to provide a very cost effective source of power to the base that will advance long-term grid independence and power resiliency. As you know, the solid oxide fuel cell program within the Office of Fossil Energy at the Department of Energy supports the advancement and eventual full scale deployment of fuel cell technologies. The Navy has been a leader in this effort, so has the military in general, using fuel cells as sources of energy in Afghanistan and elsewhere.

Could you tell me, Mr. Secretary, what is the status of the solid oxide fuel cell program at the Department of Energy?

Secretary PERRY. Senator, we have got a lot of different alternative energy programs that we are working on. That is obviously one of them, and both at PNNL [Pacific Northwest National Laboratory] and at some of our other labs, we are doing work on the fuel cell side of things.

Our advanced—I will shift gears on you just a little bit, but micro-reactors, another area that held some extraordinary potential for the future. I think it is one of the reasons that both basic research and applied research—

One of the things that we have done over at the Department is we have created a chief commercialization officer to be able to take some of these technologies like you speak about here, be able to take them from their inception and commercialize them. It is one of the things that I am proud of although we have had discussions in this Committee and other committees about budgetary items over at the Department and what the priorities are, but from my historic perspective, one of the great gifts that we have at the Department of Energy is being able to take the research in many areas and commercialize that and make it available to the general public and in many cases, obviously, for our military as well.

Senator BLUMENTHAL. Will you commit to spending the full \$30 million that the fiscal year 2019 budget appropriated to fuel cell development, the solid oxide program, for fuel cell development?

Secretary PERRY. That is our intention, sir.

Senator BLUMENTHAL. Coming back to the transfer potentially of nuclear technology to Saudi Arabia, I think Senator Kaine asked you whether any part of the 810 authorizations were signed after October 2, 2018. Would you not know that sitting here now?

Secretary PERRY. No, sir, I would not. We sign a lot of papers, and I have got a pretty good memory but to remember every date that I sign a piece of paper might be above my ability to recall, sir.

Senator BLUMENTHAL. Although that is a pretty significant piece of paper.

Secretary PERRY. I understand that. But, again, asking me to recall when I signed a particular piece of paper, when I sign literally thousands of pieces of paper, might be just above my ability to recall, sir.

Here is what I can share with you—I will get it to you and you will have it post haste, and we can see whether or not it meets the timeline of what you asked.

Senator BLUMENTHAL. But you are concerned about the transfer of that technology in light of the Crown Prince's refusal to agree to any prohibitions on enriching uranium or reprocessing of spent fuel.

Secretary PERRY. What I am concerned about is any country that is going to not go forward with nonproliferation. Here is what I am really concerned about, Senator, is that if the United States is not the partner with Saudi Arabia, for that matter, Jordan, which is the other country that we have signed 810's with, and they go to Russia and China for their civil nuclear technology, their civil nuclear partners, I can assure you that those two countries do not give a tinker's damn about nonproliferation. That is why we continue to work very, very diligently to try to bring those countries that want to develop civil nuclear programs into the sphere of the United States because we are committed to nonproliferation. We got a history of nonproliferation, and nobody in the world will do it better than us. It is very, very important for the world, for the Middle East, for the United States to be the partner in as many of these development of civil nuclear energy programs as we can be.

Chairman INHOFE. Thank you, Senator Blumenthal.

Senator BLUMENTHAL. Thank you.

Chairman INHOFE. Senator King?

Senator KING. Thank you, Mr. Chairman.

Madam Secretary, we have been promising the American people for 70 years a solution to the storage problem of high-level nuclear waste. We have not managed it yet. Governor, perhaps you want to take this one. But where are we? This is one of the reservations that people have about the future development of nuclear power is how do we responsibly tell people that we can manage this issue without having what amounts to 100 or more high-level nuclear waste sites scattered all over the country because that is what we have now.

Secretary PERRY. Senator King, thank you.

It does seem to be the issue that has vexed this country for a long time. There are two different issues here, two different problems I guess. There is a technical issue with where are you going to put this high-level waste, and there is a political challenge.

Senator KING. Which is also radioactive.

[Laughter.]

Secretary PERRY. My role is to find a solution, and we had a conversation yesterday with the Senate appropriators in a public

forum about getting together over the course of the next 2 weeks and talk about what some of those options are. If Yucca is not going to be one of the sites, if WIPP [Waste Isolation Pilot Plant], which Senator Heinrich represents, is going to limit, where are the other options? Well, there is a site in far west Texas that has historically been open and supportive of waste coming into that part of the State of Texas. That is an option.

Here is what is important. If we are going to find a solution for storage, Congress must act. You are going to have to change the statute. Today the only entity that can take possession of high-level waste is the Department of Energy. If you are going to have an option to that, you are going to have to change the statute. The statute is going to have to allow for private sector entities to be able to take possession of that. For instance, if it were to go to a place like Andrews, Texas waste control specialist, you have to change the law. You have to continue to fund the Nuclear Regulatory Commission (NRC) to be able to get those licensings processes forward. You have a real challenge on your hand.

But let me leave you with this. If you do not act, by not acting, you are saying that we have permanent high-level waste repositories in the United States and they are in 39 of your States.

Senator KING. Including one in my State of Maine.

Secretary PERRY. Yes, sir. It is a pretty stunning map to look at, Senator King, when you look at the 39 States that have high-level waste in them. I will suggest to you we have a moral responsibility to get that waste out of these States, to get it to secure, appropriate sites. That is the map. Every one of those red States has high-level waste. I do not think that is what the American people want. I do not think what the men and women sitting around your dais today want. But we have some hard decisions to make as a country about are we going to go forward with a high-level waste repository, or are we going to have interim storage? Hopefully the men and women of Congress can deal with this and deal with it in a short period of time.

Senator KING. I appreciate that, and I appreciate your commitment to continue working on this problem because it not only is a commitment based upon existing sites, as you talked about, but it is impairing the ability to even think about future nuclear development if we cannot tell our citizens that the waste problem has been dealt with.

I am running out of time. Madam Secretary, maybe for the record, you could supply for us some thinking about how we deter a nuclear attack by a non-state actor. My concern is that traditional concepts of deterrence work on a nation state, but they do not necessarily work on a group of 30 people who are ready to die anyway. Deterrence has been at the core of our nuclear strategy. How do we cope with the idea of a non-state group getting the technology from a rogue regime that has it? I understand we have got to talk about intelligence. We have got to talk about interdiction. So for the record, my time has expired. If you would supply a page or so on that, that would be helpful.

[The information referred to follows:]

The U.S. Government's approach to countering nuclear terrorism recognizes the difficulty of deterring non-state actors through the means that have traditionally

been used to deter hostile states, that is, threatening overwhelming reprisal in response to a nuclear attack. The National Strategy for Countering Weapons of Mass Destruction Terrorism, released by the White House in December 2018, captures this conundrum, noting that threats of retaliation do not resonate among fanatics who do not value human life, including their own, who may lack sanctuary to occupy or destroy, and who may even welcome retaliation as a means of galvanizing popular support. Consequently, the U.S. strategy for deterring nuclear terrorism is comprised of two central elements: (1) attempting to convince terrorists that a nuclear attack against the United States would be unsuccessful for a variety of reasons, and (2) deterring foreign governments from providing support to would-be nuclear terrorists.

The United States undertakes multiple efforts to persuade non-state actors that a nuclear attack would be prohibitively difficult. First, the U.S. Government expends significant resources around the world consolidating, securing, and when possible eliminating the nuclear materials necessary to construct an improvised nuclear device, with priority given to materials that are at highest risk of acquisition and use by non-state actors. Similar efforts are undertaken to eliminate disused radioactive materials or better secure materials still needed for medical and other applications. In addition to the intrinsic value of these programs, which have dramatically improved global nuclear security, a secondary benefit is to nurture the perception that these materials are simply too difficult to acquire. This perception may in turn persuade terrorists to pursue less lethal attack modes.

Second, the United States fields a variety of domestic and international defenses against nuclear terrorism and actively messages these capabilities in various media. For example, the U.S. Government has installed hundreds of radiation portal monitors at foreign seaports and border crossings around the world, complicating the ability of illicit smugglers and terrorists to move nuclear material from its point of origin to the United States. At home, the U.S. Government also vigorously scans for radiation at airports, seaports, and other ports of entry. Additionally, specialized capabilities are maintained to search for, interdict, characterize, and disable terrorist nuclear devices. The fact that these assets are strategically pre-positioned throughout the country to respond to nuclear incidents is consistently advertised as part of a conscious strategy to deter non-state actors from attempting a nuclear attack.

The second pillar of the United States' deterrence strategy is to dissuade hostile foreign states from providing nuclear material, equipment, and expertise to would-be nuclear terrorists. This objective requires advanced nuclear forensics capabilities to identify the source of material used in a nuclear device and thereby help attribute state support for an act of nuclear terrorism. These capabilities may also induce states to augment their nuclear security practices, lest an inadvertent loss of material be perceived as an act of willful assistance to terrorists. Like U.S. defenses, the existence of nuclear forensics capabilities are actively messaged using a variety of media platforms.

In tandem with forensics tools, the United States has consistently issued declaratory policy to identify the severe consequences that would result if a hostile state facilitated a terrorist nuclear attack against U.S. interests. To wit, the 2018 Nuclear Posture Review (NPR) pointedly states that the United States will hold fully accountable any state, terrorist group, or other non-state actor that supports or enables terrorist efforts to obtain or employ nuclear devices. Further amplifying this message, the NPR notes that our adversaries must understand that a terrorist nuclear attack against the United States or its allies and partners would qualify as an extreme circumstance under which the United States could consider the ultimate form of retaliation an unambiguous reference to the possibility of U.S. nuclear retaliation against such states.

Although deterrence of non-state actors and potential foreign patrons is merely one dimension of the United States' strategy to counter nuclear terrorism, these efforts represent an important element of the Nation's defense-in-depth against this grave threat.

Additional information on the U.S. Government's approach to deterring nuclear terrorism can be provided in a classified setting.

Senator KING. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator King.

Senator Blackburn?

Senator BLACKBURN. Thank you, Mr. Chairman.

Secretary Perry, I will begin by saying thank you so much for the attention you have given to Oak Ridge and to Y-12 and being on the ground there. It is noted and it is appreciated. We hope that

you will come back often. Good things are happening there that are important to both our energy and our military, our complex.

When we were looking at the Nuclear Posture Review, it was talking about the age of the infrastructure. Forty years old is primarily the age of the infrastructure, a quarter of which dates back to the Manhattan Project, and at Y-12 at that national security complex, in 2014—and I know you have visited there—chunks of concrete weighing up to 20 pounds fell from the ceiling of building 9024. Fortunately, no one was injured. It was good timing, if you will, that left workers not being injured, which is fortunate. But that is a building that was built in 1944, still operational today.

Then we had noticed in the annual site environment report a statement on this building, building 9024, and I am quoting, that it has degraded to the point that repair is no longer an option. Other deferred maintenance such as inoperable air conditioning equipment causing recurrent lost work days and critical fire and emergency operations crowded into too small facilities that would be rendered inaccessible in critical security events are unacceptable.

So you look at this. Should site report on some of our most critical infrastructure and the national security enterprise contain the term “World War II vintage buildings”? I wish that you would spend a couple of minutes for the benefit of our Tennessee constituents there working at Oak Ridge and at Y-12. Talk a little bit about what is needed with the backlog of maintenance. Have you arrested the growth of deferred maintenance? Kind of give a little bit of perspective on this. Then if you will refer to what will be your implementation plan and how do you intend to ensure that all of these projects are attended to.

Secretary PERRY. Senator, thank you very much. Just for the record, I will be out at Oak Ridge the first week of May for an ex-lab.

Senator BLACKBURN. You are going to be welcomed.

Secretary PERRY. Yes, ma'am.

Senator BLACKBURN. They will look forward to having you there.

Secretary PERRY. It is a great facility. I hope everyone has the opportunity to go. As a matter of fact, Mr. Chairman, I am remiss in not having tendered an invitation to every Member of the Committee to come to one of the national labs of their choice, or if we could pick one for them, it would be an extraordinary event for them. It is the most enlightening, exciting thing I have done to go be engaged in these national labs and none more intriguing, interesting, nor has a greater history than Oak Ridge National Lab, “The Girls of Atomic City,” the ladies who helped with the Manhattan Project, a really fascinating book that I know you have.

But let me address directly your question about—in fiscal year 2016 and 2017, NNSA—they stopped the growth of the deferred maintenance for the first time in nearly a decade. For fiscal year 2019 funding and certainly in this budget, 2020 requested, will help NNSA to begin decreasing the deferred maintenance that you very vividly laid out here. We are committed to implementing the infrastructure modernization initiative as directed in the fiscal year 2018 National Defense Authorization Act to reduce NNSA's de-



ferred maintenance backlog by no less than 30 percent by 2025. So I hope there is some——

Senator BLACKBURN. So what I am hearing you say is that NNSA turns the corner on this in 2020.

Secretary PERRY. Correct.

Senator BLACKBURN. Correct, okay. Thank you.

I yield back.

Chairman INHOFE. Senator Warren?

Senator WARREN. Thank you, Mr. Chairman.

I want to pick up on a point that Senator Reed raised. Last month, the House Oversight Committee issued a report detailing attempts by the Trump Administration officials to fast track the transfer of sensitive American nuclear technology to Saudi Arabia. Now, career ethics officials advised against this transfer, and they said such a transaction would be illegal without review by Congress. We know this happened because whistleblowers came forward to sound the alarm.

Secretary Perry, you are referenced nine times in the House Oversight Committee's report, which describes how you and other administration officials pushed the Saudi Government to buy nuclear reactors from American companies, including Westinghouse by name.

This is a serious matter, and Congress is right to demand answers here. You lead the Energy Department. So let me ask, how many documents has your Department provided to the House Oversight Committee in response to its investigation into this matter?

Secretary PERRY. Senator, let me get back with you on the information.

Senator WARREN. Well, it is a matter actually of public record. The answer is zero. Your Department has produced zero documents to the House Oversight Committee and its investigation.

I think the Energy Department should cooperate fully in this investigation. So I have a few more questions about it.

Secretary Perry, do you agree that any agreement to transfer our nuclear materials, facilities, or sensitive technology to Saudi Arabia requires congressional review?

Secretary PERRY. I am going to follow the law, whatever the law may be.

Senator WARREN. Well, I would like to know that you know what the law is here.

Secretary PERRY. I am going to follow the law, Senator.

Senator WARREN. The law is it requires congressional review. Are we clear on that?

Secretary PERRY. Then I think you and I both agree.

Senator WARREN. Are you just now learning that that is the law?

Secretary PERRY. No, ma'am. I am just agreeing with you, Senator.

Senator WARREN. Okay. So you understand that is the law, that Congress has to approve before the Saudis can get nuclear material.

Secretary PERRY. Senator, if you have any evidence that the Department of Energy has not followed that, I would be——

Senator WARREN. I just want to make sure that we are clear going forward here while you are out there pushing this. Under

U.S. law, any civilian nuclear cooperation or 123 agreement with a foreign country must meet nine specific requirements to ensure that nuclear material cannot be reprocessed or enriched to build a bomb. You seem more focused on pushing the Saudi Government to hire companies like Westinghouse to build reactors than you do on working with Congress to nail down an agreement that will prevent the Saudis from developing a nuclear weapon.

At a committee hearing in the House last May, you said that you told the Saudi Crown Prince that if he wants the world's best nuclear reactors, then, quote, you have to use Westinghouse.

So let me just make sure we are clear on this. Secretary Perry, do you agree that any agreement to transfer our sensitive nuclear technology to Saudi Arabia should ensure that they cannot use that technology to develop a nuclear weapon no matter which company makes the reactors or how high their profits might be?

Secretary PERRY. I agree.

Senator WARREN. Okay, good, because at a minimum, I expect the Trump Administration to follow the law when it comes to any potential civilian nuclear cooperation agreement with Saudi Arabia. Any agreement must ensure that there can be no reprocessing or enrichment of nuclear material without our prior approval.

Frankly, I think it is a bad idea to even consider transferring our sensitive nuclear technology to the Saudi Government. This is a government that continues to fuel a humanitarian crisis in Yemen. The Saudi Crown Prince ordered the brutal murder of journalist Khashoggi. The last thing we should be doing is giving the Saudi Government the tools to produce nuclear weapons.

Thank you, Mr. Chairman.

Chairman INHOFE. Senator Hawley?

Senator HAWLEY. Thank you very much. Thank you, Mr. Chairman.

Thank you, Secretary Perry and Under Secretary, for being here.

I want to first start off by saying that, of course, we are very proud that in my home State we are proud of the partnership we have with the NNSA, Under Secretary, dating back, of course, to the Second World War, but on display now with the new Kansas City National Security Campus, which we are very, very proud of. It employs over 4,000 people in the State of Missouri, manufactures, assembles, and procures 85 percent of the non-nuclear parts of the U.S. nuclear weapons. We are very proud of that. Of course, that is just the tip of the iceberg in terms of the service that that facility renders to the United States.

I thank you for your leadership, both of you, on this and look forward to working together to ensure that that Kansas City campus continues to have what it needs to advance its important mission. So thank you for that.

Let me ask you, Under Secretary, talking about research here for a moment. Given the prior administration, the Obama Administration's efforts to reduce the nuclear stockpile, constrain research and development for nuclear weapons, do you feel that—and nuclear components—do you feel that you have the resources and the authorities that you need in order to carry out the research and development that is important as we make the shifts outlined in the Nuclear Posture Review?

Secretary GORDON-HAGERTY. Good morning, Senator Hawley. It is nice to hear such complementary words of Kansas City and we do. KCNSC [Kansas City National Security Campus] is one of the proud eight locations in the NNSA. So your words resonate with us and with our entire workforce. So thank you.

With regard to the nuclear stockpile, our research and development testing, all the programs that we need to underpin our weapons activities, to modernize our nuclear weapons stockpile, I believe that the request that we are making in the fiscal year 2020 budget will certainly support our initiatives going forward. However, we have more priorities than there are resources.

We have done considerable work in racking and stacking, if you will, what the near-term priorities are and also putting us in a place where we do not find ourselves in the position we are today where we are focusing strategically on what the tools are that are necessary to maintain our nuclear deterrent, as well as plan for the future.

Senator HAWLEY. Yes. Thank you.

I mentioned the Nuclear Posture Review and let me just stay with that for a moment. The Nuclear Posture Review emphasizes low-yield capabilities, particularly modifying the small number of existing submarine-launched ballistic missiles and other low-yield options to ensure that potential adversaries perceive no possible advantage in limited nuclear escalation. That is a quote.

Do you agree with this assessment on the utility of low-yield capabilities and the absolutely invaluable deterrent potential that they provide?

Secretary GORDON-HAGERTY. Yes, I do.

Senator HAWLEY. Would you agree that having the flexibility of these weapons that they provide is essential to keeping this country safe and strong?

Secretary GORDON-HAGERTY. Yes.

Senator HAWLEY. Tell us about what more you need in order to ensure that, again, the priorities outlined in the NPR go forward here and that we continue to develop and modernize the triad to continue to keep this country safe.

Secretary GORDON-HAGERTY. We continue to need stable and predictable funding. That is first and foremost our biggest requirement.

With that, that does not only just modernize our stockpile. What it does is it modernizes the infrastructure and do the recapitalization that has been long necessary. As many people have noted, more than 30 percent of our entire enterprise is more than 60 years old. That is clearly unacceptable that we put our workforce, our very dedicated workforce of 44,000 men and women across our nuclear security enterprise in a situation where we might be working eventually in untenable conditions. We tried to minimize that situation, but with a broad, robust, and continued support in funding from the Congress, which we have seen for the last year or 2, that predictable and stable funding is what we need to continue to ensure that our nuclear deterrent remains second to none.

Senator HAWLEY. Thank you for that.

Secretary Perry, let me just ask you. As we think about the priorities outlined in the NPR, we know that Russia, who the Na-

tional Defense Strategy identifies as a peer competitor—they have been investing in lower-yield nuclear weapons and, of course, their famous escalate to deescalate strategy. Can you talk a little bit about our cooperation with our NATO [North Atlantic Treaty Organization] allies and how that is going in aligning our nuclear priorities to ensure that NATO is resilient and ready to address Russia's advances?

Secretary PERRY. Senator, our relationship with our NATO allies from my perspective as I travel in Europe and I am generally talking to them about buying American liquefied natural gas, talking to them about how to have multiple options, a diversity of fuels, a diversity of suppliers, a diversity of routes, and as those conversations take place, what I have observed is that we have a very, very strong relationship with our NATO allies. They recognize our very important role, particularly on being able to deliver our energy to them. There has never been a time in history, or certainly in my history, that the United States has been in a stronger position to be able to support our allies with a source of energy that will give them the option of whether or not they are required to buy that energy from Russia. That is a very, very powerful tool and I will suggest to you one of the most powerful geopolitical tools that we have in our toolbox today.

So our NATO allies—not only they respect us for what we have done over the last 75 years, but also what we are doing today. I can assure you that Poland and the work that is being done in Poland building LNG [liquefied natural gas] import facilities, buying United States LNG is a powerful deterrent to Russia, and it is a very comforting work that is being done that our allies in Europe see and recognize that we are more than willing to continue to deliver this diversified energy source to them.

Chairman INHOFE. Thank you, Senator Hawley.

Senator Jones?

Senator JONES. Thank you, Mr. Chairman.

Thank you, Mr. Secretary and our witnesses today. I really appreciate you being here.

Secretary Perry, just a quick question about a GAO [Government Accountability Office] report that was released in December of 2018. It laid out some criticism for how the Department of Energy and NNSA handles recording and sharing of lessons learned from mainly capital asset projects, claiming that not all the lessons are documented consistently or shared in a timely manner, which has led to cost and schedule inefficiencies. Additionally, the report found that these lessons were not accessible to other relevant staff.

Have you had a chance to look at that? Do you agree with that, or can you address whether or not the Department has taken steps to address those concerns?

Secretary PERRY. With your permission, could I ask the Administrator to address that? That is really more over her specific shop.

Senator JONES. Absolutely. Wherever we can get the best, that is fine with me. Thank you, Mr. Secretary. Yes, ma'am.

Secretary GORDON-HAGERTY. Thank you.

We are constantly trying to improve our processes and procedures. We have come off of a number of different places, off our high-risk list that GAO has put together. We are undertaking best

practices. We are taking that particular issue about how we can categorize and also codify, if you will, so that we can share best practices and lessons learned throughout our entire NNSA, and we are sharing those capabilities with the rest of the Department. So, yes, we are taking all of those recommendations under consideration by GAO, and we are finding ways of putting together and improving our best practices program so we can share those lessons learned.

There is nothing worse than finding ourselves in a situation where we are repeating the problems that we have had in the past. We have got a robust program through our Office of Acquisition and Project Management that are undertaking those efforts, and across our entire enterprise, we are undertaking that effort.

We also have a closer effort at home that we have undertaken in the last 6 months to capture lessons learned on very specific projects and see how we can affect the rest of the complex with those types of improvements that we are making from the lessons learned of the past.

Senator JONES. Great. Thank you. Thank you very much for that.

Either of you can answer this as well. In October, the NNSA collaborated I think with British, Norwegian, and Chinese experts to remove highly enriched uranium from a research reactor in Nigeria that proliferation experts have long warned could be a target for terrorists.

Can you talk about the impact a little bit about that operation and if there is potential to do similar type operations even with folks like China and Russia where we are not always on the same side?

Secretary GORDON-HAGERTY. The example that you cite, Senator Jones, is a great news story. We have worked with the IAEA [International Atomic Energy Agency], with Nigeria, and China to repatriate Chinese origin material. So what we did was we actually refueled the reactor in Nigeria with low-enriched uranium, a proliferation-resistant fuel, and repatriated the material to China. It is a huge success story, and it happened over a number of years.

I am heartened to say that we have done that and we had those commitments and have done 33 type of reactors, plus Taiwan. Thirty-three countries now have low-enriched uranium fuel reactors where we have repatriated or sent the material to the origin of the highly enriched uranium. These are great nonproliferation success stories, and we continue to pursue opportunities like that throughout the world.

Secretary PERRY. Great. Thank you, Senator. If I could just add, you really make a great point of recognizing that the United States from time to time work with countries that are not necessarily our friends or in areas that are in the world's interest.

The questions that I have been asked today about the work that we have done with countries who may have historically not been in our sphere but we would like to have them in our sphere—I have been asked a number of times about Saudi Arabia and why you would do business with Saudi Arabia. I think you make the absolute great point that if it is not the United States that is trying to create civil nuclear programs in countries, particularly in the Middle East and in Africa, that the potential for nonproliferation—

it could be expanded by X factor if it is not the United States. From time to time, these are countries that do some things that we really are offended by, but the potential of proliferation of nuclear materials, if the United States is not involved, will be substantially moved forward. I think it is our moral responsibility as a country to be engaged with this every place we can so that that does not happen, the United States and our ability to make sure that non-proliferation is being conducted. So thank you.

Senator JONES. Well, thank you. I know my time is out. I am going to follow up and maybe get some information close to home. The Bellafont nuclear plant is up for sale, and we have got an issue. That is a really important issue to the people in my State, and I would like to maybe get an update from you at some point—

Secretary PERRY. Consider it done.

Senator JONES.—about whatever we can do to help to move that along. So thank you for that. We will follow up.

Thank you, Mr. Chairman.

Chairman INHOFE. We are going to deviate from a policy I do not like to deviate from, and that is one of our Members has come back and wanted to ask one more question. We going to make an exception. Senator Heinrich, you are recognized.

Senator HEINRICH. Thank you, Mr. Chair.

I wanted to ask the Administrator actually, because we ran short on time, about the Mesa facility at Sandia National Labs, how we are addressing the long-term need for rad hard electronics, how we are going to address that in the short term, but also what the plans are to make sure that sort of capability is with us in the out-years in or 15 or 20 years as well.

Secretary GORDON-HAGERTY. With regard to the Mesa facility at Sandia, we know that we will be able to provide radiation hardened electronics for our nuclear weapons stockpile, a critical component to our stockpile, through 2040. We are now undertaking a robust plan to consider what, if any, challenges we will undertake as we look to refurbish, if you will, recapitalize or actually modernize our Mesa facility. We are making investments into it to make sure that we can maintain that facility through 2040, but the time is now to start thinking about recapitalizing that capability, a critical component, as we have discussed previously. We are also speaking with our counterparts in the IC and in the Department of Defense about what their needs are. Perhaps there are some common themes there, but certainly this is a critical component to our stockpile.

Senator HEINRICH. Thank you, Administrator.

Chairman INHOFE. Thank you very much.

Thank you to our witnesses.

We are adjourned.

[Whereupon, at 10:58 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR JAMES M. INHOFE

##### ENERGY INFRASTRUCTURE

1. Senator INHOFE. Secretary Perry, it has been brought to the Committee's attention that New England communities are having to import natural gas from Russia

due to constraints in the northeast. Have natural gas shortages effected New England?

Secretary PERRY. For decades, some of New England's natural gas demand has been met by liquefied natural gas (LNG) imports. Most of these imports have been into Exelon's Everett LNG receiving terminal near Boston, Massachusetts, but Repsol's Canaport LNG facility (in New Brunswick, Canada) and Excelsior's Northeast Gateway Deepwater Port LNG import terminal (located offshore of Boston) also provide some of the LNG imports that serve the New England market. The vast majority of these LNG imports comes from Trinidad and Tobago. In 2018, over 44 billion cubic feet of natural gas was imported from Trinidad. Also in 2018, New England received LNG shipments from the United Kingdom and France that consisted mostly of re-exported LNG that was produced at the Yamal LNG export facility in arctic Russia; the total volume of these shipments was 6 billion cubic feet. Similarly, early in 2019, re-exports of LNG from France that were initially produced at the Yamal LNG export facility were imported into the Northeast. The United States has never received a direct shipment of LNG from Russia.

Domestic natural gas production is at record high levels, and the U.S. Energy Information Administration projects production to continue to increase over the coming decades. U.S. natural gas supplies are ample to meet domestic demand, but there are pipeline constraints in the Northeast and New England that limit natural gas delivery in the region. The impacts of these constraints are felt most acutely during very cold weather events during the winter when natural gas demand peaks.

The National Energy Technology Laboratory (NETL) examined the impacts on energy markets of the cold weather event known as the "Bomb Cyclone" that occurred between December 27, 2017, and January 8, 2018.<sup>1</sup> The NETL analysis found a lack of sufficient natural gas pipeline infrastructure and the surge in natural gas demand for heating led to sharp increases in natural gas spot prices exceeding 300 percent across the Northeast. The largest price spike occurred in New York with Transco Zone 6 NY spot prices increasing nearly 700 percent during the Bomb Cyclone event.<sup>2</sup> Natural gas spot prices in the independent system operator New England (ISO-NE) footprint increased 400 percent during the weather event, peaking at over \$80 per million British thermal units.<sup>3</sup>

2. Senator INHOFE. Secretary Perry, do you believe this a threat to energy security?

Secretary PERRY. Any time we have to rely on imports of energy, it can be argued our energy security is diminished. The United States is blessed with plentiful energy resources, including abundant supplies of coal, oil, and natural gas. Producers in America have demonstrated a remarkable ability to harness innovation and to cost-effectively unlock new energy supplies, making our country a dominant energy force. Last year the United States surpassed production records set nearly 5 decades ago and is in all likelihood now the largest producer of crude oil in the world. The United States is also the world's leading producer of natural gas, becoming a net exporter in 2017 for the first time since 1957. The United States will continue to be the undisputed global leader in crude oil and natural gas production for the foreseeable future.

These robust energy supplies present the United States with tremendous economic opportunities. To fully realize this economic potential, however, the United States needs infrastructure capable of safely and efficiently transporting these plentiful resources to end users. Without it, energy costs will rise and the national energy market will be stifled, job growth will be hampered, and the manufacturing and geopolitical advantages of the United States will erode. As described in the previous answer, natural gas prices spike in New England during very cold weather events because of the lack of sufficient infrastructure to deliver natural gas to the region as demand increases.<sup>4</sup>

<sup>1</sup> National Energy Technology Laboratory, "Reliability, Resilience and the Oncoming Wave of Retiring Baseload Units," March 13, 2018, available at <https://www.netl.doe.gov/projects/files/ReliabilityandtheOncomingWaveofRetiringBaseloadUnitsVolumeITheCriticalRoleofThermalUnits-031318.pdf>

<sup>2</sup> Ibid, page 1.

<sup>3</sup> Ibid, page 7.

<sup>4</sup> National Energy Technology Laboratory, "Reliability, Resilience and the Oncoming Wave of Retiring Baseload Units," March 13, 2018, available at <https://www.netl.doe.gov/projects/files/ReliabilityandtheOncomingWaveofRetiringBaseloadUnitsVolumeITheCriticalRoleofThermalUnits-031318.pdf>

3. Senator INHOFE. Secretary Perry, would more natural gas infrastructure, like pipelines, help get our abundant domestic supply to New England so they don't turn to Russia?

Secretary PERRY. Yes. A number of pipelines have been proposed over the past several years to deliver natural gas from the prolific Marcellus and Utica shale plays to the Northeast and New England. These pipelines have faced challenges in securing state regulatory approvals, notably the required state certification of water quality under Section 401 of the Clean Water Act.

In his executive order "Promoting Energy Infrastructure and Economic Growth," President Trump directed the Administrator of the Environmental Protection Agency (EPA) to review Section 401 of the Clean Water Act and EPA's related regulations and guidance to determine whether any provisions thereof should be clarified to promote private investment in the Nation's energy infrastructure. This review will focus on:

- The need to promote timely Federal-State cooperation and collaboration;
- The appropriate scope of water quality reviews;
- Types of conditions that may be appropriate to include in a certification;
- Expectations for reasonable review times for various types of certification requests; and
- The nature and scope of information States and authorized tribes may need in order to substantively act on a certification request within a prescribed period of time.

---

#### QUESTIONS SUBMITTED BY SENATOR JACK REED

##### OFFICE OF COST EVALUATION AND PROGRAM EXECUTION

4. Senator REED. Secretary Gordon-Hagerty, in the Fiscal Year 2016 NDAA [National Defense Authorization Act] we created an Office of Cost Estimating and Program Evaluation (CEPE) much like the DOD [Department of Defense] has with the Office of Cost Analysis and Program Management (CAPE). This was after years of having programs at the NNSA [National Nuclear Security Administration] exceed their estimates. Their job is to be the counter-balance directly to you on the program managers who might be too optimistic. Are you ensuring they have the proper staff and resources to carry out their mission?

Secretary GORDON-HAGERTY. Yes. A number of pipelines have been proposed over the past several years to deliver natural gas from the prolific Marcellus and Utica shale plays to the Northeast and New England. These pipelines have faced challenges in securing state regulatory approvals, notably the required state certification of water quality under Section 401 of the Clean Water Act.

In his executive order "Promoting Energy Infrastructure and Economic Growth," President Trump directed the Administrator of the Environmental Protection Agency (EPA) to review Section 401 of the Clean Water Act and EPA's related regulations and guidance to determine whether any provisions thereof should be clarified to promote private investment in the Nation's energy infrastructure. This review will focus on:

- The need to promote timely Federal-State cooperation and collaboration;
- The appropriate scope of water quality reviews;
- Types of conditions that may be appropriate to include in a certification;
- Expectations for reasonable review times for various types of certification requests; and
- The nature and scope of information States and authorized tribes may need in order to substantively act on a certification request within a prescribed period of time.

---

#### QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

##### NUCLEAR SALES TO SAUDI ARABIA

5. Senator BLUMENTHAL. Secretary Perry, are you concerned about the potential transfer of sensitive United States nuclear technology to Saudi Arabia? Do you believe this transfer should continue?

Secretary PERRY. The regulations governing the transfer of unclassified civil nuclear technology abroad are found at 10 CFR Part 810. These regulations define the term sensitive nuclear technology as any information which is not available to the public and which is important to the design, construction, fabrication, operation, or maintenance of a uranium enrichment or nuclear fuel reprocessing facility or a facil-



ity for the production of heavy water. I have not issued any authorizations to U.S. companies to export sensitive nuclear technology as defined by regulation.

I have issued authorizations, however, for the export of unclassified civil nuclear technology to Saudi Arabia that is not sensitive nuclear technology. The authorizations issued for the export of unclassified civil nuclear technology to Saudi Arabia have been done in accordance with the Atomic Energy Act and 10 CFR Part 810. The Department of State secured assurances from the Kingdom of Saudi Arabia that the transferred technology will be used only for peaceful purposes, will not be retransferred for any military use, and will not be retransferred to a third destination without prior United States consent.

6. Senator BLUMENTHAL. Secretary Perry, could the transfer of sensitive nuclear technology to Saudi Arabia contribute to the proliferation of nuclear weapons throughout the Middle East and exacerbate existing regional tensions?

Secretary PERRY. I have not authorized any United States company to transfer "sensitive nuclear technology" to Saudi Arabia, nor do I intend to do so.

Longstanding U.S. policy seeks to prevent the further proliferation of nuclear weapons to any country and region. For this reason, the United States seeks to ensure that all countries comply with strict U.S. nonproliferation requirements, which are the strongest in the world. One way the United States achieves this goal is by placing legally binding nonproliferation conditions on U.S. civil nuclear exports.

7. Senator BLUMENTHAL. Secretary Perry, should government officials involved in the transfer of U.S. nuclear technology concurrently advise private industry interests?

Secretary PERRY. The Department of Energy (DOE) has statutory responsibility for authorizing the transfer of unclassified nuclear technology and assistance under 10 CFR Part 810. This regulatory function is performed by the Office of Defense Nuclear Nonproliferation (DNN) within the National Nuclear Security Administration. DNN interacts with private interests in the context of its regulatory function.

Separately, DOE's Office of Nuclear Energy works with the U.S. civil nuclear industry to help develop new and innovative technologies that will help return the United States to a position of global leadership in civil nuclear energy.

8. Senator BLUMENTHAL. Secretary Perry, Crown Prince Mohammed Bin Salman has reportedly refused any prohibitions on enriching uranium or reprocessing of spent fuel. Can Saudi Arabia be trusted with this sensitive technology and what restrictions and safeguards should the United States require if the transfer continues?

Secretary PERRY. All authorizations for the export of unclassified civil nuclear technology to Saudi Arabia have been issued in accordance with the Atomic Energy Act and 10 CFR Part 810.

As Under Secretary of State Thompson recently stated, the United States seeks the highest nonproliferation commitments in all peaceful nuclear cooperation negotiations, including legally binding commitments over enrichment and reprocessing. By law, every 123 agreement must contain all of the security and non-proliferation requirements specified in section 123(a) of the Atomic Energy Act.

Additionally, the United States has long-promoted the universal adherence by all non-nuclear weapon states to the International Atomic Energy Agency (IAEA) Additional Protocol, regardless of the nature of that State's fuel cycle aspirations. In this context, the United States encourages Saudi Arabia at every appropriate opportunity to conclude an Additional Protocol with the IAEA as soon as possible.

9. Senator BLUMENTHAL. Secretary Perry, Section 123 of the Atomic Energy Act (AEA) stipulates that the U.S. may not transfer nuclear technology to a foreign country without congressional approval. Do you agree that the Trump Administration must seek congressional review of any transfer of United States nuclear technology to Saudi Arabia?

Secretary PERRY. 10 CFR Part 810 implements AEA section 57 b. (2), which provides the Department of Energy with statutory responsibility for authorizing the transfer of unclassified civil nuclear technology and assistance. The part 810 regulations apply to technology transfers and assistance related to certain nuclear fuel-cycle activities, commercial nuclear power plants, and research and test reactors. Covered transfers include the transfer of physical documents or electronic media, electronic transfers or the transfer of knowledge and expertise. A 123 Agreement is not required for the export of the above-described technology and assistance, and there is no legal requirement for Congressional approval. The negotiation of a 123

agreement is a separate and distinct procedure from the part 810 application authorization review process.

10. Senator BLUMENTHAL. Secretary Perry, did you sign any of the six “part 810” authorizations for companies sharing nuclear technology with Saudi Arabia after the October 2, 2018, murder of Jamal Khashoggi?

Secretary PERRY. The Department of Energy has issued seven part 810 authorizations for the transfer of unclassified civil nuclear technology to Saudi Arabia to date. There have been two part 810 authorizations issued since October 2, 2018. A part 810 authorization simply provides United States companies the ability to compete in the international civil nuclear market.

A part 810 authorization does not authorize the transfer of nuclear material, equipment or components. The process involves a thorough interagency review that requires the Department of Energy to secure the concurrence of the Department of State, and consult with the Departments of Defense and Commerce, and the Nuclear Regulatory Commission.

#### ARTIFICIAL INTELLIGENCE

11. Senator BLUMENTHAL. Secretary Perry, do you have any concerns that private sector partners in Artificial Intelligence (AI) systems developed with support and funding from your department will sell these technologies to foreign adversaries or otherwise make such systems broadly available?

Secretary PERRY. No, as the Office of Science (SC) works on basic research which funds open source proposals.

12. Senator BLUMENTHAL. Secretary Perry, when you contract on project with private sector partners like on Project Maven, what contractual mechanisms do you have in place to ensure that the highly-accurate and efficient systems that were developed based on sensitive government datasets and collaboration are not provided to foreign actors?

Secretary PERRY. Technology is a critical part of the DOE’s mission and requires special consideration in identifying and protecting sensitive technologies and ensuring appropriate protection of DOE funded intellectual property.

DOE contractors are subject to applicable U.S. export control laws, regulations and policies when exporting materials and technical information resulting from the performance of their contracts. Within the Department of Energy Acquisition Regulation (DEAR) there are contractual requirements related to the protection of the Department funded technology and information. These contractual requirements put in place controls requiring: differing levels of review based on the technology and information; review and approval of all foreign national visits and assignments; review of all Scientific and Technical Information generated under the contract to determine appropriate release and handling; and many additional controls.

13. Senator BLUMENTHAL. Secretary Perry, what controls do you recommend the United States put in place on private sector collaboration to protect U.S. developed AI technologies from getting into the hands of our strategic competitors?

Secretary PERRY. This is an area the United States will need to continue to monitor. However, at this time we believe the present controls are adequate.

---

#### QUESTIONS SUBMITTED BY SENATOR TIM KAINE

##### U.S. NUCLEAR PART 810 AUTHORIZATIONS

14. Senator KAINE. Secretary Perry, in your testimony you mentioned over 37 part 810 authorizations approved since your tenure as Secretary of Energy, 9 of which were to the Middle East. Provide a list formatted by Date Issued / Company / Country for every part 810 authorization made since you were confirmed as Secretary of Energy, to include those which are not publically available.

Secretary PERRY. The international commercial nuclear power industry is a highly competitive market. Due to the high stakes and low number of competitors, even the name of a company and the market they are competing in can be harmful to an American company seeking to market their products. Certain companies can be easily identified by the technology associated with them, thus revealing the name or technology associated with such a company would reveal that they were competing in a certain market.

Due to the sensitive, business proprietary nature of the information in question, the Department has been working with Congress to provide access to this information in the appropriate setting and manner.

#### DECOMMISSIONING OF USS *HARRY S. TRUMAN*

15. Senator KAINE. Secretary Gordon-Hagerty, have you been given any direction from the Department of Defense to commence planning or provide funding for the decommissioning of the aircraft carrier USS *Harry S. Truman*?

Secretary GORDON-HAGERTY. No, NNSA has not been given direction by the Department of Defense related to the decommissioning of the USS *Harry S. Truman*. The Department of the Navy is responsible for the planning and budgeting to support a nuclear ship's refueling complex overhaul or its inactivation.

16. Senator KAINE. Secretary Gordon-Hagerty, what would be the impact to future DOE [Department of Energy] budgets if the Navy were to go through with the early decommissioning of the *Truman*?

Secretary GORDON-HAGERTY. There will be no impact to NNSA's budget if the USS *Harry S. Truman* is retired early. The Department of the Navy is responsible for the planning and budgeting to support a ship's refueling complex overhaul or its inactivation.

17. Senator KAINE. Secretary Gordon-Hagerty, when would planning and funding need to commence if the decommissioning were to start in fiscal year 2024?

Secretary GORDON-HAGERTY. The Department of the Navy is responsible for the planning and budgeting to support a ship's refueling complex overhaul or its inactivation. The Deputy Administrator for the Office of Naval Reactors is responsible for ensuring safe and effective nuclear propulsion plants for the Navy's fleet of submarines and aircraft carriers, to include the USS *Harry S. Truman*. Naval Reactors remains engaged in discussions with the Navy on retaining this aircraft carrier through its remaining service life based on recent announcements by the Administration.

---

#### QUESTIONS SUBMITTED BY SENATOR MARTIN HEINRICH

##### IMPLEMENTATION OF PLUTONIUM STRATEGY AT LANL

18. Senator HEINRICH. Secretary Perry, I appreciate your reconfirming Los Alamos National Laboratory's (LANL) continuing role as the Nation's center of excellence for plutonium research and development. You also stated there is an additional \$5 billion that is headed to Los Alamos to provide the capacity in PF-4 to produce at least 30 plutonium pits per year by 2026.

Secretary PERRY. We are investing approximately \$3 billion over five years in support of pit production at LANL to produce 30 pits per year beginning in 2026. Funding in fiscal year (FY) 2020 for LANL will be provided to hire, train, qualify, and retain required pit production personnel; recapitalize equipment needed to restore Plutonium Facility (PF)-4's ability to produce 10 war reserve pits per year by 2024; install pit production equipment in PF-4 to reach 30 war reserve pits per year beginning in 2026; and support analytical chemistry and materials characterization equipment scope.

19. Senator HEINRICH. Secretary Perry, can you please confirm the \$5 billion in additional funding for LANL and provide the full budget justification for it and a breakout of how the additional \$5 billion will be used at LANL?

Secretary PERRY. We are investing approximately \$3 billion over five years in support of pit production at LANL to produce 30 pits per year beginning in 2026. Funding in fiscal year 2020 for LANL will be provided to hire, train, qualify, and retain required pit production personnel; recapitalize equipment needed to restore Plutonium Facility (PF)-4's ability to produce 10 war reserve pits per year by 2024; install pit production equipment in PF-4 to reach 30 war reserve pits per year beginning in 2026; and support analytical chemistry and materials characterization equipment scope.

20. Senator HEINRICH. Secretary Perry, what portion of the \$5 billion in additional funding for LANL will be used to provide technical support to SRS (Savannah River Site) to establish the capacity to produce plutonium pits in the repurposed MFFF [MOX Fuel Fabrication Facility]?

Secretary PERRY. The funding for Los Alamos National Laboratory (LANL) includes provision of technical support to the Savannah River Site (SRS), as the two-site approach allows for complementary training plans at both sites. NNSA is developing plans for workforce recruitment, training and sustainment, and pit production knowledge transfer to the future workforce. NNSA is also evaluating options for cross training personnel at SRS and LANL. Additionally, a portion of the funding is provided for and will continue to be provided for LANL efforts supporting equipment design for the proposed Savannah River Plutonium Production Facility.

#### FISCAL YEAR 2020 BUDGET REQUEST FOR PLUTONIUM SUSTAINMENT

21. Senator HEINRICH. Secretary Gordon-Hagerty, can you please provide a break-out of proposed scope of work for fiscal year 2020 at LANL under NNSA's budget request for plutonium sustainment, including LANL's support for establishing the capacity to produce plutonium pits at Savannah River Site?

Secretary GORDON-HAGERTY. In the fiscal year (FY) 2020 budget request for LANL, Plutonium Sustainment Operations provides funding to hire, train, qualify, and retain required pit production personnel at LANL; recapitalize equipment needed to restore Plutonium Facility (PF)-4's ability to produce 10 war reserve pits per year by 2024; and support production activities. The Savannah River Plutonium Processing Facility Project element of Plutonium Sustainment Operations in the fiscal year 2020 budget request invests in completing conceptual design to repurpose the facility for pit production and supports developing other project documentation required for Critical Decision-1. LANL is providing expertise and design support for conceptual design of special facility equipment for this project.

#### SAVANNAH RIVER PLUTONIUM PROCESSING FACILITY

22. Senator HEINRICH. Secretary Gordon-Hagerty, can you please provide your current best estimate of the schedule and timeline of the major milestones, including NEPA [National Environmental Policy Act] review, to establish the capacity to produce 50 plutonium pits per year in the re-purposed MFFF?

Secretary GORDON-HAGERTY. NNSA is currently executing conceptual design activities for the proposed Savannah River Plutonium Processing Facility (SRPPF) to produce 50 pits per year. An independent cost estimate for refurbishment of the proposed SRPPF will be done prior to Critical Decision-1. Consistent with the National Environmental Policy Act (NEPA) and pursuant to 10 CFR 1021.311, NNSA is preparing an environmental impact statement (EIS) for the proposed action to repurpose the Mixed Oxide Fuel Fabrication Facility to produce a minimum of 50 pits per year at the Savannah River Site (SRS). On June 10, 2019, the Office of the Federal Register published a Notice of Intent to prepare an EIS on plutonium pit production at SRS. NNSA expects the draft EIS to be available in 2020.

#### PIT PRODUCTION AT LANL

23. Senator HEINRICH. Secretary Gordon-Hagerty, I understand Los Alamos has been making steady progress in restoring the capacity to produce plutonium pits in PF-4. What is the current status of the effort to produce development W87-like pits are you satisfied with the progress being made to begin pit production in PF-4?

Secretary GORDON-HAGERTY. NNSA remains committed to achieving pit production requirements established by the Nuclear Weapons Council (NWC) to produce the first war reserve (or W87-like) pit in 2023, 10 war reserve pits per year in 2024, 20 war reserve pits per year in 2025, and 30 war reserve pits per year beginning in 2026 at LANL. LANL has demonstrated progress in meeting these goals and fabricated four development pits in fiscal year 2018, is fabricating five development pits in fiscal year 2019, and plans to produce five process prove-in pits in fiscal year 2020.

#### DOE'S ORDER 140.1, INTERFACE WITH DNFSB

24. Senator HEINRICH. Secretary Perry, as you know, DOE issued Order 140.1 without any consultation with either the Defense Nuclear Facilities Safety Board (DNFSB) or with the local communities most impacted by DOE's nuclear facilities. The Chairman and Members of the DNFSB have been unanimous in their opposition to DOE's unilateral implementation of order 140.1. In particular, the board takes strong exception to the order's exemption of some facilities from the board's oversight, the adoption of a new definition of public health and safety that exempts onsite individuals and workers from oversight, new limitations on access to facilities, personnel and information, and denial of the board's requests related to deliberative and pre-decisional documents. The board has clearly and repeatedly con-

veyed to you its position that DOE's new Order 140.1 is both inconsistent with the board's statutory authority under the Atomic Energy Act and with DOE's own policy of continuing a strong and productive relationship with DNFSB as a valued external and independent reviewer. Community leaders in my state echoed these concerns at the board's recent public hearing on Order 140.1 in Albuquerque.

To restore credibility with the local communities, will you agree to collaborate with the DNFSB to try to address the board's specific concerns with Order 140.1, and to demonstrate again a shared focus on adequate protection of public health and safety?

Secretary PERRY. The Department of Energy (DOE) values the Defense Nuclear Facilities Safety Board's (DNFSB) advice on our two agencies' shared focus on protecting public health and safety.

DOE issued Order 140.1, Interface with the Defense Nuclear Facilities Safety Board, on May 14, 2018, to update and streamline a 17-year old, out-of-date DOE Manual (Manual 140.1-1B), to make the Manual compliant with changes made to the Atomic Energy Act (AEA), as amended, as well as to clarify DOE personnel roles and responsibilities in our interface with DNFSB.

Since the issuance of Order 140.1, DOE leadership and senior managers at Headquarters and Field Offices have participated in three DNFSB public hearings to discuss compliance with the Atomic Energy Act, as amended, including a public hearing held in Albuquerque, NM, on February 21, 2019.

DOE federal and contractor employees are particularly trained to execute their work in and around the hazards posed by our activities; their safety is the focus of our training programs and multiple requirements established by our governing directives, standards, and procedures. The adequate protection of the public health and safety is our primary point of interface with the DNFSB, and should be the focus of our interactions.

#### UPGRADE OF MESA AT SANDIA LABS

25. Senator HEINRICH. Secretary Gordon-Hagerty, for over 30 years the MESA [Microsystems Engineering, Science and Applications] facility at Sandia Labs in Albuquerque has been a real workhorse for meeting NNSA's unique requirements for strategic rad-hard microelectronics. The aging facility is outdated and unable to support adequately life-extension programs in the post-2025 timeframe. Upgrading MESA will require a major infrastructure investment. What is the current strategy and plan to sustain the unique capabilities of Sandia's MESA Complex to produce strategic rad-hard microelectronics beyond 2025?

Secretary GORDON-HAGERTY. NNSA is committed to sustain the MESA Complex through 2040. Sandia National Laboratories' (SNL) Microsystems Engineering, Science, and Applications (MESA) Complex currently is the only U.S. foundry with the capability to deliver custom strategically radiation-hardened microelectronic components required to sustain the Nation's nuclear deterrent. NNSA recognizes the distinguished capability provided by SNL and, over the last several years, NNSA has worked to assess the long-term viability of the MESA Complex to provide war Reserve components that meet system requirements. As the Silicon Fabrication (SiFab) foundry surpassed its 30-year intended life, NNSA and SNL contracted Aerospace Corporation and Longenecker Associates to conduct independent risk assessments. Both concluded that the foundry can be extended until 2040 with modest upgrades to infrastructure and equipment.

NNSA and SNL have partnered in the development of an Extended Life Program (ELP) to understand investments required to sustain the existing capabilities of the MESA Complex. The ELP plan will provide a 20-year forecast of tools and equipment recapitalization, and facilities and infrastructure projects.

NNSA and SNL are also partnering in the development of the MESA Integrated Program Plan, which will provide a 5-year view of operations, weapons program commitments, and operational costs, to include the budgeting information for maintenance of capability, R&D programs, production programs, and technology maturation activities.

26. Senator HEINRICH. Secretary Gordon-Hagerty, what are the specific milestones you are planning for the upgrade this year and for fiscal year 2020?

Secretary GORDON-HAGERTY. NNSA has worked closely with Sandia National Laboratories to generate a facility project schedule that poses minimal risk to the Life Extension Programs (LEP) production schedule. Based on the complexity and age of MESA, facility projects must be prioritized and executed based on areas of highest need to avoid extended shutdowns of production fabrication, and with consideration for the quality of the systems supporting production, e.g., cleanliness of deion-

ized water, air quality, and regulation of airflow. fiscal year 2019 and fiscal year 2020 maintenance projects and associated improvements to the MESA facility include enhancements to the bulk chemical distribution system; Silicon Fabrication Facility (SiFab) Uninterruptible Power Supply system upgrades; commencing a 3-year SiFab HEPA filter and bay ceiling replacement project; and structural upgrades to support packaging equipment for the W80-4 LEP.

#### LEP WORKLOAD AT NNSA LABS AND PLANTS

27. Senator HEINRICH. Secretary Gordon-Hagerty, the ongoing Life-Extension Programs (LEP) are essential to assuring the stockpile is safe, secure and reliable. I believe the LEPs are a top priority. You currently have four major LEPs underway: B61, W88, W80-4 and W87-1 with about \$2 billion in required work per year. Are you confident that the NNSA's labs and sites have sufficient capacity needed to perform this critical work, and stay on the schedule and budget for each LEP?

Secretary GORDON-HAGERTY. We are confident that we have sufficient capacity to execute these modernization activities. However, significant technical issues can arise that have the potential to affect LEP schedules and budget. For example, NNSA is assessing the impacts of a technical component that did not pass qualification testing and is common to several components on the B61-12 LEP and W88 Alt 370.

#### FUTURE OF PULSED POWER AND Z MACHINE AT SANDIA NATIONAL LABORATORIES

28. Senator HEINRICH. Secretary Gordon-Hagerty, the Z Machine at Sandia Labs continues to provide one of the critical pieces of our stockpile stewardship program by simulating pressures and radiation environments that previously required underground testing. Do you agree that pulsed power science is important to NNSA's mission, and what do you see is the future role of pulsed-power science for maintaining the strategic deterrent?

Secretary GORDON-HAGERTY. Pulsed power capabilities are key to supporting weapon survivability and radiation effects, materials science, and thermonuclear burn. Given the promise demonstrated by pulsed power and magnetic drive in recent years, the work at the Z Pulsed Power Facility has been prioritized within the Inertial Confinement Fusion Program. NNSA plans continued increases in its investment in pulsed-power science to capitalize on recent advances in fusion concepts, which may provide high neutron yields and meet national security needs without requiring fusion ignition.

29. Senator HEINRICH. Secretary Gordon-Hagerty, in light of the recent article in the South China Morning Post concerning China's future plans for pulsed power, what are your thoughts on the need to extend the laboratories' capabilities in pulsed power science to support stockpile stewardship?

Secretary GORDON-HAGERTY. The priority for the next fiscal year is the completion of the Inertial Confinement Fusion 2020 goal, which includes the development of credible physics scaling to multi-megajoule fusion yields for each of the ignition approaches. The conclusions of this study will be used to guide future research and facility investments. The 5-year experimental plan initiated in fiscal year 2019 includes activities that will explore the mission need for next-generation facilities and identify the best approaches.

30. Senator HEINRICH. Secretary Gordon-Hagerty, are there risks to the U.S. deterrent if adversaries advance major scientific capabilities in pulsed power beyond what the national labs currently have today?

Secretary GORDON-HAGERTY. NNSA continuously assesses and manages the full breadth of risks to the deterrent, including the impact of new technical capabilities of our adversaries. As we monitor global scientific advances, we will continue to use our full suite of tools to ensure the safety, security, and effectiveness of our nuclear arsenal, including possible investments in new capabilities as appropriate.

#### QUESTIONS SUBMITTED BY SENATOR ELIZABETH WARREN

##### SAUDI CIVILIAN NUCLEAR COOPERATION

31. Senator WARREN. Secretary Perry, my understanding is that the Department of Energy has not produced a single document or made a single agency official available to respond to the House Oversight Committee's February 19, 2019, request for documents related to its ongoing investigation into "efforts inside the White House to rush the transfer of highly sensitive U.S. nuclear technology to Saudi Arabia in

potential violation of the Atomic Energy Act and without review by Congress as required by law.” Will the Department of Energy commit to speedily producing documents and any other relevant information and making Energy Department officials available to the House Oversight Committee? If not, please explain why your Department is not cooperating with this investigation.

Secretary PERRY. The Department has produced several hundred pages of documents to the House Oversight Committee. The Department is continuing to search for and review responsive documents.

32. Senator WARREN. Secretary Perry, is the Trump Administration continuing to engage with the government of Saudi Arabia about a potential civilian nuclear cooperation agreement? If yes, what is the status of that engagement?

Secretary PERRY. Negotiations began in 2012 under the previous Administration and remain on-going. The United States continues to seek the strongest possible nonproliferation and security commitments from Saudi Arabia.

33. Senator WARREN. Secretary Perry, what other agencies, if any, is the Department of Energy consulting with regarding a potential civilian nuclear cooperation agreement with government of Saudi Arabia?

Secretary PERRY. Section 123 of the Atomic Energy Act mandates that the negotiation of a civil nuclear cooperation agreement be led by the Department of State, with the technical assistance of the Department of Energy and in consultation with the Nuclear Regulatory Commission.

34. Senator WARREN. Secretary Perry, you reportedly expressed interest in the plan to transfer nuclear technology to Saudi Arabia, known as part of a “Middle East Marshall Plan,” in a March 2017 National Security Council (NSC) meeting, just two months after President Trump’s inauguration. Why are you interested in transferring American nuclear technology to the government of Saudi Arabia?

Secretary PERRY. In 2017, Saudi Arabia announced that it is proceeding with a nuclear power program and requested bids to construct two large light water reactors. As U.S. companies have requested the Department’s authorization to compete in that tender process, I have imposed nonproliferation obligations on such exports that comply with the relevant provisions of the Atomic Energy Act and 10 CFR Part 810. Moreover, the Department of Energy has provided technical assistance to the Department of State in the negotiation of a 123 agreement. If we are able to conclude such an agreement, it will help ensure that Saudi Arabia will develop its civil nuclear program in accordance with the highest standards of safety, security, and nonproliferation.

35. Senator WARREN. Secretary Perry, have you received direction from anyone in the White House to pursue the transfer of American nuclear technology to government of Saudi Arabia? If yes, please list the names of those White House officials.

Secretary PERRY. Private companies apply directly to the Department for authorization to transfer part 810-covered unclassified civil nuclear technology and assistance abroad.

36. Senator WARREN. Secretary Perry, did you have a conversation with Jared Kushner about the Trump Administration’s efforts to transfer American nuclear technology to the government of Saudi Arabia? If yes, please explain the date, location, and outcome of those conversations.

Secretary PERRY. In my role as Secretary of Energy, I routinely interact with senior Administration officials and advise them on matters within the jurisdiction of the Department, including nuclear technology issues.

37. Senator WARREN. Secretary Perry, did you have a conversation with Tom Barrack about the Trump Administration’s efforts to transfer American nuclear technology to the government of Saudi Arabia? If yes, please explain the date, location, and outcome of those conversations.

Secretary PERRY. I do not recall any conversations with Tom Barrack during my time as Secretary.

38. Senator WARREN. Secretary Perry, did you have a conversation with then-National Security Advisor Lieutenant General (ret.) Michael Flynn about the Trump Administration’s efforts to transfer American nuclear technology to the government of Saudi Arabia? If yes, please explain the date, location, and outcome of any conversation.

Secretary PERRY. In my role as Secretary of Energy, I routinely interact with senior Administration officials and advise them on matters within the jurisdiction of the Department, including nuclear technology issues.

39. Senator WARREN. Secretary Perry, did you have a conversation with then-Deputy National Security Advisor K.T. McFarland about the Trump Administration's efforts to transfer American nuclear technology to the government of Saudi Arabia? If yes, please explain the date, location, and outcome of any conversation.

Secretary PERRY. In my role as Secretary of Energy, I routinely interact with senior Administration officials and advise them on matters within the jurisdiction of the Department, including nuclear technology issues.

40. Senator WARREN. Secretary Perry, did you have a conversation with Derek Harvey, the Senior Director for Middle East and North African Affairs at the National Security Council about the Trump Administration's efforts to transfer American nuclear technology to the government of Saudi Arabia? If yes, please explain the date, location, and outcome of any conversation.

Secretary PERRY. In my role as Secretary of Energy, I routinely interact with senior Administration officials and advise them on matters within the jurisdiction of the Department, including nuclear technology issues.

41. Senator WARREN. Secretary Perry, did you have a conversation with any employee of IP3 International about the Trump Administration's efforts to transfer American nuclear technology to the government of Saudi Arabia? If yes, please identify every individual employee with whom you had a conversation, as well as the date, location, and outcome of any conversation with that employee.

Secretary PERRY. In my role as Secretary of Energy, I routinely interact with industry representatives and other energy stakeholders.

42. Senator WARREN. Secretary Perry, did you have a conversation with President Trump about the Trump Administration's efforts to transfer American nuclear technology to the government of Saudi Arabia? If yes, please explain the date, location, and outcome of any conversation.

Secretary PERRY. In my role as Secretary of Energy, I regularly advise the President on matters within the jurisdiction of the Department, including nuclear technology issues.

43. Senator WARREN. Secretary Perry, does the Administration intend to authorize any licenses for the export of nuclear material or equipment to the government of Saudi Arabia without a nuclear cooperation agreement (commonly known as a 123 agreement) in force? Please explain in details.

Secretary PERRY. The Nuclear Regulatory Commission is responsible for licensing exports of nuclear material or equipment.

The Department of Energy (DOE) has statutory responsibility for authorizing the export of unclassified civil nuclear technology and assistance under 10 CFR Part 810. A 123 agreement is not required for the export of unclassified civil nuclear technology and assistance. 10 CFR Part 810 authorizations are often the first step in U.S. nuclear industry engagement with a new foreign partner and often serve as an indication that the partner is committed to beginning a civil nuclear program that includes the strongest possible nonproliferation requirements. The negotiation of a 123 agreement is a separate and distinct procedure from the part 810 application authorization review process.

44. Senator WARREN. Secretary Perry, does the 123 agreement under negotiation with the government of Saudi Arabia meet all of the security and non-proliferation requirements specified in Section 123(a) of the Atomic Energy Act of 1954? Please explain in details.

Secretary PERRY. By law, the Department of State leads in the negotiations of all 123 agreements. I would refer you to the Department of State for further information on the status of these negotiations.

45. Senator WARREN. Secretary Perry, according to a recent Daily Beast report, the Department of Energy "has approved six authorizations for United States companies seeking to conduct nuclear related work in Saudi Arabia." If this is accurate, please list—without divulging any trade secrets or proprietary information—the names of the United States companies to which the Department has issued a Saudi Arabia-related part 810 authorization, which allows for limited cooperation related to the "development or production of any special nuclear material outside of the



United States” if that activity has been determined by the Secretary that it “will not be inimical to the interest of the United States.” If you will not list the names of these companies, please explain how refusing to disclose this information is consistent with the Department’s obligation to “keep the committees of the Senate and the House of Representatives which, under the rules of the Senate and the House, have jurisdiction over the functions of the Secretary or the Commission, fully and currently informed with respect to the activities of the Secretary and the Commission” as provided under the Sec. 303 of the Atomic Energy Act of 1954 (emphasis added).

Secretary PERRY. The international commercial nuclear power industry is a highly competitive market. Due to the high stakes and low number of competitors, even the name of a company and the market they are competing in can be harmful to an American company seeking to market their products. Certain companies can be easily identified by the technology associated with them, thus revealing the name or technology associated with such a company would reveal that they were competing in a certain market.

Due to the sensitive, business proprietary nature of the information in question, the Department has been working with Congress to provide access to this information in the appropriate setting and manner.

46. Senator WARREN. Secretary Perry, without divulging any trade secrets or proprietary information, please list the names of any United States companies that are seeking, but have not yet been issued or denied, a part 810 authorization to conduct nuclear related work in Saudi Arabia. If you will not list the names of these companies, please explain how denying access to this information is consistent with the Department’s obligation to “keep the committees of the Senate and the House of Representatives which, under the rules of the Senate and the House, have jurisdiction over the functions of the Secretary or the Commission, fully and currently informed with respect to the activities of the Secretary and the Commission” as provided under the Sec. 303 of the Atomic Energy Act of 1954 (emphasis added).

Secretary PERRY. The Department does not comment on applications that may be in process.

47. Senator WARREN. Secretary Perry, please provide a brief update, without divulging any trade secrets or propriety information, on the status of the part 810 authorizations for the category of United States companies described in the previous question (i.e., United States companies that are seeking, but have not yet been issued or denied, a part 810 authorization to conduct nuclear related work in Saudi Arabia).

Secretary PERRY. The Department does not comment on applications that may be in process.

48. Senator WARREN. Secretary Perry, please list any federal agencies and the names of any White House officials that were involved in the Department of Energy issuing any current part 810 authorizations to United States companies seeking to conduct nuclear related work in Saudi Arabia since January 20, 2017. If you refuse to list such agencies and officials, please explain how refusing to provide this information is consistent with the Department’s obligation to “keep the committees of the Senate and the House of Representatives which, under the rules of the Senate and the House, have jurisdiction over the functions of the Secretary or the Commission, fully and currently informed with respect to the activities of the Secretary and the Commission” as provided under the Section 303 of the Atomic Energy Act of 1954 (emphasis added).

Secretary PERRY. Part 810 authorizations involve a robust intra-and-interagency review. As required by Section 57 b. (2) of the Atomic Energy Act, the Department of Energy must obtain the concurrence of the Department of State and consult with the Departments of Defense and Commerce, and the Nuclear Regulatory Commission. For each of the seven authorizations for Saudi Arabia, the Department of State concurrence was obtained following their receipt of government-to-government non-proliferation assurances from the government of Saudi Arabia. The Departments of Commerce and Defense and the Nuclear Regulatory Commission were consulted and provided no objection to the approval.

Typically there is no review of part 810 applications by White House officials.

49. Senator WARREN. Secretary Perry, do you currently have any financial interest, or did you formerly have any financial interest, in any of the following companies: General Electric, Exelon, Nuscale, TerraPower, Lightbridge, AECOM, BWXT, Centrus Energy Corp., and X-energy? Please explain in details.

Secretary PERRY. No, I do not have any current financial interests in those companies. I have not had any reportable financial interests in those companies since December of 2016.

Q50. Secretary Perry, since you assumed your duties as the Secretary of Energy, have you or your subordinates taken any meetings with registered lobbyists working on behalf of the Saudi Government to lobby the Trump Administration to approve a sale of nuclear reactors or any other nuclear technology to the government of Saudi Arabia? Please explain in details.

50. Senator WARREN. Secretary Perry, since you assumed your duties as the Secretary of Energy, have you or your subordinates taken any meetings with registered lobbyists working on behalf of the Saudi Government to lobby the Trump Administration to approve a sale of nuclear reactors or any other nuclear technology to the government of Saudi Arabia? Please explain in details.

Secretary PERRY. As Secretary, I routinely engage with my foreign counterparts, including at the Saudi Ministry of Energy, Industry and Mineral Resources.

51. Senator WARREN. Secretary Perry, in a Senate Foreign Relations Committee (SFR) hearing on May 24, 2018, Secretary of State Pompeo said in reference to a civilian nuclear cooperation agreement with Saudi Arabia: “[W]e have told them we want a gold standard section 123 agreement from them which would not permit them to enrich.” Do you agree with Secretary Pompeo? If not, please explain why it is in the national security interest of the United States to conclude a 123 agreement that would allow the Saudi Government to enrich or reprocess nuclear material for the development of a nuclear weapon.

Secretary PERRY. Yes. The United States seeks to conclude 123 agreements with foreign partners that legally restrict their ability to engage in any enrichment and reprocessing activities.

52. Senator WARREN. Secretary Perry, on May 16, 2008, the United States and Saudi Arabia reached a “United States-Saudi Arabia Memorandum of Understanding (MOU) on Nuclear Energy Cooperation,” which states: “Saudi Arabia has stated its intent to rely on international markets for nuclear fuel and to not pursue sensitive nuclear technologies, which stands in direct contrast to the actions of Iran.” While not legally binding, is this MOU still valid, and if so, is the Energy Department working to ensure that the Saudi Government adheres to the commitment it made in this document?

Secretary PERRY. The United States-Saudi Arabia Memorandum of Understanding (MOU) on Nuclear Energy Cooperation signed in 2008 supported the United States Government’s initial engagement with Saudi Arabia. This engagement was during the height of the nuclear renaissance when Saudi Arabia, similar to other newcomer countries, expressed an initial interest in pursuing civil nuclear development. The MOU provided a framework for cooperation, but none materialized. Saudi Arabia elected not to conduct any cooperation under the 2008 MOU. In 2015, the United States and Saudi Arabia concluded a new MOU that is currently active and covers cooperation in renewable and nuclear energy. Under the 2015 MOU, the United States and Saudi Arabia signed a civil nuclear energy action plan in February 2018, but no substantive cooperation under the action plan has occurred to date.

53. Senator WARREN. Secretary Perry, what steps are being taken by the Energy Department to ensure that the government of Saudi Arabia is adhering to its current International Atomic Energy Agency (IAEA) Comprehensive Safeguards Agreement (CSA)?

Secretary PERRY. The Department regularly invites officials from Saudi Arabia to attend DOE-sponsored international and regional safeguards and safeguards-related workshops and training events. Additionally, DOE is prepared to engage with Saudi officials on a bilateral basis to address any safeguards technical or implementation questions they may have.

54. Senator WARREN. Secretary Perry, in the opinion of the Energy Department, is the government of Saudi Arabia adhering to its IAEA Comprehensive Safeguards Agreement (CSA)?

Secretary PERRY. The Department believes that Saudi Arabia is adhering to the safeguards agreement that currently is in force between the IAEA and the Government of Saudi Arabia.

## IRAN NUCLEAR AGREEMENT

55. Senator WARREN. Secretary Perry, in an Armed Services Committee hearing on March 22, 2018, I asked if you agreed with the opinion of the Director of National Intelligence (DNI) that the Iran nuclear agreement (Joint Comprehensive Plan of Action, or JCPOA) “extended the amount of time Iran would need to produce enough fissile material for a nuclear weapon from a few months to about 1 year” and “has enhanced the transparency of Iran’s nuclear activities.” You replied, “I cannot tell that I do or I do not.” In a January 29, 2019 Senate Intelligence Committee hearing, the CIA (Central Intelligence Agency) Director said in reference to Iran: “at the moment, technically they are in compliance.” Do you agree with the CIA Director that Iran is currently complying with the nuclear agreement? If you do not agree, please provide your evidence of an incurable material breach of the nuclear agreement by the Government of Iran.

Secretary PERRY. We work closely with our colleagues at the U.S. Department of State and the United States Mission to the United Nations organizations in Vienna to monitor developments related to Iranian compliance with commitments made under the JCPOA. The International Atomic Energy Agency (IAEA), the organization in charge of verification and monitoring of these commitments, releases quarterly reports on Iranian compliance and we would direct your attention to those reports. DOE/NNSA provides extensive technical expertise, equipment, and training to support the IAEA’s ability to monitor Iran. DOE will support all efforts to monitor Iran’s activities and work closely with our interagency partners as needed. We would direct your attention to those reports. DOE/NNSA provides extensive technical expertise, equipment, and training to support the IAEA’s ability to monitor Iran. DOE will support all efforts to monitor Iran’s activities and work closely with our interagency partners as needed. We would direct your attention to those reports. DOE/NNSA provides extensive technical expertise, equipment, and training to support the IAEA’s ability to monitor Iran. DOE will support all efforts to monitor Iran’s activities and work closely with our interagency partners as needed. •A<sup>5</sup>

56. Senator WARREN. Secretary Perry, is the Department of Energy currently involved in working to negotiate an alternative to the Joint Comprehensive Plan of Action (JCPOA)? If yes, please explain the objectives of that work. If not, please explain why not.

Secretary PERRY. DOE would refer you to the Department of State, which has the lead on the administration’s efforts to secure a comprehensive agreement with Iran based on the 12 points described by Secretary Pompeo in May 2018. DOE/NNSA continues to monitor Iran’s nuclear activities and provides critical support to the interagency’s efforts to prevent Iran from developing nuclear weapons. If called upon, we will support interagency discussions to negotiate a new, comprehensive agreement.

---

 QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN III

## NUCLEAR MATERIAL SECURITY AND THEFT PREVENTION PROGRAMS

57. Senator MANCHIN. Secretary Gordon-Hagerty, under the previous and current administration’s budget requests for NNSA led nuclear theft prevention programs have been declining over the years as well as actual funds being appropriated. Current funding levels are at their lowest since the early 1990s and even after the most recent Nuclear Posture Review noted that nuclear terrorism is one of “the most significant threats to the security of the United States.” The fiscal year 2019 and current budget requests have suggested cuts to domestic and international radiological security, nuclear smuggling and deterrence, security at nuclear facilities, and efforts to consolidate and remove nuclear weapons usable materials. Can we count on the NNSA to partner with the Senate Armed Services Committee and other relevant committees to identify the risks we face domestically and internationally so we can correctly allocate resources to the applicable programs responsible for preventing radiological materials theft and preventing terrorism incidents?

Secretary GORDON-HAGERTY. NNSA values its partnership with the Senate Armed Services Committee and other committees on nuclear security. NNSA will continue to work diligently with Congress to ensure that any and all risks domestically and

---

<sup>5</sup> Since the date of the hearing, the IAEA has reported to its Board of Governors that Iran has exceeded its JCPOA commitments with respect to its uranium enrichment levels, low-enriched uranium stockpile and research and development on advanced centrifuges.

internationally are identified and appropriate resources allocated to support our nuclear security priorities.

58. Senator MANCHIN. Secretary Gordon-Hagerty, what efforts are the NNSA undertaking with international partners to consolidate nuclear weapons usable materials to the minimum practical number of locations to maximize security and effectiveness of resources?

Secretary GORDON-HAGERTY. NNSA has worked with 48 countries and Taiwan to minimize the amount of weapons-usable nuclear material at civilian sites by consolidating these materials at fewer sites and where possible eliminating them, for example by downblending highly enriched uranium (HEU) to low-enriched uranium. Recent and near-term activities include making Ghana and Nigeria HEU-free by returning Chinese-origin HEU from these countries to China; eliminating all HEU from the Institute of Nuclear Physics in Alatau, Kazakhstan; and working with Canada, the United Kingdom, Japan, and other partners to eliminate excess HEU from a number of other facilities.

59. Senator MANCHIN. Secretary Gordon-Hagerty, the Department of Energy's Fiscal Year 2020 Budget Request suggests cutting the Global Material Security budget by \$65 million. As you are aware, the Global Material Security plays an important role in permanent threat reduction and working closely with international partners to interdict illicit nuclear materials that could be used in a non-state actor attack. Do you agree that this program is critical for maintaining U.S. nuclear security leadership and preventing potential theft and illicit use of such materials?

Secretary GORDON-HAGERTY. The President's Fiscal Year 2020 Budget Request supports the Global Material Security mission of preventing terrorists and other actors from obtaining nuclear and radioactive material that could be used in an improvised nuclear device or a radiological dispersal device. This work, which is critical to our national security and to NNSA's efforts to reduce global nuclear security threats, is fully supported by the fiscal year 2020 budget.

Fiscal year 2019 appropriations included an increase above the budget request for Global Material Security. This allowed NNSA to accelerate a number of activities that had been planned for fiscal year 2020, including procurements to support the replacement of cesium-based irradiators, the development of transportation containers to remove disused cesium-based irradiators, and activities to secure buildings with radioactive material. The increase also allowed for the acceleration of counter nuclear smuggling efforts near unofficial border crossings, targeted operations along air traffic and unregulated maritime pathways, and with interior security services. All of these important efforts will continue in fiscal year 2020.

#### NUCLEAR ENTERPRISE SECURITY

60. Senator MANCHIN. Secretary Gordon-Hagerty, many U.S. partner countries have limited experience with vulnerability assessments that test for areas that an adversary may be able to exploit security systems and/or testing "force on force" exercises at borders or at facilities that house sensitive materials. What activities or partnerships is the NNSA leading to ensure our international partners have the training to properly assess and build awareness around their security practices?

Secretary GORDON-HAGERTY. NNSA works on a bilateral and multilateral basis with partner countries across the globe to prevent the theft, sabotage, and diversion of nuclear material. NNSA pursues this mission in concert with technical experts from the National Laboratories.

NNSA has extensive experience working with partner countries in developing vulnerability assessments to ensure the effectiveness of physical protection systems for nuclear material. Additionally, NNSA conducts force-on-force trainings for foreign response teams at domestic and international training facilities and transport security trainings for foreign police organizations. NNSA also provides physical protection upgrades on a case-by-case basis, and assists partner countries in building capacity in critical areas such as cybersecurity and insider threat mitigation.

61. Senator MANCHIN. Secretary Gordon-Hagerty, the International Atomic Energy Agency maintains an Incident and Trafficking Database, which compiles information from participating member states on incidents such as loss or theft of radioactive materials. Does the NNSA maintain any a similar database and is it accessible by other agencies and by international partners?

Secretary GORDON-HAGERTY. NNSA maintains an internal list of detections of nuclear and radioactive material gathered both from open source reports, including the Incident and Trafficking Database (ITDB), and from our bilateral partnerships with

foreign governments. Information reported to NNSA by international partners is used for internal project assessment, planning, and prioritization. NNSA also encourages its partner countries to report incidents to the ITDB. In addition, NNSA closely collaborates with other appropriate U.S. interagency partners on detections of concern to ensure a consistent whole-of-government effort in counter nuclear smuggling.

#### NUCLEAR ENTERPRISE CYBERSECURITY

62. Senator MANCHIN. Secretary Perry and Secretary Gordon-Hagerty, the budget request you presented shows a 39.9-percent increase in Information Technology and Cybersecurity funding for the National Nuclear Security Administration. USSTRATCOM [U.S. Strategic Command] is also in the process of modernizing cybersecurity as a part of an overall effort to modernize nuclear command, control and communications. Are DOE and DOD engaging in any cooperative efforts regarding nuclear cybersecurity in order to avoid duplication of efforts or systems that lack interoperability?

Secretary PERRY and Secretary GORDON-HAGERTY, NNSA and DOD are strategic partners and continuously engage in various activities. NNSA's Office of the Chief Information Officer (OCIO) currently works with NNSA's Office of Defense Programs and the Office of the Under Secretary of Defense for Policy on cybersecurity, information technology, and operational technology for weapons activities. The Nuclear Enterprise Assurance Steering Group (NEASG) is the senior DOE/DOD management body that oversees, coordinates, and shares lessons learned that will improve the country's ability to prevent adversarial threats against nuclear weapon systems. This collaboration allows us to maintain communication and engage in any cooperative efforts regarding nuclear cybersecurity, where opportunities exist.



**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**THURSDAY, APRIL 4, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**AIR FORCE POSTURE**

The Committee met, pursuant to notice, at 9:30 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Perdue, Cramer, Scott, Blackburn, Hawley, Reed, Shaheen, Gillibrand, Blumenthal, Hirono, Kaine, King, Heinrich, Warren, Peters, Manchin, Duckworth, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. The Committee meets today to receive testimonies on the posture of the U.S. Air Force and its fiscal year (FY) 2020 budget request.

We welcome Dr. Heather Wilson, Secretary of the Air Force, and General David Goldfein, Chief of Staff of the Air Force, and thank both of you for your service and all that.

We're all saddened by the decision that's been made by Secretary Wilson. Your work has just been great, and maybe there's still—it's still time to change your mind. All right?

[Laughter.]

Chairman INHOFE. The National Defense Strategy (NDS) directs our Nation's military to prepare for the return to great-power competition. This means that we must be prepared to deter and, if necessary, defeat potential near-peer adversaries. Obviously, China and Russia. In order for the Air Force to achieve that goal, it must properly be manned and trained and equipped. Unfortunately, as pointed out by the National Defense Strategy Commission, we are still in a readiness and modernization crisis. At the end of the Obama administration, the Air Force was at a historic low in readiness. Less than 10 percent of combat squadrons were ready and—to deploy, and even less were prepared for the peer fight. We have made progress in rebuilding the readiness, but more needs to be

done. A high state of readiness is crucial for our Nation to demonstrate peace through strength.

While our forces suffered from being ill-prepared, our adversaries moved out and recapitalized both their conventional and nuclear forces. So, all the time that we were resting and we were coasting, China and Russia were not. In spite of the previous neglect of our military, our men and women have done outstanding work for our Nation, but it's past time for action. You have testified that, quote, "Our Air Force is too small and too old to do what the Nation asks," unquote, and that the Air Force needs to grow to the 386 squadrons. I agree that it needs to grow and modernize. The future of our Air Force readiness and relevance requires both growth and modernization now.

Any successful modernization strategy must focus on results and meeting the needs of tomorrow's fight. Fielding relevant technology fast requires discipline in acquisition strategies. It also requires rapid prototyping and experimentation in order to get modern, reliable, and lethal systems into the hands of our warfighters, and doing so on time and within allotted budget. So, executing the strategy will require an open and transparent dialogue with Congress all the way. We look forward to working with you to make our shared modernization visions a reality and to ensure the Air Force is a fighting force prepared for the more lethal and dynamic battlefields of the future.

Senator Reed.

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Well, thank you very much, Mr. Chairman.

I want to join you in welcoming Secretary Wilson and General Goldfein to the Committee this morning to testify on the plans and programs of the Department of the Air Force in review of the fiscal year 2020 presidential budget. We are grateful to all the men and women of the Air Force for their professional service, and to their families for their continued support.

In preparing this budget request, the Air Force faced difficult decisions in balancing the need to modernizing and keep the technological advantage over near-peer competitors and the need to support ongoing operations and sustain today's readiness. This budget request proposes funding increases to address readiness concerns, munitions shortfalls, preparing for the future fight, and modernizing our strategic deterrent capability. While each of these issues is important, I'm concerned that the Air Force may not have taken as thorough a review of what programs could be cut, delayed, or made more efficient in order to pay for the proposed increases, so I am interested in the witnesses' view on what efforts could be taken to offset current and future costs.

In the near term, the Air Force has money in the disaster emergency relief supplemental they need by May 1st. If the Air Force has not received the \$1.2 billion funds by this date, they will be forced to stop all work at Tyndall Air Force Base, which will, in turn, delay the return of full base operations. If these funds are delayed past that date, other dire consequences may result, such as halting recovery operations at Offutt Air Force Base, stopping maintenance on some aircraft, and grounding others. I hope we can



focus on the potential consequences and move the disaster emergency relief supplemental forward very, very quickly.

In addition, because significant levels of funding are being transferred to build a wall on the southern border, the amount of reprogramming authority will be limited. Our main concern is that the Air Force and other services may run short of head room and reprogram authority, which could lead to delays in other shortage areas as we approach the end of the fiscal year.

One of the major issues that will be considered in this year's NDAA is the Air Force proposal to buy more F-15 aircraft. For years, the Air Force has adamantly opposed buying any more fourth-generation aircraft. I believe the Committee needs to understand this reversal. Any Air Force proposal deserves our careful consideration, but we must consider it against the recent history of abrupt Air Force changes of direction on such programs as A-10, U-2, Global Hawk, Compass Call, C-27 airlift aircraft, and JSTARS [Joint Surveillance and Target Attack Radar System]. Another area of change is light attack experimentation program—light attack aircraft experimentation program. For the past several years, the Air Force has been conducting experiments with small trainer aircraft that have been modified to include a modest ground attack capability. Some expected these experiments would result in a program that would produce one or two wings of aircraft for the Air Force. In the fiscal year 2020 budget request, the Air Force has changed the nature and timing of that effort. The budget request would defer funding for any light attack aircraft until fiscal year 2022, at which point the Air Force would buy roughly 24 aircraft. The aim of this revised program would be to encourage coalition partners to contribute to the air campaign effort with such aircraft, and to provide training support for our partners who wanted to participate in such a program. I ask that the witnesses explain this change in focus and clarify the role of proposed light attack aircraft.

In last year's budget request, the Air Force proposed to truncate the program to modernize the JSTARS, and to replace it with a combination of other systems, including unmanned systems and overhead sensors. The Committee supported the Air Force proposal, and the plan was ultimately adopted in the fiscal year 2019 NDAA. I understand that the Air Force has continued this program in the fiscal year 2020 budget, and I look forward to receiving an update on the progress.

I'm also interested in hearing updates of your continuing efforts to improve the state of Air Force personnel, including progress on improving the shortfalls within the remotely-piloted aircraft operator community, and how the Air Force has addressed shortfalls within the larger pilot community and maintenance personnel.

The one major issue I have not mentioned is the proposal for Space Force. I—discussion of Space Force this morning because Chairman Inhofe intends, and I heartily concur, to convene a hearing next Thursday dedicated solely to this issue with Acting Secretary Shanahan, Chairman Dunford, Secretary Wilson, and General Hyten as witnesses. With that in mind, rather, I plan to use the hearing to focus on the issues I've already discussed.

Once again, Secretary Wilson, General Goldfein, thank you very much.

Secretary Wilson, thank you for your distinguished service to the Nation. You did an extraordinary job. I wish you well at University of Texas—El Paso, Madam President.

Thank you.

Chairman INHOFE. It does get pretty hot down there.

[Laughter.]

Chairman INHOFE. Well, it's—anyway, you two have been here before. You know the drill, and I look forward to hearing your opening statement. Your entire statement will be made a part of the record.

We'll start with Secretary Wilson.

**STATEMENT OF THE HONORABLE HEATHER A. WILSON,  
SECRETARY OF THE AIR FORCE**

Secretary WILSON. Thank you, Mr. Chairman. With my full statement in the record, I'll just summarize a few points, and then ask the Chief to add in.

The budget proposal that we've put forward for fiscal year 2020 is driven by the National Defense Strategy and the five priority missions in that strategy. There are three things that I think I'd like to highlight from our testimony in what we're trying to do.

The first is, we're building a more lethal and ready Air Force. The Air Force is more ready for major combat operations today than we were 2 years ago because of the support and the consistent budgets that have been approved by the United States Congress. In the first place, that means more people, and getting the right people, and getting them trained. Two years ago, we were 4,000 maintainers short in the United States Air Force. As of December, we are no maintainers short in the Active Force. Now, that means that our maintainers are young, and now we have to season them and make sure that they are fully capable to do the jobs we're asking them to do. Last year, we stopped the decline in pilots, and we are increasing pilot training in order to close that gap, as well.

We are building that more lethal and ready force, but we are also building tomorrow's Air Force faster and smarter. The United States Congress gave us new authorities in order to buy equipment in new ways to meet a rapidly innovating adversary. We cannot win this contest with an acquisition system from the Cold War. We are taking advantage of the authorities that the Congress has given us. Delegation works when you do it to competent people and then monitor results. We are using the authorities for prototyping and experimentation that you have given us to start bending metal earlier, finding out what really works, and then setting requirements. We are also doing so in a way that is as transparent, or more transparent, than the traditional acquisition system, by giving reports to the Congress on our prototyping and experimentation programs three times a year and setting clear guardrails for when we need to report to you even more frequently.

The third thing I would say is that we are changing the way in which we engage small business. Many of you were involved and helped us get the word out on our first Pitch Day, where we took in proposals on some of our hardest problems from over 400 compa-

nies, narrowed that down to about 60, whom we invited to a 1-day Pitch Day with our program managers in New York City. Fifty-one companies earned awards on that day. The average time to complete a contract was 15 minutes, and the contract is one page long. We have to change the way we engage America's most innovative businesses in order to have them work with us, the United States Government. We're showing the way—or leading the way on how we can do that.

The third thing I would say is that the Air Force we need is larger and different from the Air Force that we have. This Committee asked General Goldfein and I, last year at this time—we have a new National Defense Strategy, and one of you asked us, “Well, you know, you always come up here and defend the budget amount that you’ve proposed, but what is the Air Force you need to execute the National Defense Strategy?” We didn’t know the answer. We should know the answer. So, you directed us to do a study, which we turned in to you, in classified form, on the 1st of March, that sets out, after almost 8 months of study, what is the Air Force we need to execute the National Defense Strategy. We have 321 squadrons today. As the Chairman pointed out, our analysis shows that, for the 2025–2030 timeframe, we need 386 operational squadrons to accomplish the missions of the National Defense Strategy at a moderate level of risk.

Finally, I would say this. On-time budgets and certainty matters a lot. This Congress gave us that certainty this year. In the first quarter of this year, when we looked at our first-quarter results, we were able to execute about the first quarter of our program. We were able to do new-starts and set priorities and manage appropriately. So, thank you for that certainty and that on-time budget.

I would also say that one of the most difficult things that we are facing as a service right now is the results of two catastrophic storms that hit two of our Air Force bases: Tyndall Air Force Base, in October; and, most recently, Offutt Air Force Base, in Nebraska, with flooding. We need the supplemental to recover from those terrible storms at Tyndall and Offutt. I look forward to working with you all to achieve that end.

Thank you, sir.

Chairman INHOFE. Thank you, Madam Secretary.

General Goldfein.

#### **STATEMENT OF GENERAL DAVID L. GOLDFEIN, USAF, CHIEF OF STAFF OF THE AIR FORCE**

General GOLDFEIN. Thank you, Chairman Inhofe, Ranking Member Reed, distinguished Members of the Committee. It’s really an honor once again to represent your Air Force, Active, Guard, Reserve, civilian airmen who stand the watch and provide top cover for the Nation and our joint and allied teammates.

This hearing is among the first official forums since Secretary Wilson announced her pending departure from the Air Force. I want to say publicly, on behalf of all airmen and their families, what an honor it’s been to work with her every day to make our Air Force more ready and more lethal. This budget represents the culmination of our work together to build the Air Force we need to compete, deter, and, if deterrence fails, to fight and win. I want

to state for the record that we're a better Air Force because of the leadership and the vision of our Secretary, Dr. Heather Wilson.

Thank you, ma'am.

Chairman, I went to the war—I went to war for the first time as a young captain, flying F-16s out of Shaw Air Force Base in South Carolina just days after Saddam Hussein invaded his neighbor in Kuwait. At the time, we had 401 operational squadrons consisting of 945,000 Active, Guard, Reserve, and civilian airmen, and 8,629 aircraft, with an average age of 17 years, in an Air Force that landed our Nation's initial punch, 401 operational squadrons to defeat a middleweight, non-nuclear power who threatened his neighbor and the region, but posed little threat to our Homeland and our way of life. Today, we have just 312 operational squadrons, down from 401. We have 685,000 airmen, down from 945,000. We have 5,314 aircraft, down from over 8,600. The average age of our aircraft is 28 years.

Chairman, we are not the Air Force of Desert Storm. When General McPeak was the Chief of Staff in 1991, he and his fellow Joint Chiefs were focused on supporting a single combatant commander, General Norm Schwarzkopf, the Commander of U.S. Central Command. Today, should deterrence fail and we find ourselves defending a Nation—our Nation against a major nuclear power, I expect to get three phone calls simultaneously on my Red Switch phone. First the geographic combatant commander will request forces to support his operational plan, which will include backfill for any fighters, tankers, and command-and-control (C2) forces he must place on nuclear alert. The next call will be from the U.S. Strategic Command Commander, who will tell me how many bombers, tankers, and command-and-control forces he needs to execute his nuclear deterrence mission, protecting not only our Homeland, but also our allies and partners. The third call will come from the Commander of U.S. Northern Command and North American Aerospace Defense Command (NORAD), who will tell me how many fighters, tankers, intelligence surveillance reconnaissance (ISR), and C2 aircraft he will need to execute his operational plan to defend the United States and Canada. The Air Force will be required to support these missions simultaneously, not sequentially, while at the same time, shoulder-to-shoulder with our joint teammates, maintaining a global presence to deter any rogue nation while simultaneously maintaining campaign pressure against violent extremism.

This is the stark difference between fighting a middleweight rogue nation without nuclear weapons versus competing, deterring, and, if deterrence fails, fighting and winning a peer fight. It's why Secretary Wilson and I continue to articulate in every forum, "The Air Force is too small for what the Nation is asking it to do." It's why we reported to this Committee, as the Secretary said in March, that the Air Force we need to execute the National Defense Strategy requires 386 operational squadrons. It's why the National Defense Strategy Commission, after their research, stated, "Regardless of where the next conflict occurs or which adversary it features, the Air Force will be at the foresight—at the forefront." With your support of this budget request, we'll continue to rebuild the readiness and lethality of this force, which you supported last year

with an on-time appropriation following a damaging sequester and years of budget uncertainty. For that, we thank you.

Chairman, history doesn't always repeat, but it does rhyme now and then. My father fought as a young F-4 pilot in Vietnam, and he and many of his peers stayed in and rebuilt the Air Force his son needed to fight and win in Desert Storm, which was followed by 28 years of continual combat operations, including 10 years of operations Northern and Southern Watch, air campaigns in Bosnia, Kosovo, and Serbia, and continuing through the past 17 years fighting violent extremism in Afghanistan, Iraq, Syria, and North Africa. Today, my daughter and my nephews are young airmen. With your continued support, with on-time appropriations, we'll build the Air Force they're going to need to fight and win in this era of great-power competition.

So, on behalf of every airmen serving today, and their families, I want to thank this Committee for your unwavering support. Secretary Wilson and I look forward to your questions.

Thank you.

[The prepared combined statement of Secretary Wilson and General Goldfein follows:]

## AIR FORCE POSTURE STATEMENT FISCAL YEAR 2020 PRESIDENT’S BUDGET REQUEST

STATEMENT OF:  
**THE HONORABLE DR. HEATHER WILSON**  
SECRETARY OF THE AIR FORCE

**GENERAL DAVID L. GOLDFEIN**  
CHIEF OF STAFF, UNITED STATES AIR FORCE

### STRATEGIC ENVIRONMENT

Great power competition remains the central challenge to U.S. prosperity and security. A rapidly growing China and resurgent Russia aim to coerce their regional neighbors, undermine long-standing alliances, and displace American influence from critical regions around the globe. These great power competitors are challenging U.S. dominance in all warfighting domains: air, land, sea, space, and cyberspace. Additionally, they are confronting us with threats below the level of open conflict, through information warfare, ambiguous or denied proxy operations, and subversion.

To face these challenges, the United States Air Force must compete, deter, and win across the five priority missions of the National Defense Strategy:

- Defend the homeland,
- Provide a safe, secure, and effective nuclear deterrent,
- Defeat a powerful conventional enemy, while we
- Deter opportunistic aggression, and
- Disrupt violent extremists in a cost-effective manner.

In Fiscal Year 2020, we will continue to build a more lethal and ready Air Force, while fielding tomorrow’s Air Force faster and smarter.

### AN AIR FORCE IN DEMAND

Last year, Congress appointed an independent and bipartisan National Defense Strategy Commission to study the global security environment and forces necessary to prevail in an era of great power competition. Their conclusion unequivocally stated: “regardless of where the next conflict occurs or which adversary it features, the Air Force will be at the forefront.”

.....

*“Regardless of where the next conflict occurs or which adversary it  
features, the Air Force will be at the forefront.”*

*–National Defense Strategy Commission*

As the joint force prepares for peer conflict, the Air Force continues to be in very high demand. Our Airmen perform strategic and vital missions in all domains, across the spectrum of conflict, and from 65 feet below ground to our highest geosynchronous orbits.

More than 21,000 Airmen are deployed around the globe, employing unrivaled air, space, and cyber power from over 179 locations. Last year, our Airmen conducted more than 50,000 sorties and 3,400 precision airstrikes alongside joint and partner forces in the campaign to defeat ISIS. In Afghanistan, the Air Force executed 44,400 sorties in support of our Afghan partners, and targeted Taliban and extremist networks with more weapons than any time in at least 5 years. Our mobility forces transported over 1.25 million personnel, 1 billion pounds of warfighting equipment and supplies, and evacuated more than 5,400 patients for critical medical care. To bolster allies and partners, we increased NATO interoperability and readiness through the European Deterrence Initiative, and Air Force bombers flew over 60 sorties through our Continuous Bomber Presence in the Indo-Pacific. Airmen also delivered 152,000 short tons of relief supplies across Southwest Asia, supporting those who are displaced and suffering, and demonstrating U.S. commitment to building a stable and peaceful region.

The Air Force also performs global, strategic, and critical missions from our homeland. We maintain our nuclear force at the highest state of readiness: last year our Airmen conducted 16,425 intercontinental ballistic missile alert tours and 350 missile convoys across three missile wings and five states. In space, we operate 80 satellites that provide communications, command and control, missile warning, nuclear detonation detection, weather, and the Global Positioning System (GPS) for the world. Our Airmen also support a global intelligence, surveillance, and reconnaissance (ISR) network, and last year completed nearly 57,000 missions, collected over 437,000 hours of full motion video, and produced over 1 million intelligence products for our warfighters and policymakers. Every day, our Airmen stand ready on a moment's notice to intercept airborne threats to our homeland, and they defend Air Force and Department of Defense networks from our adversaries' persistent cyber-attacks.

We can only meet these demands with predictable budgets driven by the National Defense Strategy. In Fiscal Year 2019, the Department of Defense received its first on-time appropriation in over a decade. That agreement required substantial effort by the Congress, and we are grateful for your support and confidence.

However, continued budgetary uncertainty threatens to disrupt the progress we are making. Substantial budget cuts would erase the gains we made over the last three years and inflict substantial damage to our national defense. In 2013, in the wake of sequestration, we were forced to stand down one-third of our combat flying squadrons. We cancelled large-scale exercises and lost over one million work-hours of depot maintenance.

***Despite nearly 30 continuous years of combat, no enemy in the field has done as much to harm the readiness of the Air Force than the combined impact of artificial spending restrictions, worsened by operating for 10 of the last 11 years under continuing resolutions of varied and unpredictable duration.***

“

***A return to sequestration would erase the gains we made over the last three years and inflict substantial damage to our national defense.***

”

Let's be clear. We cannot fully implement the National Defense Strategy to protect America's vital national interests with unpredictable and constrained budgets. We must come together to find a way forward.

### THE AIR FORCE WE NEED HAS 386 OPERATIONAL SQUADRONS

The National Defense Strategy calls on us to compete, deter, and win against near-peer competitors and across a wide spectrum of priority missions.

Last year, in Congressional testimony, you asked us what we needed to implement the National Defense Strategy – not “What is the Air Force we can afford?” but “What is the Air Force We Need?” We didn't know, and we should know. You put that question in the 2018 National Defense Authorization Act, when Congress directed us to study the forces and capabilities we require to implement this strategy.

Using our current operational plans and future defense planning scenarios projected into the 2025-2030 timeframe, the Department of the Air Force conducted thousands of simulations and wargames to answer this question. Our analysis produced an unmistakable conclusion: the Air Force is too small for what our nation needs. We currently have 312 operational squadrons – the clenched fist of American air and space power. To implement the National Defense Strategy and prevail over our highest priority competitors, we determined that the Air Force must grow to 386 operational squadrons.

To put this in context, at the height of the Cold War, in 1987, the Air Force had 401 operational squadrons. Four years later it would combat the Iraqi military in Operation Desert Storm, and decisively defeat Saddam's forces in just 43 days. Despite a shrinking budget and force size, the Air Force continued flying combat missions in the region, and added significant new demands and missions in the wake of 9-11.

The independent and bipartisan National Defense Strategy Commission also asserts the need for greater capacity in an era of great power competition. We cannot credibly face our future with the Air Force of today, evolved over two decades for counterinsurgency and counterterrorism operations. We must grow and meet our adversaries from a position of strength.

Our study also shows more of the same isn't the best answer. The Air Force we need must evolve to incorporate advanced technology and wield cutting-edge capabilities in new and innovative ways. Together with our joint partners, we are developing Multi-Domain Operations as our new warfighting framework.

While our land, sea, air, space, and cyber forces have become more joint and coordinated, they are not sufficiently integrated for the future fight. Multi-Domain Operations will integrate U.S. and allied forces across all warfighting domains. This concept will rely on a joint and interconnected network of sensors, weapons, and platforms. Forces will rapidly share information and present our warfighting commanders unprecedented levels of knowledge. With information superiority, we will simultaneously converge warfighting effects from all domains and produce intractable dilemmas for our adversaries.

“  
Our study also shows more of the  
same isn't the best answer. The  
Air Force we need must evolve to  
incorporate advanced technology  
and wield cutting-edge capabilities  
in new and innovative ways.  
”



Ultimately, Multi-Domain Operations will be executed by our operational squadrons, the combat power of the Air Force. Not all squadrons are the same size, and not all squadrons fly airplanes. The National Military Strategy directs a balanced “boxer’s stance” of military readiness, and our operational squadrons form the clenched fist of American resolve. But a fist is nothing without the power of the body – our supporting squadrons – behind it. These squadrons repair our aircraft, manage and secure our infrastructure, keep our logistics and supplies flowing, and support our Airmen and their families. Our operational and supporting squadrons will fight together, so they must grow and modernize together.

### AMERICA IS BUILDING A MORE LETHAL AND READY AIR FORCE

Our National Defense Strategy directs a more lethal and ready force, prepared to defeat our adversaries in high-end combat. This past year, we focused the additional resources provided by Congress on our pacing squadrons, the 204 operational squadrons required in the opening days of a peer fight. With these resources, we are more ready for major combat operations today than we were two years ago. More than 90% of our pacing squadrons are ready to “fight tonight” with their lead force packages – the first Airmen to deploy at the beginning of a conflict. When we include their follow-on forces, these pacing squadrons are on track to reach 80% readiness before the end of Fiscal Year 2020, 6 years faster than originally projected. As our front-line squadrons meet their readiness goals, we will also ensure the remainder of our operational squadrons reach the 80% readiness mark by 2022, as we continue to build toward the 386 operational squadrons we require.

“  
*We are more ready for  
 major combat operations  
 today than we were two  
 years ago. More than 90%  
 of our pacing squadrons  
 are ready to “fight  
 tonight” with their lead  
 force packages.*  
 ”

**PEOPLE AND TRAINING.** Readiness recovery is first and foremost about people. Recently authorized increases in end strength helped eliminate a shortage of 4,000 Active Duty maintainers. In two years we closed this gap and are working to build expertise in these young Airmen. While Air National Guard and Air Force Reserve maintainers still face manning challenges, our FY20 budget continues this end strength growth by adding 4,400 Airmen and 5,143 civilians to the Total Force.

To address our aircrew shortage, we are implementing initiatives to increase the number of pilots we train, season them in operational units, and retain experienced aircrews.

Last year we produced 1,211 pilots, 146 more than originally expected. This budget builds on our progress and will produce 1,480 pilots in 2020. We are also exploring how to use new technologies in our “Pilot Training Next” program, where we are using virtual reality and more simulators to train pilots better and faster. As we season these young Airmen, some of our new Active Duty pilots will begin their flying careers with a Guard or Reserve squadron and benefit from the deep experience we have there. We are also pursuing quality of life and quality of service reforms to retain our aircrew. Our new Talent Marketplace gives Airmen greater transparency on their assignment process, and we are reducing the number of year-long deployments to improve stability and reduce the burden on families.

Our Airmen are shifting their focus to great power competition, and we must train and equip them for the high-end fight. This budget proposal includes funds to modernize our live and virtual ranges and infrastructure to provide relevant and realistic training capabilities against our most advanced threats. The Nevada Test and Training Range, the Joint Pacific Alaska Range Complex, the Utah Test and Training Range, the Space Test and Training Range, and several smaller range complexes will receive targeted funding to better replicate the capabilities of our peer adversaries. We are exploring ways to expand contract adversary air – aircrews who are trained to fly as “bad guys” – from a single test case to up to three locations, freeing our Airmen to practice their own skills rather than spend time simulating the skills of our adversaries. This budget includes 1.1 million peacetime flying hours, the maximum amount of sustainable training, to prepare our Airmen to fight alongside allies and partners as vital members of our joint force.

**COST-EFFECTIVE MAINTENANCE AND LOGISTICS.** We are focusing on innovative ways to maintain and supply our aging fleets. Last year, a team of Airmen conducted a detailed sustainment review and produced 45 recommendations to ensure our aircraft and equipment are ready to meet

“  
*Last year, a team of  
 Airmen conducted a  
 detailed sustainment  
 review, and produced 45  
 recommendations to  
 ensure our aircraft and  
 equipment are ready  
 to meet Combatant  
 Commander timelines.*”

Combatant Commander timelines. We are fielding innovative technologies to streamline supply chains, drive engineering improvements, and manage our fleets. We are using data to make our maintenance personnel more efficient and effective, and we are testing analytic tools and monitoring sensors to match industry best-practices, known as “conditions based maintenance.” By being able to better predict when a part will fail, we can improve readiness while saving time and money – initial tests on several E-3 and C-5 components show the potential to reduce up to 30% of unscheduled maintenance. And we’re making reforms cost-effectively. Our Oklahoma Depot is now completing major repairs on our KC-135 fleet 40% faster and at half the cost of recent industry contract proposals.

”  
 A ready force needs a modernized logistics system to power it. Last year, we established the Rapid Sustainment Office to improve readiness and drive down the cost of repairs by using advanced manufacturing technologies. Through partnerships with universities and industry, this office is identifying emerging technologies that can reduce the cost of maintaining our weapons systems.

We will scale these reforms across the Air Force. This budget includes \$16.4 billion in weapon system sustainment to support our home station and deployed fleets. We are striving to achieve 80% Mission Capable Rates in our F-16, F-22, and F-35 fleets by the end of this fiscal year. We will continue to focus on supply inventory, increasing our maintenance capacity, enhancing our training and proficiency, and moderating our operational tempo to help our maintainers meet this goal.

**AVIATION SAFETY.** We will not compromise safety as we prepare our Airmen and align resources for great power competition. Last year, the Air Force experienced an uncharacteristic increase in in-flight mishaps and fatalities for manned aircraft. The safety of our Airmen remains a top priority, so we initiated several actions to bolster our mishap prevention programs, including additional safety

training and operational pauses to discuss risk. Our mishap rates are decreasing toward historic averages, and we will continue to improve these programs over the next fiscal year. We are thankful for Congress' support and interest in this important issue. We look forward to working closely with our joint teammates and the newly created National Commission on Military Aviation Safety, established by Congress in the 2019 National Defense Authorization Act.

**A SAFE, SECURE, AND EFFECTIVE NUCLEAR DETERRENT.** The Air Force provides two-thirds of our nuclear triad and 75% of our nuclear command, control, and communications capability. We demand the highest standard of readiness from the Airmen who manage and safeguard our nuclear enterprise. The triad remains the ultimate guarantor of American, allied, and partner security, and underpins America's military power and diplomacy worldwide. As our adversaries continue to modernize and expand their nuclear weapons and delivery systems, the National Defense Strategy, Nuclear Posture Review, and National Defense Strategy Commission all reaffirm America's need for a modernized triad of air, sea, and land-based nuclear weapons, tied together by a resilient command and control architecture. These forces deter nuclear and non-nuclear strategic attack, assure our allies and partners, achieve our objectives if deterrence fails, and hedge against an uncertain future. Today, we perform these missions with the smallest and oldest nuclear enterprise in our history. It is imperative that we sustain our existing triad and replace these aging systems. Our budget proposal fully funds our major nuclear modernization programs.

Our Ground Based Strategic Deterrent will replace the aging Minuteman III intercontinental ballistic missile, first deployed in 1970. These ground-based missiles are the most responsive leg of the triad, given their long range and constant state of readiness.

Our Long Range Standoff Weapon will replace the Air Launched Cruise Missile and improve bomber lethality and survivability through 2060. Our modernized B-52, B-2, and upcoming B-21 bombers are the most visible and flexible leg of the triad. They can be deployed to signal resolve, and their sustained flight times and ability to be recalled increase stability and Presidential decision-making time.

Finally, we are modernizing our nuclear command and control system to ensure the President has uninterrupted access to his leadership team and command of nuclear forces, under all conditions, without fail.

Since the end of the Second World War over 70 years ago, every President and every Congress has supported the nuclear triad as a vital element of our national defense. We must continue to do so.

**MODERNIZATION.** America's potential adversaries are rapidly fielding capabilities that approach our own. We must retain our technological edge and equip our Airmen with highly advanced and lethal tools to prevail in high-end combat.

“  
*Since the end of the Second  
 World War over 70 years ago,  
 every President and every  
 Congress has supported the  
 nuclear triad as a vital element  
 of our national defense. We  
 must continue to do so.*  
 ”

As we design our future Air Force, we are examining different operating concepts to frustrate our opponents and defeat them in combat. We will need systems that can penetrate contested environments or remain outside these zones and employ long-range weapons and effects. We are investing \$1.5 billion to test and prototype game-changing technologies to cement our warfighting advantage, including hypersonic weapons, directed energy, and adaptive jet propulsion. Our next-generation penetrating bomber, the B-21 Raider, is proceeding on schedule and building on three years of successful development. It will be able to deliver both gravity bombs and the Long Range Standoff Weapon to hold adversary targets at risk around the world. High-end conflicts will require the long-range capability of an advanced bomber fleet, and the B-21 is central to the expanded bomber capacity and capability we need.

Our aerial refueling capability underwrites the global nature of Air Force power and enables the rapid deployment of aircraft. We recently welcomed our first KC-46 tankers and are proposing to buy 12 more KC-46 tankers in Fiscal Year 2020.

The future fight will require a robust network architecture and battle management system. This budget funds our continued transition to the Advanced Battle Management System, a family of systems that will fuse data from multiple platforms across all warfighting domains. Nearly every system on the battlefield will contribute data to this network, and through advanced analytics, commanders will understand the battlespace and be able to direct forces faster than our adversaries. To develop the capability for successful Multi-Domain Operations, we are upgrading legacy command and control nodes and have established an architecture to ensure the many programs that must connect and share information will work together. We are also upgrading and modernizing our electronic warfare systems, organizations, and analysis capability to dominate the electronic spectrum.

“

*We remain committed  
to the F-35 and its  
game-changing  
capabilities, and will  
continue purchasing 48  
aircraft each year.*

• We remain committed to the dual-capable F-35 and its game-changing capabilities, including its ability to deliver nuclear weapons, and will continue purchasing 48 aircraft each year.  
• No other weapons system is designed to fuse information and make split-second decisions inside defended enemy airspace.  
• As the quarterback in the air fight, this aircraft combines the capabilities of our joint, allied, and partner teammates to deter or defeat our adversaries.

”

While budget increases are making a significant difference and restoring the readiness of the force, our analysis indicates that we must purchase additional aircraft in the future to fully implement the National Defense Strategy. Our current fighter force of 55 squadrons is too small.

At the same time, our F-15C fleet is aging, with two-thirds of the fleet past its certified service life. This fleet is expensive to maintain, and F-15C capability against advanced threats is diminishing over time. Our budget proposes to replace the F-15C with a modernized successor by purchasing the F-15EX. We propose to buy 80 aircraft over the next 5 years. This decision allows us to benefit from foreign partner investments in the F-15 line to begin cost-effectively replacing our F-15C fleet.



**CYBER DOMINANCE.** Every day, Airmen encounter sophisticated and persistent adversaries in cyberspace, some of whom are now peer competitors in this domain. To meet this challenge, we are producing innovative cyber capabilities to repel these threats, defend our networks, and support Combatant Commanders around the globe. These capabilities also strengthen domestic cybersecurity efforts, and helped counter adversary attempts to interfere in last year's election.

Our FY 20 budget submission advances how we train and equip cyber forces for Multi-Domain Operations. We are investing in new capabilities to identify network threats and vulnerabilities, and are designing countermeasures to mitigate risks to our weapon systems. Last May, our Cyber Mission Forces achieved operational capability four months faster than predicted. We will continue leading joint efforts to supply these Airmen with a new, integrated cyberspace operations suite, the Unified Platform. To fully harness this capability, the Joint Cyber Command and Control system will provide Combatant Commanders cyber situational awareness and battle management of these forces. We face an increasingly contested cyber domain, and these investments will provide the tools we need to prevail in both competition and conflict.

**ACCELERATING DEFENDABLE SPACE.** Our adversaries have recognized the advantages we gain from operating in space, and are developing capabilities to deny us the use of space in crisis or war. They are developing weapons that can blind or jam satellites with directed energy and electronic warfare, target ground sites and infrastructure through cyber-attacks, or physically destroy or damage our satellites with missiles or dual-use, on-orbit spacecraft. While we all would prefer that space remain free of conflict, we will deter and defeat these threats in order to secure the satellite constellations that power our military forces and civil societies.

In January of 2018, we transitioned the National Space Defense Center from an experimentation and planning office with weekday business hours to an around the clock operations center to protect and defend our assets and interests in the space domain. In July, we transitioned the Joint Space Operations Center to a Combined Space Operations Center, integrating the efforts of allies, partners, and commercial industry.

“  
*Our FY20 budget builds on  
 our advances and further  
 accelerates efforts to protect  
 and defend our ability to  
 operate in space. We propose  
 a \$14 billion investment in our  
 space portfolio in FY20, a 17%  
 increase over our FY19 budget.*  
 ”

In the 2019 budget, we proposed a significant change to our space plans. With the support of Congress, we added nearly \$1 billion to the FY19 Air Force space program. Our FY20 budget builds on our advances and further accelerates efforts to protect and defend our ability to operate in space. We propose a \$14 billion investment in our space portfolio in FY20, a 17% increase over our FY19 budget. It frames our warfighting approach and changes how we prototype and field innovative space technologies to stay ahead of our competitors. This budget includes \$55 million for the demonstration of technology for a proliferated satellite constellation. In partnership with the Defense Advanced Research Projects Agency, we will assess the future of small, low-cost platforms.

The Department of Defense recently submitted legislation to establish the Space Force as a new armed service within the Department of the Air Force. This legislation would consolidate missions from across the Department into a single Space Force. It would establish a civilian Under Secretary of the Air Force for Space and a Chief of Staff of the Space Force who would be a member of the Joint Chiefs of Staff. This proposal capitalizes on the Air Force being the best in the world at space, and given the new era of strategic competition, is the right move to posture us for the future.

Finally, we are devoting greater time and resources to train and develop our space operators as true warfighters. They will be the cornerstone of U.S. Space Command, our newest Combatant Command.

### WE ARE FIELDING TOMORROW'S AIR FORCE FASTER AND SMARTER

An era of great power competition demands we rethink the way we buy things. China is innovating faster than we are, and fielding game-changing forces. We cannot win this contest with an acquisition system from the Cold War. We must move fast to stay competitive, and we are fundamentally transforming what we buy, how we buy it, and from whom we buy it.

The 2016 and 2017 National Defense Authorization Acts restored responsibility for acquisition to the Services, and granted us new authorities to accelerate prototyping and fielding. With these authorities, we are changing the way we buy things to get capability from the lab bench to the warfighter faster.

“  
*We cannot win this contest  
 with an acquisition system  
 from the Cold War. We must  
 move fast to stay competitive,  
 and we are fundamentally  
 transforming what we buy,  
 how we buy it, and from  
 whom we buy it.*  
 ”

Our experience shows that delegating authority works. Last summer we set a goal to strip 100 years of unnecessary schedule from our program plans. So far, we have saved over 78 years and are closing in on our milestone.

Three contributing factors are making us faster. The first is prototyping. For example, in hypersonics, we are leveraging available technology from across the Department of Defense to build, fly, and buy our nation's first operational boost-glide weapon five years earlier than anticipated. For our Next-Generation Overhead Persistent Infrared Missile Warning satellites, we are competitively prototyping a new sensor, retiring this key risk nearly a year earlier, while also strengthening the industrial base for future programs.

The second contributing factor to increase speed is the use of tailored acquisition strategies. We have empowered our workforce to structure decisions around the specific needs of their programs, as opposed to the generic milestones of the traditional acquisition process. Recently, our F-15 Eagle Passive/Active Warning Survivability Systems split its Milestone C decision into two tailored reviews, accelerating fielding by 18 months at no additional cost.

The third major effort to increase speed to the warfighter is agile software development. The decades-old “waterfall” process for developing software is too slow, very expensive, and often doesn’t work at all. We are making a wholesale shift to agile development, putting acquirers and operators together to make rapid incremental software improvements. We proved the concept with a new tool to plan air refueling at the Combined Air Operations Center at Al Udeid Air Base, where we command the air war against ISIS, Al Qaeda, and the Taliban. Our agile software tool saved the Air Force millions of dollars in fuel each month, reduced the requirement by two tankers and ten aircrews, and delivered a modern software planning tool to operators in months, not years.

We established the Kessel Run Experimentation Laboratory to continue applying agile development for the warfighter and stood up a Program Executive Office Digital to develop and proliferate best practices across the Air Force. So far, major programs like F-22, the Unified Platform for cyber

“  
*Using authorities given to us  
 by Congress is not just faster,  
 it’s giving us better results. We  
 are able to find design flaws  
 earlier in the development  
 period, fix them faster, and  
 ultimately save money with  
 better products.*”

warfare, and the Protected Tactical Enterprise System are reaping the benefits of shifting to agile development, accelerating delivery of tools to the warfighter.

Using authorities given to us by Congress is not just faster, it’s giving us better results. We are able to find design flaws earlier in the development period, fix them faster, and ultimately save money with better products. Our B-52 Commercial Engine Replacement Program will use digital models of new engines to compare their performance, with greater levels of confidence in the results. Not only will we save more than three years from normal development timelines, we expect to achieve up to 30% greater fuel efficiency by prototyping these models.

Our recent Light Attack Experiment was conducted under these authorities and taught us important lessons we would not have learned through a traditional acquisition process. This experiment sought to test whether an existing commercial aircraft could perform as a combat capable and cost-effective platform to support the global campaign to counter violent extremism. Key to the experiment was the development of an intelligence gathering and information sharing network that will improve interoperability with allies and partners. Based on available aircraft that met experimental criteria, we focused last year on only one aircraft type and intend to expand the experiment in this budget to include additional aircraft types (rotary, unmanned, turbojet) and improved technologies. Additionally, we intend to continue our close partnership with industry and allies to further this technology as we determine the best strategy going forward. We remain committed to developing a cost-effective and increasingly networked counter-violent extremist capability to deepen these partnerships and directly support the National Defense Strategy.

We are also committed to competition. The Air Force saved over \$15 billion dollars through robust competition with the National Security Space Launch, Global Positioning Satellite III F, the UH-1N helicopter replacement, and the T-X jet trainer.

Our Space Enterprise Consortium is removing barriers to entry for small business and non-traditional vendors, and these companies now make up nearly 80% of the Consortium's 235 partner organizations. By removing bureaucracy and giving authority to our Program Managers, our Space and Missile Systems Center is awarding prototype contracts in 90 days, twice as fast as traditional contracting.

Technology is evolving faster than ever before, and we are acquiring the intellectual property, data, and software rights to keep pace with this change. When we retain ownership, contractors must compete to sustain and improve these systems, producing better performance and lowering costs. We have already secured these rights in our UH-1 helicopter replacement and T-X jet trainer programs, and we will continue pursuing these ownership rights to flexibly modernize our force.

As we increase competition we are leading innovative approaches to contracting with small businesses and start-ups, and last year we awarded over \$11 billion to such companies. By law, we must spend \$660 million through our small business innovation and technology transfer programs, and want to make partnering with the Air Force easy and energizing. We created a new mechanism to get dollars into the hands of small businesses faster than before. By combining government credit card payments with one-page contracts, we created a small-dollar contracting process that will "pay in a day." Last November, we sought to award 50 small business contracts in 50 hours. We surpassed our expectations and more than doubled our goal, awarding 106 contracts in only 42 hours.

***America's small businesses  
and start-ups are engines  
of innovation, and we are  
developing creative ways to  
employ their talents.***

We just completed our inaugural Pitch Day to build on this success. We invited entrepreneurs and start-ups to pitch revolutionary solutions to Air Force problems. During the two-day event, 51 businesses won contracts and were immediately paid up to \$158,000, often within 15 minutes of their presentations. America's small businesses and start-ups are engines of innovation, and we are developing creative ways to employ their talents.

These authorities do not sidestep key decisions or oversight, and we will not sacrifice quality for speed. Early prototyping informs the Department of Defense and Congress about a program's feasibility before making costly decisions to buy it. We are mindful of the trust placed in us, and are committed to giving you more transparency about how we are using new authorities than what is required for traditional procurement. We will soon release our second annual report on acquisition, giving you all our results, and we will provide you reports on our prototypes and experiments three times a year.

***Our Space Enterprise Consortium  
is removing barriers to entry  
for small business and  
non-traditional vendors, and these  
companies now make up nearly  
80% of the Consortium's 235  
partner organizations.***



## AN AIR FORCE TO COMPETE, DETER, AND WIN

The United States faces an increasingly complex global security environment, characterized by overt challenges to the free and open international order and the re-emergence of long-term, strategic competition between nations. To meet these challenges, the Air Force is evolving to project unmatched power through the air, space, and cyber domains. We are prioritizing our readiness to fight tonight and are on track to meet our readiness goals. The new authorities Congress has given us are allowing us to field tomorrow's Air Force faster and smarter. We must rebuild the capacity we lost and field a force that will compete, deter, and win for the American people.

Chairman INHOFE. Well, thank both of you.

We'll have a round of—a 5-minute round.

That was a great historic perspective. I appreciate that very much. It's one that a lot of people have forgotten.

Now, I know that we're all locked into the NDS and the Commission. They've done a great job. We had two good hearings here. Everyone believes that we should be following that blueprint that we've established. While, yeah, we—this is—we're on the way to recovery right now, we still have problems out there. I mean, if we were to follow the NDS, that would be an increase for this 5-year—for the Future Years Defense Program of between 3 and 5 percent increase over inflation. This 750 doesn't do that. We're not quite there. So, I think, when—your discussion, starting with that as something we kind of agreed on, you had to give in some areas that probably could have very well produced some risk.

General, during that process, what things did you kind of either slight or change from what we had thought was going to be a good model and a blueprint to follow?

General GOLDFEIN. Yes, sir. I'm aligned with the Chairman, who's testified, as well, to say that 3 percent allows us to keep—stay even; 5 percent allows us to improve and modernize in both capability, capacity, readiness. The trades that we made—

Chairman INHOFE. Yeah, but we didn't do the 3 percent, even.

General GOLDFEIN. That's right. So, the challenges that we had—one of the places we didn't take risk was readiness recovery. What the Secretary talked about, in terms of getting our maintainer shortage to zero and ensuring that we're investing in people, we did not take risk. Where we had to take risk was in areas of—some areas of modernization, some areas of procurement, and some areas where we'd like to have bought more to get at that shortfall we have of the aircraft we need—

Chairman INHOFE. Yeah.

General GOLDFEIN.—to go forward.

Chairman INHOFE. Yeah.

Secretary Wilson, someone's got to say this. We're right in the middle of a budget thing. If something should happen that we're not able to do this, and we had to go back—keeping in mind that we went through fiscal year 2018 and fiscal year 2019 as recovery years, and—but if fiscal year 2020 comes up and we don't do the—if we have to fall back to Budget Control Act (BCA) and to the—or a CR [continuing resolution], describe to us what the result of

that would be and how this would have impacted what we've already done in fiscal year 2018 and 2019.

Secretary WILSON. Well, let me give you—with respect to the Budget Control Act and sequester, for the Air Force that would be about a \$29 billion cut. To put that in context, that would be four times as large as what happened in sequester the last time. So, let me give you what that would look like.

Now, a sequester is kind of across the board, but what would the—what would the magnitude of those choices look like under the Budget Control Act? Twenty-nine billion dollars. That would be no F-35s. Cut all of the KC-46s, all—stop the B-21 program. No ground-based strategic deterrent. No research, development, test, and evaluation for any space system, most of the fourth- and fifth-generation modifications and all of science and technology. Or \$29 billion means all of weapon system sustainment, all flying hours, all base operations and airfield support, and all munitions, together to make \$29 billion. I think you can see that that would be absolutely devastating in scope and scale.

With respect to a continuing resolution, what that would mean is, we've got 16 new military construction projects that wouldn't start, and 18, for current missions, military construction that wouldn't start, and we would also—we've got 89 research, development, test, and evaluation new-starts in this budget that wouldn't start.

So, either of those would set us back significantly. Sequester, at this point, would be four times as bad as it was in the previous time that the Air Force went through it, and we are still recovering from a sequester that would be just one-quarter of the impact if we had to go through it again.

Chairman INHOFE. That's a frightening scenario. But, I would agree with that. You think about the progress that we made during that period of time, the two fiscal years. You had mentioned the Tyndall and the Offutt. We do know that there are some problems. One thing has—that has been discussed is cutting the 18,000 flight hours. You know, we went through that once before, and that turned out to be a disaster, and we changed our situation there. Does that look like one of the things that you think we might have to do in order to come up with the results that we're looking for?

Secretary WILSON. Mr. Chairman, with respect to Tyndall, last week I had to hold back money for 61 facility modernization projects in 18 States because we still—we're cash-flowing the damage to Tyndall. Just this year, the impact will be about \$750 million. As we get further into this year, my options narrow further and further. If we get into May, we're probably going to have to stop the recovery at Tyndall, and that means an impact to flight operations there, as well as to people who are going to continue to live in—and work in degraded facilities. We're going to have to, in May sometime, stop a lot of aircraft repairs. We're going to have to ground some of our bombers if we don't get the supplemental to recover—

Chairman INHOFE. Yeah.

Secretary WILSON.—from Tyndall. If we get towards the end of the year and we've only got a month or so left, there's very few options that we have. So, I'm trying to minimize the impact and give

the Congress enough time to pass a supplemental. But, if I get into that last month and I still haven't balanced, because of the impact of the storm, and we don't have a supplemental, yes, it will impact flying hours.

Chairman INHOFE. Yeah. Well, my time's expired, but for the record, I'm going to ask you a question as to where we are right now when we're talking about 48 F-35s and eight F-15s. I mean, it seems to me we're getting back into the fourth generation that we're hoping to be out of. Then, we remember so much. Sometimes in history, we forget about the fact that—what happened to our F-22s. You know, it started out that was going to be 750, ended up being, what, 187, and we've paid dearly for that ever since then. That was a huge mistake, should not have happened. So, I'll be asking those questions for the record.

Secretary WILSON. Mr. Chairman, an all fifth generation fleet would be ideal; however it simply isn't a realistic option given the current budgetary situation. Our analysis shows in the 2030 timeframe, sufficient fighter capacity is critical in a fight with a near-peer. A mix of F-15EX with F-35 is our best option given present resources. Additionally, we will continue to rely heavily on our fourth generation aircraft for the next 20 years. Unfortunately, some of those aircraft—most specifically the F-15C/Ds—are rapidly reaching the end of their service lives. Replacing the F-15C with a modernized successor such as the F-15EX allows us to benefit from foreign partner investments and enhance capacity without transition costs to another platform in the near term.

Senator REED. Well, thank you very much, Mr. Chairman.

So, I'm interested in those topics, too, Mr. Chairman, since I raised it in my opening statement.

Chairman INHOFE. You did.

Senator REED. So, General Goldfein, for years the Air Force has declined to request funding for F-15s or F-16s, and it was a pretty strong declination. This year, there are eight F-15s in the budget, 1.1 billion over the FYDP, 7.9 billion for about 80 F-15s. Can you just give us an idea—and I think it touches upon the Chairman's question, too—based on your personal and professional judgment, is this a wise acquisition?

General GOLDFEIN. Sir, this is what went into the decision. It starts with, Chairman Inhofe, your point. If you go back to the decision when we cut the F-22, a part of that decision was the program of record. We should have 1100 F-35s today. We have less than 300. The F-15Cs were supposed to be long gone. So, first and foremost, as we went into looking at the capacity challenges we're facing right now, we're absolutely adamant that the F-35 program, the program of record that we have, stays absolutely on track, and that we don't take a dime out of the F-35, because it's not only a game changer for us, it's the quarterback of the penetrating joint team. So, what you'll see in our budget is not only maintaining the F-35 program, but we're actually adding \$1.8 billion to the F-35 program to make sure we stayed on track.

Here's the challenge we faced. We have the capacity—those missions—those phone calls that I'm going to get, that I laid out in my opening statement, that are simultaneous—our mission assessments of the Air Force we need says that we need all of the capacity of both fifth- and fourth-generation. We've got four fourth-generation aircraft that have got to fly into the 2030, the F-15C, the F-15E, the F-16, and the A-10. One of them is not going to make

it, and that's the F-15C. So, knowing that, we had to find a way to refresh the F-15C line only by keeping the F-35 program on track. We only looked at one option, which was a F-15 variant to replace an F-15. Because what that does was, it allows you to use the same hangars, same construction, same base, same operating equipment, which is 90-percent common, same maintainers, same operators, and no time and minimal costs to make a transition. The Saudis and the Qataris have kept that line open and have invested in making it a much better airplane. So, we can capture all that, the business case for being able to refresh that F-15C line only, on top of the F-15, with the other fourth-generation airplanes, make—made the most sense to us, and using the CAPE [cost assessment and program evaluation] estimates.

We are now an Air Force of about 20 percent fifth-generation, 80 percent fourth-generation. By 2040, our target is to reverse those numbers: 80 percent fifth-generation, 20 percent fourth-generation. That target has not changed, and we have not changed our position on the F-35. We've just got a capacity near-term issue we've got to solve.

Senator REED. Thank you.

Just a quick, almost, footnote on the F-35. One of the issues you're still dealing with is sustainment costs, which are much higher than you can manage, frankly, going forward. I presume both you and the Secretary are committed to getting those sustainment costs down dramatically. That fair?

General GOLDFEIN. Sir, we are committed to that. We've made that very clear to the contractor, as the largest customer, I believe we speak not only on behalf of the Air Force, but also on behalf of our Navy and Marine Corps teammates and all of the international air chiefs and the international partners who are in the F-35. The target that we've put out is to get a procurement cost below 80 million and an average cost per flying hour of less than 30,000 per flying hour, which puts it comparable to the high end of a fourth-generation.

Senator REED. Right.

General GOLDFEIN. If we can hit those targets, then we've got an affordable airplane that is already a game changer.

Senator REED. Thank you very much.

Secretary Wilson and General Goldfein, last year's NDAA, section 335, asked for the list of 10 most vulnerable installations to weather challenges. We have not yet received that list from the Air Force. We had the Army here last week. They committed their leadership to send us this list. Would you do that? Because, you know, looking at Tyndall, looking at some of these other bases, it's not a one-off experience. We're going to have more storm damages and if we don't know where to start putting our mitigation funding and our sustainability funding, we'll mispend resources. Can you send us those lists?

Secretary WILSON. Yes, sir, we will.

[The information referred to follows:]

This list was sent to the professional staff members of the Senate Armed Services Committee on April 30, 2019.

### Top Air Force Active and Reserve Bases Subject to Severe Weather Effects

Component	Installation	State
Active	Vandenberg Air Force Base	CA
Active	Dover Air Force Base	DE
Active	Eglin Air Force Base	FL
Active	Hurlburt Field	FL
Active	Patrick Air Force Base	FL
Reserve	Homestead Air Reserve Base	FL
Active	MacDill Air Force Base	FL
Active	Tyndall Air Force Base	FL
Active	Joint Base Charleston	SC
Active	Joint Base Langley Eustis	VA

#### Notes:

- The list is organized alphabetically by state; it is not a ranked 1 to 10 list.
- This list differs from the Office of Secretary Defense (OSD) list submitted in March 2019 pursuant to Section 335 of the Fiscal Year 2018 National Defense Authorization Act.
- The OSD Report on Effects of a Changing Climate to the Department of Defense submitted in fulfillment of Section 335 included Air Force input. The Office of the Undersecretary of Defense for Acquisition and Sustainment (OUSD (A&S)) provided each Service the same list of bases, and the Air Force noted the presence or not of current and potential vulnerabilities to each Air Force site to five climate-related events: recurrent flooding, drought, desertification, wildfires and thawing permafrost over the next 20 years.
- The Air Force list is different because we took a broader look at the full inventory of primary Air Force bases in the continental United States to determine our exposure to current and potential severe weather and climate effects. It also evaluated coastal and inland flooding vulnerabilities separately, and appropriately weighted flooding, wildfire and drought vulnerabilities. These factors led to results that were different from OSD results. Additional similarities and differences between OSD and Air Force approaches are below.
- The OUSD (A&S) mission assurance list included 34 active Air Force sites and 2 National Guard sites. The Air Force list is derived from 74 Active sites, 10 Reserve sites, and 2 National Guard sites.
- We analyzed our expanded list of bases with the same authoritative data used for the OUSD (A&S)-provided list.
- We separated the OUSD (A&S) 'recurrent flooding' category into coastal and inland flooding to capture those sites that are, or could be, impacted by multiple flooding effects.
- We applied the same weighting methodology used by OUSD (A&S), which ranked current effects higher than potential effects, and weighted recurrent flooding (in our case, two categories of flooding—coastal and inland) and wildfire vulnerabilities higher than drought, desertification, and thawing permafrost.

The Air Force analysis that underpins both Air Force-specific list, and our input to OSD's list, is subject to some caveats:

- It reflects an installation's susceptibility to the consequences of severe weather events, not necessarily 50 to 100 year climatic changes
- It does not consider any specific critical mission implications. For example, even if the base is subject to flooding because a portion is within a 100 year flood plain, the mission critical facility may not be impacted because of its location on the base (e.g. STRATCOM HQ Building on high ground at Offutt)

Moving forward, we plan to conduct a more robust analysis of Air Force installation vulnerabilities related to mission criticality and specific locational aspects within the installation, to include accessibility concerns. Once we have a better understanding of the linkage to mission, then we can begin to assess where best to apply resources to improve either resiliency or adaptability.

Senator REED. Thank you very much, ma'am. Thank you, Madam Secretary.

One of the other issues that came up last week when we were speaking to the Army is, they did a deep dive. They looked at where they could save money to pay for—which we understand are significant challenges. We're trying to help, but, as the Chairman and the dialogue here is presented, you know, we're not up at that 5-percent level. We're probably hovering close to the 3. So, some of these savings have to be found internally. Can you give us just a quick sense of what you've done and what you propose to do?

Secretary WILSON. Thank you, Senator. The Air Force also conducted what we call the "zero base review" of our 1,072 programs in the Air Force. We will do that again for fiscal year 2021. Our approach was to come up with a balanced budget that made us as lethal as we possibly could be. We restructured our next-generation air-dominance program. Of course, last year, we had proposed, and you all approved, the restructuring, cancellation of JSTARS and moving to advanced battle management. We terminated the B-2 high-frequency program. We put money into readiness and tried to focus that on the squadrons where it made the most difference, what we call our "pacing units." So, we also—and when we try to do acquisition faster and smarter, we're trying to bring more competition into our procurements, because that drives down cost. In fact, with the four major procurements that we've announced in the last 7 months, we came in \$15 billion below the independent cost estimate, and were able to take that \$15 billion and roll it back into greater readiness and lethality.

So, our approaches have been slightly different than the way the Army has approached the problem set, but the intent is the same, to get the most value we can out of every dollar that we spend.

Senator REED. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Senator Fischer.

Senator FISCHER. Thank you, Mr. Chairman.

Madam Secretary and General, I'd like to thank you both for making visits to Offutt Air Force Base after the flooding that we saw hit Nebraska a couple of weeks ago. Madam Secretary, it was a pleasure to be able to have you at office when we were able to survey the damage together there. I thank you for your commitment to rebuild Offutt, and I look forward to working with you on that task.

I have no doubt that this Committee appreciates the essential value of that installation. I do think it's important that this Committee also understands the full impact to Offutt and what will happen if we do not provide supplemental funding. You mentioned the effects of sequester, a CR, if we do not get the supplemental funding to Tyndall, with looking at the 61 projects that are out there in 18 states, and the effect that has, not just on repairs, but on readiness. But, now you add Offutt into that mix, as well. Can you explain the effect that that will have if we do not get this supplemental funding done?

Secretary WILSON. Senator, let me talk a little bit about that. We have a rough estimate now of what it's going to do—what we're

going to need to just recover from the damage done at Offutt. So, it wasn't just that a third of the runway was covered by water, it is that the water came up into a number of our facilities and buildings there, including some satellite facilities and other things.

I would say two things first. One is a real thank you to the people in Nebraska. When the base put the call out for needing people to help with sandbags to protect the base, the city of Bellevue showed up with dump trucks' worth of sand. It was a wonderful partnership, even when they were also threatened.

The second thing that I would say is that STRATCOM headquarters was in the middle of an exercise when that flood hit, and they didn't miss a beat, because there was redundancy in power, and we worked with the commercial power provider to make sure that power was shut off in an orderly way and shifted to the backup systems. Resilience does matter.

The reality is, though, that we're going to probably have \$350 million worth of damages there at Offutt just this year, and that's not including MILCON [military construction], which will be further out, to recover and rebuild some of those facilities. If we don't get the supplemental to recover from the storm damage, in July we're going to have to start deferring Offutt recovery other than for matters related to health and safety. That means the risk of mold and continued damage to buildings that then cost more to recover will increase.

Senator FISCHER. Thank you.

As you both know, the 55th Wing is also at Offutt. It's the home of the RC-135, which is Air Force's largest manned ISR platform. Secretary Wilson, last October, you responded to a question that I submitted for the record on the future of the RC-135, and you stated, "The RC-135 family of aircraft will continue to operate through at least 2040 to 2050".

General, yesterday, you were at the HASC hearing, and, in testimony, when discussing the RC-135, you mentioned that the Air Force is looking at fusing capabilities that are platform-centric. Can you explain—or can you expand on this and what it really means for the C-135 family of aircraft? I think there might have been a little confusion yesterday on that.

General GOLDFEIN. Yes, ma'am.

First of all, let me reinforce Secretary's testimony that, in fact, the RC-135, which is not only a U.S. platform, but one that we also do with our U.K. partners. We're partners in that program. So, our ability to fly that airplane into the 2040s is going to be absolutely essential.

The Advanced Battle Management System, the debate that we had last year that this Committee supported, is bigger than Joint STARS. This is about the future of joint warfighting and how we move from a platform-centric approach to a network-centric approach. The visual I would offer you—you know, sometimes we, I think, are guilty of putting forth PowerPoint slides that have big, red domes over countries that—as though we cannot penetrate or get in. A better visual actually is a block of Swiss cheese, because that's about what any country can put over the top of them to defend themselves. It's our job to actually know where the holes are and get in. Once we get in, then we do the—what I call the "five

Ps” of air superiority, right? We’ve got to penetrate, we’ve got to persist when we’re inside there, we’ve got to protect what’s in there, not only on the ground, in the air, at sea, we’ve got to proliferate, and we’ve got to be able to punish by holding targets at risk.

So, if an adversary actually ever sees an F-35, which is unlikely, I would like to also send them a message on their screensavers that says, “We’re here.” Not “I’m here,” but “We’re here.” Because the visual I would offer you is that, if the F-35 is inside, it is the quarterback of a penetrating joint team, and that joint team consists of an F-35, a B-21, an RQ-170, an X-37 in space, low-Earth orbiting satellites, a penetrating attack submarine, a small team on the ground. The key for that penetrating team to operate is to connect every sensor to every shooter. That’s advanced battle management.

This is bigger than the Joint STARS. This is about the future of joint warfighting and how the entire Department is shifting to networked warfare of the future.

Senator FISCHER. As we move to that future, though, the 135s definitely have a role to play, as the Secretary said, through 2040 to 2050, because that future is not where we are at the present. Is that a correct statement?

General GOLDFEIN. Yes, ma’am. Where I would give you in the visual is, every sensor to every shooter, and the RC-135 is a critical sensor.

Senator FISCHER. Okay, thank you.

Chairman INHOFE. Thank you.

Senator Jones.

Senator JONES. Thank you, Mr. Chairman.

Thank you both for being here.

Let me add my voice, Madam Secretary, for your service. I want to particularly thank you for the time that you’ve spent with me over the last 15 months as I joined this body. It’s been very, very helpful.

In one of our meetings, in particular, we talked about Air Force’s Junior ROTC program. That program really came to my attention through a similar program that the Air Guard in Alabama has. Colonel Sparrow—“Swapper Sparrow” has a program to give some scholarships for kids. I notice that, for the Air Force to grow from, like, 312 operational squadrons to 386, we’re going to need, like, 1,480 pilots for fiscal year 2020. I am hopeful that, in doing that, we can also increase the number of female and minority pilots, which I think is really—that Junior ROTC program is directed to. I’d like for you to just talk about that program for a minute, and talk about the success for that program. We have introduced a bill recently to kind of expand that across the other branches of the services. So, I think it’s a good opportunity for you to talk about the Air Force’s success in that program.

Secretary WILSON. Well, thank you, sir. Thanks for the opportunity.

We are facing a national shortage of aircrew and pilots. While we are having plenty of people volunteer to go through training with us and we don’t think we’ll have trouble getting to the 1,480, we need to inspire the next generation of aviators and cause people to



choose to fly. When we look at who we don't have volunteering in the Air Force and who's not stepping up in civil aviation, as well, there is a disproportionately low number of women and minorities who choose to fly. When we looked at the data, one of the things that was interesting was that, if you ask an Anglo boy, "When did you decide to learn to fly?"—they usually say, "Fourth, fifth grade," somewhere around there. If you ask girls, women, or minorities, it's much more common for them to say, "In high school" or "In college."

One of the things we looked at was the Junior ROTC program. Here's an interesting factoid that I didn't know before I became Secretary. But, our Junior ROTC programs, which we have in high schools across America, are 58 percent minority. Last summer, with some of our excess funds, we decided to sponsor 170 high school kids to get their private pilot's license. We partnered with seven universities around the country. They had to be in Junior ROTC, which gave us a—you know, we—so, we're going after the population we were interested in. So, they showed some interest in the military. There was no requirement to join the military. But, a full-ride scholarship on a college campus for 7 weeks in the summer to get their private pilot's license. So, we're trying to inspire the next generation of aviators. About 90 percent of them were successful in getting that private pilot's license, and we hope that we have sparked a dream.

Senator JONES. Great. Well, thank you very much for that. I hope we can get that going across the other agencies.

Following up on that a little bit, just, General, about recruiting, we've heard the challenges, sometimes, of recruiting, but I notice, you know, in the budget the Air Force has increased its recruiting goal without really talking about challenges. Have you experienced challenges? It seems that, to meet the budget, you are trying to recruit 4,400 new airmen. What experience have you with challenges? But, more importantly, what are some of the Air Force's successful recruiting strategies?

General GOLDFEIN. Thanks, Senator.

We have met our recruiting goals, but, I'll tell you, what's been interesting is—you know, there's a tradition at the Recruiting Squadron; when they meet their quota, they ring a bell. Normally, through most of the year, they ring the bell about the middle of the month. What we're seeing is that they're often ringing the bell in the last day or 2 days, because it's becoming harder and harder. This is a challenge across—this is—this has to do with, 29 percent of America's youth that's physically capable of serving and we're all fishing in that same pool. So, it's a challenge for all services. We're happy to report that, to date, we've been able to meet our recruiting goals.

When we looked at the growth and the glide slope that we could sustain, in terms of increasing our numbers, 4,400 a year, plus then about 3,000 or so after that, allows us to have a very steady growth path that allows us to not only go out and recruit what we need, but also bring them in. We have the right numbers in basic military training, the right numbers in tech schools. So, the entire pipeline now has been built to be able to sustain that growth over time.

Probably the biggest success story, I will tell you, is in our special warfare business. We stood up a new recruiting squadron to go after our Special Operators, our young men and women who are capable of probably the most intense training pipeline of any of the services, certainly in our—2 years' pipeline. We're seeing a lot of success with mentors, a preparatory program, and getting out to high schools and talking about what an Air Force does on the ground.

Senator JONES. Great. Well, thank you all very much. I appreciate that. I'm looking forward to talking about SPACECOM next week.

Thank you.

Chairman INHOFE. Thank you.

Senator COTTON.

Senator COTTON. Thank you, Secretary Wilson, General Goldfein, for your testimony today.

I know you spoke a little bit earlier about what would happen if the Air Force returned to sequester-level budgets. Let's hope that doesn't happen. It usually hasn't happened since 2013. But, General Goldfein, I'd like for you to address what would happen under an alternative scenario that some people in Congress are talking about. Let's suppose you got a full-year continuing resolution. So, Congress couldn't reach an agreement to lift the budget caps and pass the normal annual spending bills, the way we have the last 12 years, so Congress throws up its hands sometimes later this summer or early fall, and says, "You know what? We're just going to have a full-year continuing resolution for all of fiscal year 2020. You'll get exactly what you got last year." What would that impact be?

General GOLDFEIN. Thanks, sir.

I'll just give you a few examples of what that'll mean for us, because, of course, a year-long CR, we would assume, would be to execute, with no new-starts, at the 2019 levels. So, new mission MILCON, KC-46, F-35, TX would all stop. That would affect about 16 projects that would stop and, therefore, stop our ability to bed down, because you have to have the infrastructure to bed down the weapon systems. We have about 18 current mission MILCON projects that would cease and stop that would affect our readiness. You know, any procurement, research, development, training, and evaluation (RDT&E), new-starts would stop. That would affect over 89 programs, the United States Air Force, for an Air Force that's working hard to modernize, that this Committee has supported. If it goes anything more than 6 months, it would put our end-strength growth at risk, because we will not be able to bring on the additional airmen we need, not to have mission growth, but actually to fill our formations to do the missions that we're already doing. So, it would have a significantly negative impact.

Senator COTTON. So, almost the worst thing imaginable.

General GOLDFEIN. Yes, sir.

Senator COTTON. Sequester would be the worst thing, but it's hard to—

General GOLDFEIN. Yes.

Senator COTTON.—imagine we would go back to the actual sequester levels. But, a proposal that's being batted around to have

a full-year continuing resolution, almost the worst thing imaginable.

General GOLDFEIN. Yes, sir.

Senator COTTON. All right, thank you for that.

Couple of NDAs ago, the Congress directed the Air Force to begin to transition a significant number of UAV [unmanned aerial vehicles] pilots to enlisted ranks, an issue on which I've worked. Senator King and Senator Jones and I are working together on this pilot issue. Could you tell us how that's going, what we've learned about—learned from it?

General GOLDFEIN. Sir, no surprises. As you might imagine, what we learned is, our enlisted force can do anything we ask them to do. The enlisted members who have been in the—we put them in the RQ-4, the Global Hawk program, and they've performed brilliantly.

We've now expanded the discussion, though, because, as we work through in space and look at the—building the force we need to fight and win in a contested environment, today all constellations are being flown by our young enlisted force. You know, we have seven members right now who are on duty, who are running GPS for the globe right now at Schriever Air Force Base. So, the question we're asking is, What is the future of the enlisted operator when you look at space transitioning to a contested domain and high-altitude ISR, going forward? Is there a broader discussion that we're having about that enlisted operator in high-altitude ISR when it's above the atmosphere and below the atmosphere? Is there a career path where someone can now go into the business of ISR as an enlisted operator and transition between the two? So, we're taking the lessons we learned from where we are today, and now expanding that discussion. That's where I think we're going to land.

Senator COTTON. Okay, thank you.

I'd like to talk about the B-21 budget request. I have occasional hearings on the B-21 and its progress in a closed setting so we can ensure that, 20 years from now, people don't look back on some of the decisions made now, as we do look back on the F-35. Last year, the budget request was 2.3 billion. This year, it's 3 billion. Secretary Wilson, in this setting, could you tell us a little bit more about why we've seen that increase and what the Department plans to do with it?

Secretary WILSON. Senator, we've got—we're moving forward with the research, development, test, and evaluation of this new aircraft. We had the critical design review late last year, fourth quarter last year. The program is on track and on schedule.

Senator COTTON. Okay.

General Goldfein, anything to add?

General GOLDFEIN. No, sir. Same.

Senator COTTON. I know we're projected at 100, minimum, aircraft. Given the threat environment we face and the posture review that you've undertaken, can you envision a scenario in—where we need to have more than 100 B-21s?

General GOLDFEIN. I can, sir. Not surprisingly, when we did our analysis of the Air Force we need, which was over 2,000 computer iterations of different force elements against the latest combatant

commander OPLANs, operational plans, and the projection of the threat in the 2025 to 2030 timeframe. No surprise that long-range aviation was in the shortest supply and in the greatest demand. So, tankers, bombers, long-range ISR and command and control, those are where you're seeing the largest amount of growth required for the Air Force we need. So, I do see an environment where the bombers would be a larger number required.

Senator COTTON. Over the long run, that would produce a lower average unit cost, I would assume, right?

General GOLDFEIN. It would.

Senator COTTON. Okay.

Thank you both for your testimony.

Secretary Wilson, thank you for your service. We're sorry to see you leave. I guess, though, congratulations is in order to see you leave Washington?

[Laughter.]

Secretary WILSON. I was released early for good behavior.

[Laughter.]

Senator COTTON. Very well.

Thank you all.

Chairman INHOFE. Thank you, Senator Cotton.

Senator Duckworth.

Senator DUCKWORTH. Thank you, Mr. Chairman.

Thank you both for being here, and also, thank you for your service.

General Goldfein, you stated that F-35 is the quarterback of our fighters—fighter aircraft. You also said that, by 2040, you want a 80–20 percent dominance of the Air Wing by the fifth-generation fighters, like the F-35. In all my time on House Armed Services Committee, we had a lot of discussion about the need to invest in more fifth-generation into our current fleet, but then also to start investing in sixth-generation aircraft, certainly because our competitors, on the global scale, the Chinese, are pushing into the sixth-generation, themselves. So, I'm a little bit confused. How will funding the F-15X—EX—affect your goal of this dominance, given that a sustained defense budget is not guaranteed, moving into the future?

General GOLDFEIN. Yes, ma'am. Thank you.

First, I'll just—I'll say that the F-35, as I describe it, is the quarterback of more than the fighter force. It's the quarterback of the penetrating joint team. When you look at the investment in—that we are making, in this budget, in penetrating capability, you'll see \$135 billion of investment. But, the—but, that is F-35, plus B-21, plus other capabilities that we're—plus space capabilities—that are all required to penetrate enemy airspace and be able to watch the enemy. So, first and foremost, the F-35, which is why we are not backing an inch off of our program of record, and maintaining the F-35, because it is the quarterback of the joint team that we need.

The challenge we face is a near-term challenge. Our analysis indicated that, to be able to drive aircraft aged to a manageable level and to be able to do the missions that we require, we have to procure 72 aircraft a year to do that. There's four aircraft that we have to fly in the fourth generation, capacity-wise, into the 2030s, and that's the F-15C, the A-10, the F-15E, and the F-16. Three

are going to be capable of flying into the 2030s. One is not going to make it. So, the F-15 refresh is only to give us the capacity we need as we make that transition from 20-80 to 80-20. We find ourselves in this position again, because, as the Chairman mentioned, when the decision to cancel the F-22 occurred—we're supposed to have 1100 F-35s right now. We have less than 300. So, we're faced with the situation we have right now. As the Secretary and I looked at the cost estimates, an F-15 refresh, using the investments that the Saudis and the Qataris have put in that line, to replace the F-15C, as long as we don't impact the F-35 line, was a reasonable choice.

Senator DUCKWORTH. So, you're refreshing the Charlie-model F-15s, and they're going into the EX. Then you— what's the projected lifespan for the refresh model into the future? You're saying into 2030?

General GOLDFEIN. Yes, ma'am. Actually, longer. The model of—the EX model has got a 20,000-hour service-life expectancy.

Senator DUCKWORTH. Will that affect what your future requests are going to be for the number F-35s?

General GOLDFEIN. Ma'am, if we ever get to a point where we are trading F-35s for F-15s, let me tell you, that's a bad choice. The F-15 is not an F-35. It will never be an F-35. We are just—you know, in the flying business, we—you know, we describe things as "runway behind us and runway ahead of us." The run—the decision that was made on the F-22 to put us in the place we're in is "runway behind us." I can't affect that. The Secretary and I can only affect "runway ahead of us." What we need is, we need the capacity, and we've got to get to 72 aircraft a year. We've got to look at the cost projections to be able to make an affordable decision, going forward.

Senator DUCKWORTH. Understood. Also, "airspace above—altitude above you and gas on the ground, behind you," right?

Last year, it was reported that more than 126 military installations or sites and their surrounding communities rely on wells or groundwater sources that contain dangerous levels of two chemical compounds that are tied to birth defects and certain cancers, known as PFOS and PFOAs. Secretary Wilson, how many Air Force military installations may be threatened by dangerous levels of PFOS and PFOAs? Do you know?

Secretary WILSON. Ma'am, we have done 110 detailed site inspections. We have looked at 297 total locations. So, we've done the detail of those. Of the ones we did—so, we did an initial look, and then—and, in that initial look, we identified 21 installations where we need to do alternative water supplies. So, there is, immediately, alternative water supplies to make sure that people have safe drinking water.

We then go back and do a more detailed site inspection. We have done 110 detailed site inspections of a total of 189, I think, active facilities. We also do some on locations that were BRAC'd [Base Realignment and Closure].

Senator DUCKWORTH. What about the ones that are on Air Guard locations?

Secretary WILSON. That includes Active, Guard, and Reserve.

Senator DUCKWORTH. Okay. Thank you.

Yield back.

Chairman INHOFE. Thank you, Senator Duckworth.

Senator ROUNDS.

Senator ROUNDS. Thank you, Mr. Chairman.

General Goldfein, Secretary Wilson, first of all, thank you both for your service to our country.

Secretary Wilson, we're going to miss you up here, but it sounds as though you've got an opportunity that—it's clearly something in your future, and you'll do great.

I do have a question with regard—for Secretary Wilson—with regard to the DOD's submitted budget of \$750 billion this year. Why is the Air Force unfunded priority list (UPL) over a billion dollars—a billion dollars greater than your fiscal year 2019 request, despite the top-line growth in the overall DOD budget?

General GOLDFEIN. Senator, I'll—

Secretary WILSON. I'll go—

General GOLDFEIN.—answer, if that's—

Secretary WILSON. Sure.

General GOLDFEIN.—okay, just because the—

Secretary WILSON. Sure.

General GOLDFEIN.—the unfunded priority lists normally comes from the service chiefs.

What you'll see in the unfunded priority list—first of all, it's always those things that didn't make the cut line when we were building our budget, and it—the intent is always to tell you where we would place money if additional money were available. It's important to note that, in the first—and we listed ours in priority order, as well, in the UPL—the first thing we listed was money for MILCON, and those—and if we were not—to not get a supplemental, we placed in the UPL, in 2020, money that we would need to recover from the damage done in 2019 if we didn't get a supplemental. Important to note that, in that money is also adding three to five additional professionals at 63 bases where we have privatized housing and identified privatized housing issues, because of that—of course, that issue came up after we had completed our POM.

What you'll also see there is in money for defensible space, because we are—we're transitioning from a noncontested domain to a contested domain. This accelerates things that we're already doing in the program, but moves them to the left, and you see that. Then you see money in there for aircraft procurement so that, again, if there was additional money left, it gets us to this—to 60 F-35s, which is what we are told, from the company, they can produce in 2019, and it also adds KC-46s, which our Air Force We Need Assessment told us long-range aviation is a high priority.

Senator ROUNDS. All right. Well, as you both know, we're very pleased with the bed-down determination, where Ellsworth Air Force Base will be the first bed-down for the B-21. Community of Rapid City is very pleased, and I can assure you that they are prepared and willing to assist any way possible to make that as workable as possible. But, we're very happy with that decision, and we look forward to seeing the B-21 being deployed on time and on target with regard to budget.

Based upon the study that you've provided us, which is "The Air Force We Need," the number of required bomber needs to be increased, according to your assessment. I think Secretary—or Senator Cotton talked a little bit about it. But, I want to go into this a little bit. We'd originally talked about the 100 B-21s as—first it was, that's what we were looking at, in terms of the budgeted items, but, really, that's a minimum number. But, there really is no scenario laid out in which you could get by with just 100.

What I'd like to do is to talk about two items. First of all, what is that real number? What is the number that we're really going to need to make this thing work? Second of all, you've got the F-35s coming in. I agree with you, you've got to get to the right number of F-35s. But, that's not an air-dominance system. It's not designed to be the F-22. The F-22 is now, what, closing in on 40 years in age? So, you're going to have to be looking at that next-generation air-dominance system, that platform. What's the plan? How do you fit in maintaining and moving forward with the required numbers of B-21s that you're going to need and still allow for us to maintain the air dominance necessary with that next new platform or system? How does it fit together?

Secretary WILSON. Sir, I may let the Chief talk a little bit about the numbers of bombers, but let me talk a little bit about next-generation. Probably within the next couple of weeks, we will be releasing the Science and Technology Strategy for the Air Force. The Air Force does that every 7 to 10 years. But, one of the things that we are going to do is go back to what we call vanguard programs, where we use the authorities you've given us to prototype, to experiment, and to rapidly innovate. I think there's—if you look back, there's probably a legitimate criticism of some of our major defense programs, where, you know, there are multiple miracles required in a program. That's probably not the way to set yourself up for success. Rather than looking at a particular platform, our next-generation air-dominance will identify the technologies that we need to develop and test, and then make decisions along the way on how we will deploy those technologies. Beyond that, I think, probably we should go into—I'll talk to you in a classified setting, on what we're thinking about.

General GOLDFEIN. Sir, with respect to bombers, the minimum number we need to be able to meet the current operational plans of the combatant commanders is 175. That's 100 B-21s and 75 B-52s. To be able to keep the B-52 flying in the period of time—and we did a business-case analysis to look at the cost of a brand-new bomber versus, you know, taking the B-52 and reengining it and putting new radars in it. What we found is that the cost alone for a, you know, EMP-hardened new bomber, to be able to bring that level of payload in a standoff capacity, is far more significant than the cost of just upgrading it, because it has good bones and can last for awhile.

So, it's 175 that is the minimum number in the Air Force we need. We have—you'll see that that pluses up from a current squadron number of 9 to 14, with an additional 5 squadrons. Those 5 squadrons are based on the simultaneous missions and the simultaneous plans that we're going to have to support, be that STRATCOM, NORTHCOM, EUCOM, or PACOM.

Senator ROUNDS. But, the key was, the B-52 was a standoff——

General GOLDFEIN. Yes.

Senator ROUNDS.—weapon system——

General GOLDFEIN. Absolutely.

Senator ROUNDS.—not a penetrating.

General GOLDFEIN. Not a penetrator.

Senator ROUNDS. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Rounds.

Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.

Thank you both for being here today.

Let me add my voice to the others on the Committee who have said how much we will—have appreciated your service, Secretary Wilson, and how much we will miss you.

General Goldfein, we're glad you're staying.

A couple of weeks ago, I had the opportunity to be at the “Last Plane Out” ceremony for the KC-135 that left the 157th Air Refueling Wing at the former Pease Air Force Base. I just want to share with you one of the things that commander of that unit, Colonel John Pogorek, said as he was saying goodbye to the plane. He pointed out that for the third year running, the 157th has flown more sorties, and more sorties per KC-135, than any other Guard unit, Reserve unit, or Active Duty unit in the world. So, as you can appreciate, we—and I should point out that the plane that left was the oldest plane in our inventory. It wasn't through yet. It was built in 1957, and it was going to Arizona. So, obviously, we're waiting, with great angst, for the new tankers to come to Pease. I know there have been some reports in the news lately indicating that there has been another discovery of foreign debris found in the aircraft, and that there has, again, been a halt to delivery of the tankers. So, I wonder, Secretary Wilson, if you can give us an update on where we are with this and what you expect to happen with Boeing and the production of the tankers.

Secretary WILSON. Senator, the production is going forward. I had the joy of being on the first KC-46 to fly in to McConnell. Senator Inhofe brought the first one in to Oklahoma, I believe. We have found some debris on the line. The inspectors found some debris that shouldn't have been there, should have been wiped out of some of the compartments on the KC-46, on the manufacturing line. We have worked with Boeing on a corrective action plan. It will also require greater inspection and attention for quality assurance by both the Air Force and Boeing. But, we expect that they will be able to implement those quality improvement plans this month so that we can restart acceptance of the aircraft and the arrival of the aircraft at Pease will not be affected.

Senator SHAHEEN. I'm delighted to hear that. Are the issues that were found with the—as I understood, it was the electronics that also had some issues with the plane. Has that been resolved, as well?

Secretary WILSON. There were two issues that we accepted the plane with, where we had some deficiencies that we had to work through. One of them is going to be fixed at Boeing's expense, and that has to do with the remote vision system. So, in the KC-135,



as you know, you kind of look out—you lie down and look out the back window.

Senator SHAHEEN. Right.

Secretary WILSON. In the KC-46, you look at a video screen that has cameras on the back, and there's some distortion of that screen because of the way the cameras are located and so forth. We have reached agreement with Boeing on how that needs to be fixed, and that that will be retrofitted into aircraft—all of the aircraft, and added in on the line, going forward. That will be done at their expense.

There was one other deficiency that we identified. That had to do with the stiffness of the boom when refueling an A-10, which is a very light aircraft. They met the international standard, so that actually will be a change that the Air Force will pay for. It's the change of an actuator to affect the stiffness of the boom.

Senator SHAHEEN. Great. Thank you for the update.

I also should thank you for the responsiveness of the Air Force to the PFAS issues that we've had at Pease, and your support for the study that the Agency for Toxic Substances and Disease Registry is doing, the first long-term health impact of PFOA and PFOS that will have been done. So, that should provide a lot of information that we can use, going forward.

Unfortunately, we've also heard from a number of military retirees and their families who believe that exposure to a dozen other known carcinogens at the air base has caused them health impacts, including a number of cancers, ranging from prostate to bladder cancer. The National Guard has requested that the Air Force Medical Support Agency conduct a public health study for military personnel and civilian individuals that lived and worked on Pease to determine if there is a higher-than-expected rate of morbidity and mortality. Can you tell me if that is a possibility and what would need to happen in order for us to be able to get that done?

Secretary WILSON. Senator, I don't—the answer—the quick answer is, I don't know what would have to happen in order to do that kind of a study. But, of course, we'd have no objections to that kind of a study being done.

Senator SHAHEEN. Well, if there's anything that I can do, and anything that we need, in terms of the upcoming defense bill, I'm happy to work on that.

Thank you very much.

Chairman INHOFE. Thank you.

Senator PERDUE.

Senator PERDUE. Thank you, Mr. Chairman.

Thank you both for your service and outstanding performance in the last 2 years.

Two years ago, when you sat before us, you inherited the smallest and oldest Air Force ever. You reminded us of that. You also called out, Secretary, that your three priorities were readiness, recap, and rationalization. I want to thank you both for what you accomplished in the last year and a half on readiness. It's remarkable to see what you've done to bring our force to the current level of readiness. I know we have a lot of work yet to do, but I want to thank you for that.

Chief, can you just give us an update—you mentioned it earlier—on ABMS [Advanced Battle Management System]? I have two questions for both of you, so I'd appreciate some brevity, here. But, in June of last year, in 2018, the Air Force announced that Robbins would actually host some of the initial elements of ABMS. That statement actually said it is a service transition—and I quote, “transition to ABMS, the Air Force will fly the E-8C JSTARS fleet in the mid to late 2020s. The air and space systems that make up the ABMS network will include a fusion center and associated supporting activities.” Can you give us an update on what's happened in the last year, how that's progressing, and how it's developing, and how you're managing the gaps from current technology into this model that you're talking about, in this environment?

General GOLDFEIN. Yes, sir. Thank you.

You know, the decision that was made to place Air Battle—Advanced Battle Management System at Robbins was based primarily on the fact that that's where our Ph.D.'s of battle management exist. We looked, first and foremost, at that community, who understands this business better than any other community. They're the doctors of battle management that we need to lead us into the future.

There's three increments to this transition. Increment one is focused on taking the current sensors that we have and advancing them and connecting them in ways that they're not currently connected. So, one of the first things we did with the money that you authorized us to put, is, we bought back E-3 AWACS as they were currently—we were planning to retire, and we put money into them to be able to bring in feeds that didn't currently exist. Because this is about current—increment one is current sensors, and connecting them together. That is on track.

Increment two is about bringing new sensor capability—many of those are going to be in space—and bringing that new capability on, and connecting them together.

The final increment is to connect it all together. We've just brought on, this year, an architect, Mr. Preston Dunlap, to lead us through that. His first stop was to meet the doctors of battle management at Robbins. Matter of fact, I believe he's still there today. We're on track, and I'm really excited that Robbins is going to lead the way.

Senator PERDUE. Thank you, sir.

Madam Secretary, in your first testimony here, you talked about China. We've just received this RAND report. It's an update on their views of what's going on. My concern about China was that they were moving out from a defensive posture, evidenced by publishing the Made in China 2025, along with what they've known they've been doing with the BRI, Belt-Road Initiative, along with their port loans in Africa and South America. The one that really concerns me is that their air force investments and what they're doing right now looks like they've been moving more to a strategic posture, certainly over the next 10 years. So, as you talk about what we need, in terms of the 386 squadrons and so forth, does that reflect this change in strategy that you see China moving to right now?

Secretary WILSON. We do see rapid innovation in China, and a change to their strategic approach to the world from being a largely—the old PLA was largely internally focused and focused on internal control. They made a decision to be more of a regional power and a—they have words for it. I can't remember them, like, off the top of my head, but there was a very good Defensive Intelligence Agency unclassified study recently on this subject, as well, looking outward and developing a military commensurate with their place in the world, I think is kind of the way it was. The J-20, which is a—is in service now in the Chinese air force, and they've just flight-tested the J-31, so they are moving forward with advanced aircraft, but also advances across the board in other kinds of capability as air defense, of course, their surface navy and so forth. So, we're seeing modernization across the board and in all domains.

Senator PERDUE. I'd like to say one last thing, Mr. Chairman. The greatest threat that these two people have, certainly General Goldfein as he faces this next year, is, I think we're staring down the barrel of a CR, September 30th. We have 39 working days left between now and July 31. If we don't move this up as a priority, there is no way we're going to get defense authorization done—HHS, if we have to combine them, whatever we have to do. This needs to be our Committee's top priority right now to make sure that, in the remaining few days we have before that, quote, "August work period" comes up again, that we get this defense budget authorized and appropriated. Because we're staring down the barrel of another CR. After 2 years of not having—the number-one thing I've heard from these guys and others that we've met over the last 2 years is that this is the number-one threat to getting readiness back and beginning this long haul toward recap. I'll just close.

Madam Secretary, thank you for your service. You guys have accomplished great things in the last 2 years under your leadership, and as "off you go into the wild blue yonder," I wish you all the best.

Thank you.

Chairman INHOFE. Well, thank you, Senator Perdue. Let me assure you, that is our intent, and that's our commitment. I'm fully aware of the time remaining. I'm also fully aware of the fact that we've never had to face a China like this before, or, for that reason, a—also a Russia.

Senator Warren.

Senator WARREN. Thank you, Mr. Chairman.

Secretary Wilson and General Goldfein, thank you.

The private companies that were put in charge of managing military housing failed to provide safe and clean homes to military families, but they still managed to make millions of dollars in profits. The services have fallen short in their oversight responsibilities. Now, many of these families have developed chronic medical conditions from exposure to mold, lead paint, and other hazards. Last week, I asked the Army Chief of Staff, General Milley, whether he believes, as a matter of principle, that the U.S. Government has the responsibility to cover the lifetime costs of treating servicemembers and their families for health problems connected to unsafe military housing. He said, "Absolutely yes,".

General Goldfein, do you agree with him?

General GOLDFEIN. Yes, ma'am.

Senator WARREN. Secretary Wilson, do you agree?

Secretary WILSON. Yes, ma'am.

Senator WARREN. Good.

One other quick question. I'm concerned that the southern border deployment is having some negative effects on readiness. General Neller recently wrote a memoir to the Secretary of the Navy that listed border deployment among the factors contributing to readiness challenges. General Goldfein, have any training exercises or overseas deployments been canceled or delayed due to units supporting border developments?

General GOLDFEIN. No, ma'am.

Senator WARREN. Not—

General GOLDFEIN. Not in the Air Force.

Senator WARREN. Not—okay.

I also want to ask another readiness issue facing the Air Force: climate change. The Defense Department's most recent report on climate change discussed the impact of this human-caused problem on our military operations and bases. This report included a statement by the Chairman of the Joint Chiefs of Staff, General Dunford, who said, quote, "When I look at climate change, it's in the category of sources of conflicts around the world and things we have to respond to."

General Goldfein, just a simple yes or no on this one is fine, and then I have some followups. Do you agree with General Dunford?

General GOLDFEIN. I do, ma'am. I do think—if there's time at the end, I'd like to sort of qualify where I think he was going with that.

Senator WARREN. Sure. But, let me ask, Does adapting military bases and other infrastructure to climate change contribute to Air Force readiness?

General GOLDFEIN. It does, ma'am. I think what General Dunford was referring to, though, is that—I mean, if you go back—if you take a look at Syria as an example, most don't remember what caused the Syria conflict to start. It started because of a 10-year drought—

Senator WARREN. Yes. Water.

General GOLDFEIN.—and folks having to move from their family farms into cities, where they then were not getting any support and, therefore, a civil war began. I think what Chairman Dunford was talking about is that we have to respond militarily, very often, to the effects globally, of climate change.

Senator WARREN. Good.

So, let me ask, Do you think it is prudent for the Air Force to incorporate climate change when making strategic decisions, like strategic basing decisions, for example?

Secretary WILSON. Senator, let me take that one.

Senator WARREN. Sure.

Secretary WILSON. We just published an Infrastructure Investment Strategy, and we also just finished a major piece of work on weather. Maybe the Air Force looks at these things more because weather is such a big impact on us for all of our flying operations every day, and we're the ones responsible for weather forecasting around the globe. The infrastructure strategy looks at resilience

and, How do we get more out of every dollar that we spend? So, there's a number of pieces of that strategy. But, the resilience of our bases is very important because we fight from our bases. We don't leave our bases to fight. We fight from our bases. Their resilience is very important to——

Senator WARREN. How would you rate Air Force installations as a whole, in terms of their climate resilience?

Secretary WILSON. Senator, it probably varies a lot. I couldn't give you a red, yellow, or green chart on that at this point, but I know that, overall, we've got significant infrastructure challenges overall, but from a number of factors.

Senator WARREN. Well, I see that the Air Force is requesting nearly \$5 billion in emergency funds to rebuild Air Force bases in Florida and Nebraska, alone, that were damaged by natural disasters. So, I think it's very important that the Air Force and the other military services continue to incorporate climate change in their planning so that when disaster strikes, the impact on operations is minimal. This clearly is a readiness issue.

So, thank you for your work on this.

Chairman INHOFE. Thank you, Senator.

Senator Tillis.

Senator TILLIS. Thank you, Mr. Chair.

Thank you both for being here, and, Secretary Wilson, for your service. I was also sad when I heard you were moving on, but I can certainly thank you for everything you've done and share the Chair's advice to you that it's still not too late to change your mind.

I think I'll start with General Goldfein. It's on the KC-46. Specifically, I know that—I believe that Senator Shaheen asked a question earlier. I'm more interested in our current plans in the basing in Seymour Johnson, whether or not that's shifting to the right, or what the current status is.

Secretary WILSON. Senator, we're—I think we're—we are going to be fine on the basing. We're not seeing an impact there. We just needed to have Boeing stop, put a corrective action plan in place, get up to the standards that we expect on the manufacturing line, and then get the line moving again. You actually can't fix a manufacturing line while it's stopped. It has to be flowing. But, they have to put the corrective actions in place for quality assurance.

Senator TILLIS. I also had a question on the talent marketplace. I think, right now, the—almost all the officer assignments are in there. Give me an idea of how that's working and what progress has been made.

General GOLDFEIN. Sir, it's working well. As a matter of fact, you know, when I travel and talk to, especially, young officers, you know, what I hear over and over again is the fact that they want to have a little bit more control over their future, and they want to have a better visibility on what's out there. Not only them, but also hiring officials want to know—get a—have a better sense of who they can look at for hiring purposes. The fact that we're now connecting them for dialogue is pretty powerful. Initial rollout's been very—very successful, and—but, we're not going to slow down. We're going to continue to listen to the force, screen with our ears, and modify it to make it better.

Senator TILLIS. On a related note, how well are we doing, or what kind of changes have we put in place to address the pilot shortage?

General GOLDFEIN. So, this year we were successful at stopping the reduction. So, it's the first year where we actually haven't had increasing numbers leave. So, we see that as—

Senator TILLIS. What do you think that could be attributed to?

General GOLDFEIN. I think it's a combination of things, sir. I think, you know, what I hear over and over, it's a combination of quality of service, quality of life. The financial incentives that Congress has approved, I think, have been very helpful. But, it's as much quality of service as it is quality of life. I think the combination—we have, like, 69 different initiatives that we're working on. I don't think there's one silver bullet. A combination of reducing overseas deployments, I think, has helped. Putting more white space on the calendar, we've looked at every one of our exercises and reduced those that aren't value-added. I think that making flying in the United States Air Force as rich an experience as we can make it is going to have the most lasting effect. That's going to start with inspirational and courageous commanders and senior NCOs [non commissioned officers], and so, where the Secretary and I have focused is on where—when we select and how we develop these young officers to make sure that, when they are in command, they can build a culture that thrives.

Senator TILLIS. Thank you.

I share Senator Perdue's concern about where we're headed with respect to a CR. I see your budget request. I tend to agree and would support and advocate for it. But, I believe it's more or less going to be a paper exercise, and that we're going to be looking at a CR. So, I think one thing that we need from you, Madam Secretary or General Goldfein, is an understanding of the consequences of that, because here is a trajectory to increase readiness capabilities and things that I think are important. I think we also have to understand the consequences of our inaction, to go through regular order appropriations. We'd like to see that so that, when those who would resist moving through regular-order appropriations understand the consequences of their actions, we need that. You can infer it, but I'd like, very specifically, to look at things that are going to be affected by that.

Secretary Wilson—I mean, we can talk about that now, but I think I'd—what I'd prefer to do is go, if you don't get this and you have to deal with the consequences of a CR, what does that look like in the near term, and how it could potentially be disruptive to progress that you've made?

Secretary Wilson, you have a comment on that?

Secretary WILSON. Senator, there will be 16 new MILCON projects for new missions that wouldn't start. That means that we can't put those aircraft at those bases. There were the 18 MILCON projects for existing missions that would not go forward, and 89 new-starts for programs where we're trying to modernize this force and trying to stay—our adversaries don't have to deal with continuing resolutions or sequester. They keep going, and so, there is risk in deciding that we're just going to do a CR.

Senator TILLIS. We need to look at that in terms of the effect that it has on MILCON and then the effect that it has on what we would flesh out after those MILCON projects are complete. People really need to understand that, because I think we're doing you all a disservice. We need to make sure that those who oppose going through that process understand the direct consequences of their actions, both in terms of the opportunities in the communities for these projects to move forward, but, more important to me, the capabilities and readiness that we're leaving on the table when we talk, in every committee, about our great-power competition and the need to really move forward with these projects. People need to start taking responsibility for holding up what I think is an important regular-order process.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Tillis.

Senator Manchin.

Senator MANCHIN. Thank you, Mr. Chairman.

Thanks, both of you, for your service. I appreciate it very much.

We're sorry to see you going, Secretary Wilson, but thank you for what you've done. I've got one last request before you leave, too. I met with Secretary Shanahan on Tuesday, and he mentioned, in the city of Martinsburg, that has still not received their money for PFAS. He agreed we're going to get on that. So, only thing I'm asking—it's less than \$5 million, and this little city really needs that. It means a lot to them, and they've put the money out already, and they just don't have the resources. So, before you depart, if you would check into that. The city of Martinsburg. It's the National Guard base. Our Air Base National Guard there in Martinsburg does a great job, and it would be very much appreciated.

The other thing I want to ask for is, you know right now statute only allows us to tap operations and maintenance, O&M, dollars from the Air National Guard. That's what I consider to be unfair, considering that they are using the same firefighting foam as the Active component uses. So, my question would be, Do you agree—or will you agree that we should be able to use defense environmental restoration dollars for the National Guard facilities, the same as military does?

Secretary WILSON. I—Senator, whenever I get involved in the Guard issues, there are different colors of money there, and I'm going to have to take that question for the record. Our commitment is to do the cleanup on all of our bases where we've been responsible for this. I'll have to get back to you on that specific question about which funds can be used for which kinds of—

Senator MANCHIN. Yeah. I don't know why they would be objectionable, because—

Secretary WILSON. I don't—

Senator MANCHIN.—in NDAA, we've tried to do this, and got stripped out. I think every Senator has a Guard component that, basically, needs to be able to use their money the same as the branches use theirs. Okay?

Secretary WILSON. Senator, you may well be right. I just don't know.

Senator MANCHIN. Okay. I appreciate your—again, that’s one other question before you leave, because I know you will be diligent about that.

Secretary WILSON. Yes, sir.

[The information referred to follows:]

Secretary WILSON. Defense Environmental Restoration Account (DERP) funds cannot be used to fund environmental restoration actions at State-owned and operated facilities where DOD was not the “owner” or “operator” at the time of the release of PFOS/PFOA into the environment. DERP funding is allowed for initial investigations in order to resolve DERP eligibility or ineligibility, and for cleanup where the release occurred when DOD was the “owner or operator.” The Air National Guard (ANG) is in the process of determining DERP eligibility for all its sites and is now programming for both DERP funding and Operations & Maintenance (O&M) funding to address its required environmental restoration activities.

Senator MANCHIN. I think this is probably—General Goldfein, maybe you can help me on this one. The F-15EX—and I understand the arguments for—procuring capabilities. I understand all of that. Where I’m unclear about is the plan how you’re going to integrate that. Because I think it’s a 4-year phase-in, and, during that 4-year phase-in, even though it’s the same aircraft, the components are different. So, I’m understanding that we don’t have the ability to train or—or the simulators that it will take to train them, and won’t be ready in 4 years. How are we going to have our pilots ready and prepared for the—for that to come onboard in 4 years, and them not have the proper training?

General GOLDFEIN. Sir, because the F-15EX is only intended to help us with a short-term capacity shortfall and replace only the F-15Cs, the—

Senator MANCHIN. How many aircrafts, General, are we speaking about?

General GOLDFEIN. Right now, we’re looking at 80—

Senator MANCHIN. Eighty.

General GOLDFEIN.—is what we have laid—

Senator MANCHIN. That’s because the F-35 is not going to be able to meet the demand.

General GOLDFEIN. It’s to supplement the F-35 program to make sure—and I said before—

Senator MANCHIN. I understand that, and I’m okay with all that. I’m—

General GOLDFEIN. Yes, sir.

Senator MANCHIN.—just understanding—as a pilot, myself, and you as—having many hours, as you have—there’s still some simulation time it takes to integrate into that.

General GOLDFEIN. It does. The 90 percent of the architecture—the support equipment for the F-15C is common to the F-15EX. That’s one of the reasons—so, we’re not looking at—

Senator MANCHIN. You’re not concerned about the transition.

General GOLDFEIN. No, sir. Matter of fact, that’s one of the reasons that we only looked at an F-15—

Senator MANCHIN. Okay.

General GOLDFEIN.—as a replacement.

Senator MANCHIN. I trust you on that.

Next, my final question is this. This picture here. This shows the J-31 and the F-35. They kind of look similar, I think, if you look at it. They’re fairly similar, here. I’ll pass just around to my col-



leagues. I'm not an expert on jet fighters, but they sure do look like that someone had some plans. My concern is this. I understand we have the prime contract, and then it goes from the prime to sub to sub to sub to sub to sub. This didn't happen by accident. They're able to—and I'm understanding they're actually able—the Chinese and Russians, and whoever else, has been able to get up to speed quicker by being able to access—and maybe it might not be high priorities or high profiles—they were able to get into things that weren't classified, and reverse engineer. We're not holding our subs accountable, and we're not holding the prime accountable to the subs. Do you all see that as a tremendous concern? How do we change it? Will you work with us to change the procurement process, holding the primes—holding your prime subcontractors totally responsible for the food chain, if you will, and bringing some of these platforms to reality?

Madam Secretary?

Secretary WILSON. Sir, very happy to work with you on that. The intelligence threat, particularly from China, is significant, and it's—

Senator MANCHIN. But, I'm saying it's continued. For them to have the rapid acceleration—and everybody here is concerned about that—that has to be stopped. We're not doing anything to stop it. I'm on Cyber Command, I'm concerned about this. So, I'm just hoping that you all are in total agreement with this. It needs to be changed. Do you all agree it needs to be changed?

General GOLDFEIN. Yes, sir. I'll tell you that we've stood up a Cybersecurity Task Force, under the leadership of General Pawlikowski, when she was Air Force Materiel Command. That Cybersecurity Task Force is designed to do just what you're talking about, look at every system and subsystem to—

Senator MANCHIN. Who's heading that up?

General GOLDFEIN. Now it's Colonel—the Commander of Air Force Materiel Command. If—

Secretary WILSON. McMurray.

General GOLDFEIN. Yeah, thanks. General McMurray.

Senator MANCHIN. General McMurray, okay. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you.

Senator Hawley.

Senator HAWLEY. Thank you, Mr. Chairman.

Thank you, Madam Secretary, General, for being here. Thank you, as always, for your exemplary service.

To Secretary Wilson, I was delighted, last week, to get the news that Whiteman Air Force Base is slated to be the second location for the B-21 Raider. Of course, I think we ought to be the first location, but we're delighted to be hosting the B-21. I just want to say for the record how proud I am of the 509th Bomb Wing and the work they've done with the B-2 Spirit over many a year. We stand ready at Whiteman to receive the B-21 when the time comes.

I know Senator Cotton asked you about the schedule and whether we were on schedule, in terms of production. Let me ask—and you testified that we are—let me ask you just about the budget. I know the target price is about 500 million a piece. Are you con-

fidant that we're going to come close to that number? What's it looking like?

Secretary WILSON. Senator, we don't discuss publicly the B-21 program costs, and we're—actually would be very happy to come and talk to you in detail about where we are. But, we are pleased with the management of the program, thus far, by both the contractor—and we're doing this one a little bit differently. We do this through our Rapid Capabilities Office. It's a small high-performing team, and they're doing a very good job.

Senator HAWLEY. Very good. Thank you.

Let me shift gears just slightly and ask you about a number that appears a number of times in your written testimony, the 386 number. Let me ask you about the relative importance of this. The NDS states very clearly that the Joint Force and the Air Force need to focus on improving in our key warfighting scenarios against China and Russia while carrying out operations in the greater Middle East more economically. I'm wondering, why is purchasing more platforms now better, relatively speaking, than investing in R&D [research and development], munitions, base resilience? I mean, can you give me some sense of why 386 is important, and how you got there?

Secretary WILSON. Senator, the 386 is a size construct, but the work that we did in this evaluation looked also at different ways of fighting. It is not just more of the same. It's not just about capacity. It also looks at, What do we have as a stand-in force, what do we have as a standoff force, how do we integrate things so that we get more bang for the buck, if you will? If you think about this, you know, to—and the Chief talked about Desert Storm and having 401 operational squadrons. If we're talking about meeting a near—defeating a—detering and defeating a near-peer adversary, a safe, secure nuclear deterrent, Homeland defense, countering violent extremism, and deterring rogue states, all at the same time, with 386 squadrons. They're obviously more capable squadrons and a different way of fighting. So, it's both.

Senator HAWLEY. You're satisfied, then, that this budget advances the NDS priorities, and particularly those on, not just capacity, but also capability, lethality, resilience.

Secretary WILSON. I am. You know, there are always more things that we can do, and we're always making tradeoffs. But, even things like multidomain operations and the need to connect everything as part of a network, and driving those things forward. Our science and technology—early-stage science and technology budget is—you know, combined with research, development, test, and evaluation, is fairly healthy.

Senator HAWLEY. General, do you want to comment on any of this?

General GOLDFEIN. Sir, I'll just tell you that, by the time Secretary Mattis rolled out the National Defense Strategy, the last version I saw was version 67. I said that because it was very inclusive—typical Secretary Mattis—very inclusive. We had folks that were there, and it allowed us—it allowed Secretary Wilson and I, actually, to align the 2019 budget, because we were part of the writing of the National Defense Strategy, and then 2020, our guidance to the team, and our scoring of our budget inside was align-

ment with the National Defense Strategy. So, that's what this budget submission is all about.

Senator HAWLEY. Thanks very much.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hawley.

Senator Heinrich.

Senator HEINRICH. Thank you, Chairman.

General Goldfein, I want to ask you a little bit about artificial intelligence. It is going to be critical, both on and off the battlefield in the future. As you know, AI is just not possible without good, high-quality data. AI is only effective if we have a workforce that really understands how to take care of that data. Do you think that the Air Force is, at this point, adequately able to recruit a workforce that is literate and understands that future?

General GOLDFEIN. Sir, I think we're in the beginning stages, really—

Senator HEINRICH. Yeah.

General GOLDFEIN.—of—and the Secretary and I have—maybe turn it over to the Secretary, because, you know, having a Secretary that was formerly a president of a STEM [Science, Technology, Engineering & Math] university, and understanding how the universities work, and how you bring in young people, and how you motivate them, and you bring them in as interns. I think we've done a lot to make sure that we are a—we're an easy place—

Senator HEINRICH. Are you extending her work assignment?

General GOLDFEIN. Would love to.

Senator HEINRICH. Yeah.

One other thing, and then I do want to get to you, Secretary. It—is it—is there value to thinking about whether there should be someone within the services that just has that responsibility—and maybe this is a good time to pivot to you, Secretary—for making sure that we're recruiting coders and data scientists and the folks that we're going to need as we make this transition into AI? Specifically, I'm curious whether it might be even worth considering a mission occupational specialty for that area, to make sure that we do make that transition quickly.

Secretary WILSON. That's actually an interesting idea. In the Air Force—you know, the Navy has been talking, I know, to the Committee about a Chief Information Officer position. In some ways, the Air Force already has—we've got our Chief Information Officer, our Chief Data Officer, and our Chief Management Officer all in the same—all combined and reporting directly to the Under Secretary of the Air Force. So, we've got—organizationally, got that. I would say that we've got—AI is not just about the data, it's about gathering and directing that data, and analyzing it, at speed. In many cases, it's about the analysis happening right at the sensor edge and not as you bring it in. So, for all of us, in the military and in the wider society, we are probably going to see a significant shortage of data scientists and analysts over the next couple of decades. It's a very high priority.

Senator HEINRICH. Secretary, I want thank you for your service, and specifically, as—you know a great deal about what we now call the Space Rapid Capabilities Office (RCO) and how much that has contributed to our national security with its infrastructure and per-

sonnel and acquisition authorities. I just want to thank both of you, really, for your work in building secure facilities at Kirtland for Space RCO and enabling that office to really quickly deliver solutions to the military. I look forward, General, in continuing that progress with you.

Secretary, one other thing I want to ask you about is—I'm starting to hear from another of—a number of folks, both in and outside the services, who have said that if the U.S. doesn't start to buy the emerging commercial offerings that we're seeing, in terms of small satellites, small launch providers, that we could see those things migrate overseas. Is the Air Force being assertive enough in procuring or even just experimenting with some of these smaller commercial capabilities?

Secretary WILSON. I think there's going to be a huge demand for small commercial capabilities, globally. The Air Force has funded, through DARPA, an experiment. It's called Black Jack, and it's looking at a small satellite constellation using commercial satellites. But, I will say this. We've done a lot of modeling and simulation. Many of you have participated in a tabletop exercise that we've done about the shift from an uncontested environment to a contested environment. What is the strategy that makes sense in that environment? Then, how do we develop programs to support that strategy? One of the challenges with a proliferated low-Earth-orbit satellite system that's where commercial satellites usually live and operate is, it's very close to the Earth. That's great to be able to see things, but it also means that they are vulnerable. The commercial systems, without any defenses on them, are also quite vulnerable. So, we need to think about not just how expensive they are, but, Do they survive in a contested domain? The way I like to put it is, you know, I drive a Subaru. It's a great—I love it. It's less expensive than a tank. But, I wouldn't take it into combat. So, we need to think about it from a warfighting point of view.

Senator HEINRICH. Well, Secretary, I want to thank you again for your service. I'm out of time, here, but, before you begin your transition, I would just urge you, on the PFAS issue that Senator Manchin brought up, whatever we can do to make these folks, who have been so severely impacted by that, whole, really through no fault of their own, in all of these cases, I would just urge you to give that all the attention you can before you make your transition to El Paso.

Secretary WILSON. Thank you.

Senator HEINRICH. Thanks.

Chairman INHOFE. Thank you, Senator Heinrich.

Senator Cramer.

Senator CRAMER. Thank you, Mr. Chairman.

Thanks, both of you, for appearing again.

Let me add my congratulations and just tell you I agree with all the accolades you've received today, Secretary Wilson. I don't think any of them are even a little bit exaggerated. But, thank you for your service.

To both of you, thank you for your candor. You have spoken with great clarity, and particularly in differentiating the Air Force we need from the Air Force that we can afford. More importantly, thank you for your candor in answering the what-if questions, the

“What if the worst? What if we don’t get our jobs done as it relates to appropriate appropriations?” So, we need that clarity, our constituents need to hear that clarity, and I thank you for that.

I’m tempted, of course, to ask about plans to modernize two very important aircraft to me, the Global Hawk in Grand Forks and the B-52s. I think we’ve talked a lot about that. But, before we get to that, I’ve not heard a lot today about, and I’m very intrigued with, and interested in, Space Force. I’d like the—the message that is coming out, I think you have 72 million in this budget for the headquarters. But, I would ask each of you to, maybe, elaborate a bit, first of all, on the importance of it—as we look at scarcity of resources, and we’re talking about a sixth branch, there—you know, lots of people have lots of opinions, and yet this domain seems—well, I think it seems critically important, and I haven’t heard anybody—any of the combatant commanders or anybody else, whether related to Space Force or not, say that it’s not a good idea. But, I just would open the floor to let you explain to us one more time why it’s so important, maybe starting with the Secretary.

Secretary WILSON. You know, Senator, we are the best in the world at space. Our adversaries know it, and they are seeking to develop the capability to deny us the use of space in crisis or in war. In private conversations, as we’ve received briefings and so on from combatant commanders—not from the Air Force, but from combatant commanders and other services—they understand the importance of space as an enabling capability for everything they’re trying to do. We have made significant changes in programs, based on threat analysis and strategy, in fiscal year 2019, which this Committee and others in the Congress supported, and we propose, in fiscal year 2020, another boost, a 17-percent increase in our space portfolio in the fiscal year 2020 budget. So, we’re making the financial investments. We are also buying those capabilities faster and smarter. In fact, in the space realm, we—you know, we set ourselves a goal 10 months ago. In some ways, it was a gimmick, but it got people focused. We wanted to strip 100 years out of Air Force procurement in 12 months. So, look at every program, see if we could optimize these in a—you know, not—we’re not skimping on any requirements. We’re going to buy a tailored suit rather than a suit off the rack. We’re currently at 78.5 years taken out of Air Force procurement programs. Of that, 21 came from space, alone. So, we are moving forward to buy things in space faster and smarter. Our policy is to maintain American dominance in space so that space capabilities are available to the Joint Force, and so that we deter any attack on the United States or our allies.

So, the organizational change that was put forward in parallel with this budget is actually—you know, it’s a change that elevates, that enhances the influence of space and leaders in the Pentagon. That’s in it for the long haul. So, I think one of the things that—taken all together, the combatant command, which is being stood up, plus the increases in spending that all of you have supported, and the shift to a strategy for a—strategy and the programs to support it for a contested domain, will keep us dominant in space. That is our job.

Chief?

General GOLDFEIN. Thanks, ma’am.

You know, I look at it from a warfighter perspective. Having been the space coordinating authority and component lead for Central Command for—deployed for 2 years, I've employed space capabilities against an enemy. I look at it from a warfighting perspective. I see, given the situation we're in, and obviously aligned with the Secretary's statement—the problem statement, that we are the best in the world, we've got to do three things simultaneously. First, we have to defend what we have, because it's going to be there for awhile, and we all rely on it. From the blue dot on our phone to the indications and warnings of missile launch, I mean, we rely on space capabilities. So, we have to defend what we have.

But, it's not good enough just to step in the ring and defend and take punches. At some point, you've got to be able to punch back. Our adversaries need to know that we can punch back. It needs to be part of their calculus. So, we have to develop offensive capabilities.

the third piece we have to do is develop the force that can fight and win, because this transition from an uncontested domain to a contested domain requires that force to be developed for the future.

So, I believe that, as we were in a robust debate about how to get at the President's guidance, we were debating between a separate service, separate department, separate Secretary, separate Chief, to a Med Corps, JAG Corps. Where we landed, which is a separate service within the Department of the Air Force, to me, is the most recognizable model from a business of warfighting. Of all the things that we're doing, going forward, I would offer, the most important act that I would ask this Committee to take on this year is to stand up U.S. Space Command with a commander. Because, in the business of joint warfighting, that aligns how this entire Department does business, going forward.

Senator CRAMER. Well said. Thank you both.

Thank you, Mr. Chairman.

Chairman INHOFE. Yeah. Thank you, Senator Cramer.

Senator KING.

Senator KING. Thank you, Mr. Chairman.

I want to pursue this question of the Space Force, but I understand we're having a full hearing next week, so I'll defer. Put me down as skeptical that an organizational change costing half a billion dollars a year is going to change our capacity. So, be prepared to help me through that question. I look forward to that discussion next week.

Secretary Wilson, everybody's praised you today. I plan to do something about it. You'd better watch the National Defense bill. I'm thinking of an amendment prohibiting your retirement. So, you'd better have that—have your legislative staff scour that document as it goes forward.

You have done a sensational job. I think a perfect example is the comment you made a few minutes ago about the amount of time you've cut out of the procurement process. That's a big deal. Procurement has two problems, historically, in the Defense Department. One is money, cost, and the other is time. You have done something that had needed doing a long time, and I really want to thank you for that.

A second general comment. I understand neither of you had anything to do with this, but I just don't like this OCO-for-base business. Twenty-five percent of your budget is OCO, and three-quarters of the OCO is OCO-for-base, which is a non sequitur. If it's base, it's base. If it's OCO, it's OCO. Again, I realize that you're—this is something that was handed down from other parts of the government, but it's not honest government, it's not honest to the Congress or the people of America. This isn't OCO. Let's get real about what these numbers are.

General, the light-attack experiment, which is to use existing platforms, try to develop a new counter-violent-extremist—I understand the A-10 is—I heard, yesterday, from people in the maintenance business, that they are hard to maintain now. They're just wearing out. How's this experiment going? Where does it stand?

General GOLDFEIN. Sir, let me tell you, first, that light attack, A-10, two completely separate—

Senator KING. Okay.

General GOLDFEIN.—issues, here. Light attack is not designed to, nor will it ever, replace the A-10. Our intent is to fly the A-10 as one of the four weapon systems—

Senator KING. You can—

General GOLDFEIN.—that we need through the 2030s.

Senator KING. Because we've been hearing, for the last 3 or 4 years, about getting rid of the A-10. Are we now back to maintaining the A-10?

General GOLDFEIN. We are, and—through the 2030s, for the A-10.

Senator KING. So, let's move now to the light attack.

General GOLDFEIN. Light attack. Sir, to understand light attack and where we're going—and I will tell you that I can't think of a better example of how we used the authorities you gave us to accelerate our understanding about a particular weapon system. You go back to the National Defense Strategy, the second line of effort is about building allies and partners. That's what the light attack is all about. The question—the strategy in the National Defense Strategy is to drive violent extremism down to the point where it can be handled inside the borders of governed nations. This is a global challenge, from the Philippines to Nigeria. So, the question we asked to ourselves was, How do we build a platform sensor/weapon combination and an intelligence-gathering and a network that will allow more allies and partners to join us in the fight against violent extremism? So, we went out—

Senator KING. So, this would be a—an aircraft that could be utilized by our allies.

General GOLDFEIN. Absolutely. That's been the primary focus. It remains our focus. So, again, we went out, 5 months after I signed an initial declaration of an experiment, when it went out, companies came in, we did an experiment at Holloman Air Force Base. We went on to a second experiment. What you'll see in our budget is money to procure three of each kind of airplane that we've been experimenting with. We're going to put a detachment at Nellis, where we do our task-level training. We're going to put a detachment at Hurlburt, where we do Special Ops. We're going to invite allies and partners. The most exciting part of this experiment, that

we would not have been able to do without your authorities, is, we have built a coalition-friendly intelligence-gathering and information-sharing network that we don't have to tell anybody, "No, you can't have this information." It's platform-agnostic. By owning these airplanes, now, as prototypes, we can modify. We're going to bring industry in, we're going to bring allies and partners in, and we're trying to solve the math equation that currently exists in North Africa. One-thousand Americans plus 4,000 French enables 35,000 fighters that are taking on violent extremism across North Africa. This is the air-component contribution to the National Defense Strategy, to do just that.

Senator KING. I take it from your comments that you feel like this has been a worthwhile experiment, and that we're making some real progress.

General GOLDFEIN. Yes, sir. Not only has it been worthwhile, but I will tell you that the companies that have been with us from the beginning have been spectacular. I think there is no better example I can give you of how we used your intent for these authorities to advance. We're not even 2 years——

Senator KING. You mean you're saying, for the record, that we did something right?

General GOLDFEIN. Yes, sir. We jumped on it.

Senator KING. Thank you.

I'm out of time, but a question for the record. I'm very interested in maintenance levels and readiness levels of aircraft, and increasing those levels to, if not duplicate, but approach commercial availabilities. For the record, if you could give me some thoughts on where we are, progress made, perhaps graph where we are. You understand the nature of the question.

[The information referred to follows:]



CAF/MAF Component	MDS	TAI*	AA Std	3-MO AA Avg	10-yr AA Avg	MC Std	3-MO MC Avg	10-yr MC Avg
CAF	A010C	281	63%	63%	63%	76%	72%	73%
	B001B	62	53%	27%	38%	57%	46%	51%
	B002A	20	55%	41%	40%	51%	57%	54%
	B052H	75	58%	54%	59%	71%	67%	74%
	CV022B	50	69%	45%	53%	64%	53%	60%
	F015C	211	57%	58%	60%	76%	70%	71%
	F015D	23	57%	42%	60%	76%	71%	71%
	F015E	217	66%	60%	64%	74%	72%	74%
	F016C	784	72%	66%	66%	80%	73%	73%
	F016D	154	72%	61%	61%	80%	70%	71%
	F022A	184	72%	46%	54%	80%	53%	62%
	F035A	187	65%	52%	47%	75%	60%	56%
	HH060G	97	73%	50%	58%	74%	64%	73%
	MC130J	37	71%	64%	76%	84%	80%	85%
	MC130P	0	0%	0%	60%	0%	0%	70%
	MQ001B	30	80%	88%	83%	86%	100%	92%
	MQ009A	260	79%	79%	78%	85%	90%	89%
	UH001N	63	74%	70%	74%	80%	81%	83%
MAF	C017A	222	79%	72%	71%	88%	82%	85%
	C130H	173	64%	53%	61%	75%	65%	73%
	C130J	128	72%	70%	72%	85%	77%	79%
	KC010A	59	75%	68%	68%	85%	80%	81%
	KC135R	343	74%	64%	67%	85%	73%	77%
	KC135T	54	74%	67%	68%	85%	73%	78%

Senator KING. Thank you very much.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator King.

Senator Kaine.

Senator KAINE. Thank you, Mr. Chair.

Thanks, to the witnesses. Secretary Wilson, I'll add my congratulations. I'll tell you who I'd be—who is really nervous right now. The individual running Air Force ROTC at UTEP [University of Texas El Paso], because if that program isn't the best-performing one in the country, with the former Secretary of the Air Force as president of the university, that person's going to have some 'splaining to do, I think. So——

Secretary WILSON. Sadly, there's only Army ROTC at UTEP, so——

Senator KAINE. Okay, good. All right. They ducked that bullet. Congratulations to you.

I just want to pick up, first, on comments—a number of folks on the other side of the dais here have raised the specter of CR. Folks on this side of the dais aren't talking about CR. The notion that we're heading toward a CR, I hear that from one side. I don't know where that's coming from. We don't want a CR. We want an appropriations bill, and we'll get one. We got a great appropriations deal at the end of 2018, with two Republican houses, that Republican colleagues here voted for. But, then, after the President said he didn't like it, folks switched their votes, they voted against it, and we shut the Government down for 35 days. That hurt the military. Didn't hurt the Air Force directly, but the Coast Guard's part of

the military, even though it's not part of the DOD. They weren't getting paid for 35 days. So, let's be clear who's talking about CR, who's expressing worry about CR, who's saying we might run into a CR. It's not Democrats. We don't want a CR. We want a budget.

Let me just ask, If there is a CR and sequester kicks back in, my understanding is, it's not steady-state funding. Am I correct that funding would start to ratchet down under a CR if sequester kicks back in?

Secretary WILSON. Senator, if you move to a sequester, the cut for the Air Force would be about \$29 billion. I think you were at another hearing when I was talking about this, but that's four times the size of the sequester we had last—

Senator KAINE. Yeah.

Secretary WILSON.—time the Air Force went through this, and just to—so, the choices—I mean, sequester would be across the side—

Senator KAINE. Right.

Secretary WILSON.—of all program elements. But, if it were concentrated, the scope of this is—it would be all F-35s, all KC-46s, all B-21s stopped, ground-based strategic deterrent, all research, development, test, and procurement of space, and most fourth- and fifth-generation modifications, all science and technology. You add all of that together, and you get \$29 billion in a single year.

Senator KAINE. Sequester would be foolish. CR would be foolish. There's nobody on this side of the dais who is talking about either. We can do an appropriations bill.

Let me move to hurricane relief. I have a publication from the OSD Comptroller, and I just want to make sure this is right. The Air Force hurricane recovery estimate—just the Air Force—is 5 billion—that's my understanding—for Tyndall, Eglin, Warner Robins, Goldsboro, Sumter, and Hampton, VA. Is that 5-billion number accurate, Madam Secretary?

Secretary WILSON. It's 3.7 plus 1.2.

Senator KAINE. Okay. So, 4.9—\$4.9 billion. Now, that's the Air Force number. The—DOD-wide, the hurricane recovery request is \$8.9 billion. That's for Hurricanes Michael and Florence. Here's the way that we're proposing to deal with that. The DOD has—they're trying to cobble together 2.4 billion out of the fiscal year 2019 budget, and they're flexing cash around to be able to do it. They may need a supplemental of 1.8. They may not be able to find enough, but they're trying to find 2.4 billion in fiscal year 2019. The Department has, in the budget—the budget before us—3 billion for fiscal year 2020. So, that gets to 5.4 out of the 8.9. That leaves 3.5, 3.6 billion unfunded for hurricane relief. Now, I'm struck, when I saw that the unfunded requirement for hurricane relief is \$3.6 billion, that that is exactly the amount that the President is taking out of the fiscal year 2019 MILCON budget: \$3.6 billion. It's 3.6 billion out of MILCON. It's 2.5 out of the drug interdiction account.

So, if we were not taking the 3.6 out of MILCON to deal with what your colleagues have testified here is a nonmilitary emergency, that \$3.6 billion could be used to fill the unfunded requirements for hurricane relief for the entire DOD. I'm just putting that on the record, because many of us voted against the declaration, a

few weeks back, because we don't think a nonmilitary emergency should give the President a license to ransack the military's budget. The numbers, dollar for dollar, are the same. That \$3.6 billion is the amount of the unfunded requirement to do the hurricane relief on Tyndall and on other installations—Lejeune, et cetera—that are outside the Air Force. That's important.

General Goldfein, the last thing I want to say is this. Military housing folks have asked you about it. Your statement in that hearing, where you said, "I've lived in military housing most of my life, as a child, as a member in the military, and my wife and my kids have lived in military housing." I think you said 50 years, plus, in military housing, or something like that. You said that you have never worried for your own health, you've never worried for the health of your spouse, you've never worried for the health of your kids in military housing. You said that in a very powerful way to point out that people who are in military housing right now shouldn't have to, either. That comment gave me a feeling that there is a command presence here that's going to take this very, very seriously until we get it right. We'll make sure that you do. But, I'm given confidence by the way you expressed that.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator.

You know, let me just make one comment, here, and we can discuss this in a different setting, perhaps. Just keep in mind that the problem that many on this side of the aisle see is parity. This is the first time in my memory that we've been in a situation—and I'm older than you are, I've been around longer than you have, and I've observed, certainly since World War II, that we have not been in a situation where defending America wasn't the number-one priority. It is no longer, as a result of the last administration.

Senator Blumenthal.

Senator BLUMENTHAL. Thank you. Thanks, Mr. Chairman.

I know there have been questions about the F-35 and the F-15. As you well know, prior to the release of the President's budget request, my Connecticut colleagues and I sent a letter to Acting Secretary Shanahan expressing concern about the then-rumored cuts to the F-35 program. I am deeply disappointed, more so now than then, that these reports proved to be true. Instead of the robust investment in the fifth-generation F-35 Joint Strike Fighter, this budget request proposes a mix of fourth- and fifth-generation fighters. This step seems to be a shift in strategic planning. This shift appears to have been directed by the Secretary—or, I should say, the Acting Secretary of Defense, not the Air Force. Is that true?

Secretary WILSON. No, sir. The Secretary of—Acting Secretary of Defense did not direct us to do that—or did not direct me to do that.

Senator BLUMENTHAL. Was it your initiative?

Secretary WILSON. I'm sorry, sir, I didn't hear you.

Senator BLUMENTHAL. Was it your initiative?

Secretary WILSON. Sir, when we put together a budget and make sausage, there's—we put forward ideas, they then go forward to the OSD level and cost analysis and program evaluation, and the Comptroller then look at various programs and how all of this works. In the process of that, we did a deep dive particularly look-

ing at tactical air and how are we going to get to where we need to be without our airframes—we've got some airframes, particularly the F-15C, that's not going to make it there. You look at the various sand charts and pieces of analysis and what the combatant commander requirements are, and we cannot meet their requirements in capacity, because that F-15C—it's just not going to live long enough. What should we do about that within the money that we have? The solution that we came up with, in concert with CAPE and the Comptroller, was to buy—we're committed to the F-35—was to buy 48 F-35s and then, instead of trying to extend the life of those F-15Cs, replace them with an F-15E.

Senator BLUMENTHAL. What was the initial recommendation, though, that you made before all of the grinders—

Secretary WILSON. Well—

Senator BLUMENTHAL.—then took over?

Secretary WILSON. I can tell you that, when we—what the—what we could do within the money that we were—the way this works—and I didn't know it when I was up here on the Hill, but you—we, basically, are given a top line internal to the Air Force and try to build the best program we can to achieve the National Defense Strategy objectives within that top line. That included a proposal for 48 F-35s. With that, we would see a decline in the number of fighter squadrons we would have in the out years, because those F-15Cs weren't going to make it. When we went forward and said, what does this mean for our ability to meet combatant commander requirements? The answer was good. We can't keep declining in the number of fighter squadrons we have. In cooperation with CAPE and the Comptroller, one of the ideas was to replace those dying F-15Cs with an F-15EX off the line. By doing that, the Qataris and the Saudis have kept the line open, and have invested in modernization there. We wouldn't have any MILCON cost. We could do local training to shift from an F-15C to an F-15E. Most of the ground equipment is the same. Many of the parts are the same. We wouldn't have to retrain the maintainers. So, when it's a balance of capacity and capability, given the budget that we have available, that was what made, we thought, the most sense.

Senator BLUMENTHAL. So—I hate to be simplistic about it—your initial recommendation, as I understand it, your initial budget that you submitted to the Secretary of Defense did not include the F-15s, and then all of these factors were made aware to you?

Secretary WILSON. Senator, we do the best we can with the top line we're given internally, and that included 48 F-35s and a declining size of the number of fighter squadrons. The question then was, What is the impact of that? When we went forward with the Office of the Secretary of Defense and the CAPE and the Comptroller—and, you know, they never allocate all the money out when we go through this process, and it was, "Well, if there were more money available, can we stem that decline in the number of fighter squadrons we have available?" The first thing was to keep 48 F-35s. We're committed to that platform. It's a game changer. How can we reduce the impact of the loss of the F-15C? This was the answer we came up with.

General GOLDFEIN. Sir, I would just offer that, as part of the dialogue, one of the things that the Secretary and I made very clear

was that we were not going to take money from the F-35 and put it into an F-15. This is additive, F-15. We absolutely have to keep the F-35 program on track, because, as the largest customer, we speak not only for the United States Air Force, but also for our teammates in the Navy and the Marine Corps that are buying the F-35, and all of our international teammates, because we need our international allies and partners in the fifth generation with us. To give you an example, we need Canada, who's going through their process right now. We need them. They're part of an alliance that we've worked together in NORAD for 60 years. To defend our Homeland together, we need them in the fifth-generation. So, we're not backing an inch off the F-35 as we go forward.

Senator BLUMENTHAL. Well, I take it at word, because my time is expired, that there will be no diminishing of commitment to the F-35. I think that is certainly the right goal.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you very much.

Let me make one comment about the F-35 that I don't think was—has been made. Yeah, we have the figure of 1,763—1,763 that's supposed in this timeframe. We are now at 182. We should be at 1,100. I think you would agree with that figure. So, that's one of the problems that we have not had a chance to explore, but it's a problem, certainly not of your doing.

Appreciate very much the great responses that you made to all these questions.

We're adjourned.

[Whereupon, at 11:36 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR MIKE ROUNDS

##### BOMBERS

1. Senator ROUNDS. Secretary Wilson and General Goldfein, how many combat coded bombers does the Air Force We Need require?

Secretary WILSON and General GOLDFEIN. The Air Force We Need requires a total of 14 bomber squadrons, an increase of 5 bomber squadrons. The exact number of combat coded bombers is classified but remains available in the Fiscal Year 2018 NDAA Section 1064 Report.

2. Senator ROUNDS. Secretary Wilson and General Goldfein, how many penetrating (non-standoff) bombers does the Air Force We Need require?

Secretary WILSON and General GOLDFEIN. The Air Force We Need requires a total of 14 bomber squadrons, an increase of 5 bomber squadrons. To achieve this capacity while reducing overall bomber operations and sustainment costs, the Air Force plans to keep the current four B-52 squadrons and transition the rest of the bombers to B-21 long-term. Therefore, the remaining 10 bomber squadrons would eventually consist of penetrating bombers. The exact number of penetrating combat coded bombers is classified but remains available in the Fiscal Year 2018 NDAA Section 1064 Report.

#### QUESTIONS SUBMITTED BY SENATOR JONI ERNST

##### MANNED-UNMANNED TEAMING

3. Senator ERNST. General Goldfein, as we continue to build readiness and modernize our forces to potentially fight a great power war, we must contend with issues such as the ongoing pilot shortage. Part of this can be addressed through recruitment and retention, however, emerging capabilities provide additional avenues to overcome this challenge, as well as many others. What initiatives has the Air

Force undertaken in the realm of manned-unmanned teaming to increase the number of combat aircraft without necessarily requiring as many pilots?

General GOLDFEIN. The Air Force is continuing to develop, demonstrate and assess advanced control automation techniques, a key initiative to make manned-unmanned teaming work. In our budget we are funding research to continue the development in three areas: 1) mixed initiative control techniques for teams of remotely piloted aircraft and/or manned-unmanned teams in contested, dynamic mission environments; 2) integration of unmanned systems into controlled airspace and airbase operations; and 3) autonomous behaviors for safe, loyal wingman that maintain appropriate human control over weapons employment.

4. Senator ERNST. General Goldfein, do you foresee a future in which a single pilot or pilot-pair could fly while simultaneously directing autonomous aircraft in combat?

General GOLDFEIN. This is exactly the type of game-changing capability we envision for future autonomous combat air vehicles. Manned and unmanned teaming in future operations will require unmanned platforms to autonomously fly in complex and fluid formations. Manned and unmanned teaming will also be dependent upon on how well our systems seamlessly share information.

5. Senator ERNST. General Goldfein, what hurdles would need to be overcome to field these types of formations, and how would emerging technologies such as artificial intelligence be leveraged to field them effectively?

General GOLDFEIN. A variety of technologies, including advanced sensors, flight control systems, artificial intelligence, flight safety systems, communications capability and others will have to be leveraged to field these types of formations. As the technology evolves, we will iteratively hone our thinking on human control, develop employment concepts, and then the detailed tactics, techniques and procedures needed to employ these new capabilities.

#### QUESTIONS SUBMITTED BY SENATOR DAN SULLIVAN

##### F-35 BEDDOWN

6. Senator SULLIVAN. Secretary Wilson and General Goldfein, is the Air Force's beddown of F-35 aircraft proceeding on schedule?

Secretary WILSON and General GOLDFEIN. The beddown of 54 F-35As in 2 Squadrons at Eielson AFB, AK remains on track. The first squadron has already started receiving F-35 personnel, and is currently planned to receive F-35s from the spring of 2020 to the spring of 2021. The second squadron's F-35s are planned to arrive from the spring of 2021 to the winter 2021/2022.

7. Senator SULLIVAN. General Goldfein, please describe the strategic importance of bedding two squadrons of F-35s down at Eielson AFB.

General GOLDFEIN. F-35 beddown at Eielson AFB adds the newest fifth generation fighters to our major Air Force command within the Pacific, adding significant capacity to provide Air Superiority to United States Indo-Pacific Command's area of responsibility. In accordance with the National Defense Strategy, they are strategically located there to deter Russia and China and aid the United States in a time of great power competition.

8. Senator SULLIVAN. Secretary Wilson and General Goldfein, are there any ongoing military construction projects at Eielson AFB that would affect the F-35 beddown, if the project were to be delayed?

Secretary WILSON and General GOLDFEIN. There are no ongoing Military Construction projects at Eielson AFB, AK that, if delayed, would affect the F-35 beddown.

9. Senator SULLIVAN. Secretary Wilson and General Goldfein, what are the programmed but not yet awarded military construction projects at Eielson AFB that would affect the F-35 beddown, if the project were to be delayed or cancelled?

Secretary WILSON and General GOLDFEIN. There are no programmed, but not yet awarded Military Construction projects at Eielson AFB, AK that, if delayed or cancelled, would affect the F-35 beddown.

##### KC-46 PROGRESS

10. Senator SULLIVAN. Secretary Wilson, what problems and concerns with KC-46 production and quality control prompted you to halt delivery of KC-46 aircraft

from Boeing twice? What was the timeline for those problems, concerns, and the Air Force's decision-making process?

Secretary WILSON. On February 28, 2019, the Air Force halted KC-46A aircraft acceptance after discovering excessive Foreign Object Debris (FOD) during aircraft acceptance inspections. Deliveries resumed on March 11, 2019, following Boeing's Corrective Action Plan brief to the Air Force and successful FOD sweeps of delivering aircraft. Deliveries were halted a second time on March 23, 2019, after inspections to selected sealed areas uncovered additional FOD as well as workmanship and quality issues. On April 5, 2019, the Air Force resumed deliveries after determining additional corrective actions proposed by Boeing were sufficient. Delivered aircraft can continue to fly as there is no immediate safety of flight issue. Inspections to select sealed areas of delivered aircraft are required and will be accomplished via a Time Compliance Technical Order in the coming months, at Boeing's expense.

11. Senator SULLIVAN. Secretary Wilson, when will you release the outcome of the Air Force's Strategic Basing Decision for KC-46 OCONUS basing?

Secretary WILSON. The Air Force will make future final basing decisions approximately three years prior to projected first aircraft delivery. Future KC-46A basing strategies will be made in light of the National Defense Strategy and combatant commander requirements to maintain optimum combat capacity during recapitalization. The National Defense Strategy informs the optimal sequencing of Active Duty, Reserve, and guard locations for future KC-46A squadrons.

---

#### QUESTIONS SUBMITTED BY SENATOR DAVID PERDUE

##### NEW AIR NATIONAL GUARD AEROMEDICAL EVACUATION SQUADRON

12. Senator PERDUE. Secretary Wilson, this year, the Air Force will continue with its strategic basing process to establish a new Aeromedical Evacuation Squadron (AES) within the Air National Guard, including site surveys this spring. Savannah Hilton Head Air Guard Station is one of fourteen locations being considered. The September 18, 2018, approval of the enterprise definition and criteria emphasizes the operational, manpower, and capacity requirements of the AES mission. Within the manpower criteria is an emphasis on recruiting, and in particular, registered nurses. Georgia Southern University has a top tier School of Nursing located in Savannah and is uniquely positioned to offer support in the way of nursing professionals, as well as other health professional programs. How important is a local, academic recruiting pipeline to the success of this new AES?

Secretary WILSON. As shown in the basing criteria released to Congress, registered nurses and the ability to recruit form 70 percent of the Recruiting score listed under Manpower, which is a Mission criterion. Recruiting and retention, combined, form over half the Mission score. Recruiting and retention are primary considerations for this Air National Guard basing action.

13. Senator PERDUE. Secretary Wilson, how important is support from local academic institutions to ensure there is the required, trained workforce available to this mission?

Secretary WILSON. The recruiting measure in part includes assessing the registered nurse population proximate to the installation, therefore although not directly measured as a part of this basing action, local academic support may positively impact recruiting pool and retention levels, which are measured.

14. Senator PERDUE. Secretary Wilson, how can academic and workforce development partners tailor their programs to prepare to support the Aeromedical Evacuation Squadron?

Secretary WILSON. Academic institutions offering Bachelors of Science in Nursing programs benefit the Air Force by providing the basic qualifications needed by flight nurses. Also any partnerships related to physician training would also apply. Workforce development partners, with critical care capabilities, should allow Air Force medics to practice within their facilities through memorandums of agreements or training affiliation agreements with our Active Duty medical treatment facilities so our Aeromedical Evacuation medics can keep their skills up.

##### JSTARS/ABMS

15. Senator PERDUE. Secretary Wilson, in February 2019, the Air Force submitted a report to Congress on the "Joint Surveillance Target and Attack Radar System

(JSTARS) Sustainment and Viability Plan". The report states that the E-8C fleet service life projection has been updated and extended as a result of the wing and fuselage widespread fatigue damage analyses conducted by Boeing. The report states that these analyses indicate the ability to operate "into the 2030s". However, the platform's service life may be much greater, with the potential to operate well into the 2040s. What is the most current service life projection for the E-8C JSTARS fleet?

Secretary WILSON. The current airframe service life projection is past 2070, but other critical components begin to limit the E-8C's service life in the 2030s. The next major limitation is engine availability, driven by engine depot throughput, a lack of replacement parts to maintain aging engines. In parallel, multiple communication and datalink mandates, and aging/Diminishing Manufacturing Sources (DMS) components all limit the service life.

16. Senator PERDUE. Secretary Wilson, the February 2019 JSTARS Sustainment and Viability Plan states that the System Program Office is currently executing multiple initiatives to address declining fleet aircraft availability rates, to include addressing negative non-mission capable (NMC) drivers. However, the report does not identify which elements of the aircraft are most responsible for driving NMC rates, nor does it describe how exactly the Air Force intends to address these issues. The propulsion system has repeatedly been identified as the number one non-mission capable driver for the platform, and that it is also one of the largest time and cost drivers during depot maintenance. Of the multiple initiatives currently being executed by the System Program Office, are there any related to the propulsion system, and what is the Air Force's plan going forward to address issues related to the propulsion system?

Secretary WILSON. The program office is actively pursuing efforts to address key non-mission critical drivers such as engine availability. Efforts include: locking out the engine thrust reversers; working with Tinker engine depot to improve engine replacement throughput; and sub-contracting engine maintenance to augment the Tinker depot. Each will increase engine availability, but not eliminate all issues completely.

The thrust reversers are the biggest non-mission capable driver for the JSTARS engines. The thrust reverser lock out project is expected to begin this summer and last six months. During the six months, engineers will design a permanent hardware solution, which locks the thrust reverse in place preventing any movement of the reverse eliminating the issue. The project is funded.

To address parts limitations, the Air Force will ask for additional money in fiscal year 2021 to increase depot part throughput and availability. Right now, the program office is working with Northrop Grumman to sub-contract an alternative engine depot to augment the current depot throughput.

17. Senator PERDUE. Secretary Wilson, the progression of the ABMS program is now being measured by "phases", rather than "increments." What is the rationale for this shift, as well the impact it will have on formal milestone designations, decision authority, and progress measurement?

Secretary WILSON. The objective is to field ABMS capabilities as they are ready and not wait for a specific preconceived date in the future.

18. Senator PERDUE. Secretary Wilson, does the Air Force have an estimate on when they expect ABMS to deliver a BMC2 and GMTI capability that is at least comparable to that of the current JSTARS fleet? Please provide both the timing (fiscal year) and acquisition stage (both phase and increment).

Secretary WILSON. We are committed to doing ABMS thoughtfully, prior to the retirement of any legacy systems, to ensure that we have the right warfighter capabilities. This will enable us to project power in contested environment, not simply a permissive environment.

19. Senator PERDUE. Secretary Wilson, on June 4, 2018, the Air Force announced that Robins would host the initial elements of ABMS. The press release specifically said, "Selecting Robins enables the Air Force to leverage existing infrastructure and the more than 40 years of experience resident in the Robins' workforce. There is no intent to reduce manpower at Robins AFB as the service transitions to ABMS." Is it still the case that the Air Force expects no reduction of manpower at Robins AFB as the service transitions to ABMS?

Secretary WILSON. Yes. The Air Force still expects no reduction of manpower at Robins AFB as the service transitions to ABMS.



## QUESTIONS SUBMITTED BY SENATOR JACK REED

## SUPPORT TO SOUTHERN BORDER OPERATIONS

20. Senator REED. General Goldfein, in a response to a question from Sen. Warren, you said there were no training exercises or impacted deployments based on the Air Force's support of troop deployments to the southern border with Mexico. Given the news and readiness impacts General Neller outlined in his memoranda to Secretary Spencer, I wanted to give you an opportunity to clarify. Have there been any adverse impacts to unit readiness, any training exercises deferred or missed, or otherwise any impacts on unit deployments based on Air Force support to southern border operations?

General GOLDFEIN. General Goldfein's memo dated May 2, 2019 provided amplifying details to answer Senator Warren's questions on the readiness challenges posed by the deployment of troops to the southern border. No exercises or deployments were cancelled or delayed due to a unit supporting a southern border deployment. However, an HH-60G Rescue Squadron missed an opportunity to attend the Navy's TRIDENT Exercise from January 14–26, 2019. The exercise would have provided an opportune platform for deck landings. The Rescue Squadron's inability to attend the Navy exercise due to southern border deployment had a limited impact on a training opportunity. There was no impact to long-term readiness of the squadron due to other training opportunities throughout the year and deck landings are not required for current deployments. The HH-60G Rescue Squadron is no longer supporting southern border operations as of January 31, 2019.

## QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

## F-35

21. Senator BLUMENTHAL. Secretary Wilson, with the recent shift in National Defense Strategy toward great power competition against near peer threats like Russia and China, isn't having a robust generation 5 tactical fighter aircraft like the F-35 now more important than ever? What is the value of having stealth fighter in a non-permissive environment?

Secretary WILSON. The capabilities of the F-35 are crucial for deterring and prevailing in combat against a peer adversary. The F-35's stealth capabilities allow it to penetrate enemy advanced air defense to hold key targets at risk. Additionally, the F-35's Battle Management Command and Control (BMC2) capabilities are essential for Joint Team success. The F-35 increases the value of other assets against a peer threat—it is the centerpiece of achieving air superiority in future contested environments.

22. Senator BLUMENTHAL. Secretary Wilson, the Air Force unfunded priority list includes 12 F-35A's. How would the Air Force's benefit from receiving those additional 12 F-35's in this year's budget authorization and appropriation from Congress?

Secretary WILSON. The F-35 brings game-changing capabilities to the fight—it has increased survivability through a number of technologies including stealth. Its advanced integrated sensors will provide battlespace awareness to the Joint Team through the resilient network. The F-35's situational awareness and targeting abilities allow it to effectively employ our most advanced weapons in a highly contested environment. Analysis shows that we must procure 72 fighter aircraft a year to account for aging aircraft retirements and to meet National Defense Strategy and Operations Plans assigned missions. Appropriating funding for an additional 12 F-35A's would bring the Air Force closer to that number.

23. Senator BLUMENTHAL. Secretary Wilson, you have said recently that F-15s were not in the initial Air Force budget you submitted to the Secretary of Defense. Why did you decide to reverse course and add 8 F-15EX's to your budget this year? Were you directed to do so?

Secretary WILSON. No. It is true that our initial fiscal year 2020 POM submission did not include the F-15EX; however, several key pieces of analysis and information became available during Program and Budget Review (PBR) to support the fiscal year 2020 PB position to procure the aircraft. We must procure 72 fighter aircraft a year to account for aging aircraft retirements and to meet the National Defense Strategy. This requirement, combined with current budget realities and the global missions of the Air Force demand a mix of 4th and 5th generation force structure to balance near and mid-term readiness with future needs.

## DOD RESIGNATIONS

24. Senator BLUMENTHAL. Secretary Wilson, did the abrupt departure of Secretary Mattis influence your decision to resign? Why did you decide now is the right time to leave the Air Force?

Secretary WILSON. Questions not answered; Personal questions about SecAF resignation.

25. Senator BLUMENTHAL. Secretary Wilson, are you concerned that your position—like many other administration positions—may remain unfilled for an extended period of time? What are the potential negative effects of this void?

Secretary WILSON. Questions not answered; Personal questions about SecAF resignation

26. Senator BLUMENTHAL. Secretary Wilson, what qualifications and experience should this Committee seek in your successor as we vet the next Air Force Secretary?

Secretary WILSON. Questions not answered; Personal questions about SecAF resignation

27. Senator BLUMENTHAL. Secretary Wilson, as you know, Acting Secretary Shanahan has been serving in a temporary status since January 1st. This is the only time in the last 70 years the Secretary of Defense position has been vacant for more than two months. How has this vacancy impacted the Department, and specifically the Air Force? Are you concerned that Acting Secretary Shanahan appears to be serving indefinitely, without a confirmation to serve as Secretary of Defense?

Secretary WILSON. Questions not answered; Personal questions about SecAF resignation

## C-130H MODERNIZATION

28. Senator BLUMENTHAL. Secretary Wilson, can you provide any updates to the approval process since I wrote to you on this issue?

Secretary WILSON. The NP2000 8-bladed propeller is a performance enhancing modification approved and currently funded for 44 total C-130H aircraft. Currently, 11 aircraft have had been modified with NP2000 propellers. The remaining 33 aircraft will begin NP2000 installations in June 2020. Since your letter, we have continued flight testing of the NP2000 propeller with other C-130H propulsion modifications all scheduled for completion fall 2019. Data from this test and the accompanying analysis of performance information will inform Air Force leadership of composite propeller capabilities as a baseline for future decisions for the C-130H fleet.

29. Senator BLUMENTHAL. Secretary Wilson, in light of the recent tragic events and the subsequent revelation of the serious risk to our Air Force C-130H aircrews while flying the legacy propeller, what is the proposed timeline for installation of the NP-2000 propeller on the C-130H's like the ones we have in Connecticut?

Secretary WILSON. The Air Force continues flight tests of the NP2000 propeller with other C-130H propulsion modifications scheduled to complete fall 2019. Data from this test and the accompanying analysis of performance information will inform Air Force leadership of composite propeller capabilities as a baseline for future decisions for the C-130H fleet.

30. Senator BLUMENTHAL. Secretary Wilson, I understand that Collins Aerospace is currently producing enough propellers for two aircraft per month. Due to the risk associated with the legacy propeller, would you support an increase to 3-4 aircraft per month if Congress appropriated additional funding to support the increased production costs?

Secretary WILSON. Our budget request includes a plan for propeller modifications. Should congress appropriate additional funds, it is possible the Air Force could accelerate the modification.

## QUESTIONS SUBMITTED BY SENATOR MAZIE HIRONO

## INDO-PACIFIC IMPORTANCE

31. Senator HIRONO. Secretary Wilson, the U.S. National Security planning has for several years centered its policies in relation to the five major threats it faces, four of which are in the Indo-Pacific AOR. What concerns you most with regard to the Indo-Pacific region as the Secretary of the Air Force?

Secretary WILSON. There are four main areas of concern, basically stemming from China's threatening regional posture: 1) Rapid growth of Chinese ability to attack United States and allied forces throughout the region and hinder United States entry, 2) Chinese competitive actions aimed at pushing the United States out of the Western Pacific, 3) Lack of resilient and hardened basing to execute Agile Combat Employment, and 4) Increasing ops-tempo on USAF and allied air forces in responding to aggressive Chinese intrusions.

Iran, North Korea, and other violent extremist groups are opponents we are equipped to manage, but China's large economy has enabled its huge and often hidden military expenditures. Ironically, we enabled China's economic growth by welcoming them into the international system with open arms. Over the last few years, however, it has become abundantly clear that China fundamentally rejects the equitable system—the system which has prospered more than any other—and aims to dominate its own sphere of influence by force, while threatening us in our own region.

32. Senator HIRONO. Secretary Wilson, are additional assets and investments needed for the Air Force to maintain its competitive advantage against our adversaries in the Indo-Pacific region? If so, in what areas?

Secretary WILSON. There are several material steps we can take such as base hardening/base resiliency, more munitions, more cyber capability, hypersonics, and resilience in space. But we are only beginning to invest. Just as important is the time and effort our leaders put into engaging with our allies and partners, explaining our commitment to a free and open Indo Pacific, and our willingness to work cooperatively with all nations who wish to keep it that way.

## INDO-PACIFIC OPERATIONS

33. Senator HIRONO. Secretary Wilson, last month, B-52H Stratofortress bombers deployed in support of U.S. Indo-Pacific Command's Continuous Bomber Presence (CBP). The CBP has been operational for more than a decade in support of a free and open Indo-Pacific. The bombers conduct training with NATO allies and partners to enhance interoperability and readiness. During this operation, one of the bombers flew over contested islands in the South China Sea for the first time since November. United States officials recently criticized China for setting up the Air Defense Identification Zone (ADIZ) over the East China Sea in 2013, which does not conform to international law and overlaps similar zones operated by Japan, South Korea, and Taiwan. How important are operations such as to show support to United States partnerships abroad and to communicate our commitment to ensuring the South China Sea remains open?

Secretary WILSON. Our Air Force's presence, along with our sister services and civilian counterparts, is critical to maintaining a free and open Indo-Pacific.

To ensure we balance this critical mission with readiness needs, we continually evaluate the specific measures we take, such as CBP, for their effectiveness and efficiency. That means our specific actions can and will change, but our commitment remains firm.

34. Senator HIRONO. Secretary Wilson, how important are these types of missions in support of Air Force readiness?

Secretary WILSON. Real world missions require a ready and able force. In some cases, employing that force in critical missions improves readiness. However, there are some aspects of readiness that are best done or can only be done, within the United States. There may come a point when best supporting a particular mission means bringing forces home, and possibly changing the configuration of forces abroad.

## ARTIFICIAL INTELLIGENCE

35. Senator HIRONO. Secretary Wilson, I see that your unfunded priority list calls for \$18 million for further development and demonstration of cutting-edge technologies like hypersonics and autonomy. What is the importance of these tech-

nologies for the capabilities of the Air Force to meet our near-peer and peer adversaries?

Secretary WILSON. In the dynamic battlespace, the Air Force must gather decision-quality information and act on it faster than our adversaries can react. Technologies such as autonomy and hypersonics will give the Air Force advantages over near-peer and peer adversaries in regards to acquiring information and acting upon it with speed. Artificial intelligence, aided by machine learning, will play a critical role in enhancing human-machine teaming, allowing for collaborative platforms and sensors, predictive analysis, and rapid decision making. Current autonomy research efforts have demonstrated a long-range, high subsonic unmanned air vehicle, as well as live mission exploitation techniques to accelerate analysis of full motion video, computer assisted detection, characterization, and tracking of humans in operational surveillance imagery. Current hypersonics research efforts have demonstrated hypersonic engine performance in ground testing and physics based simulations for the utilization of hypersonic weapons. These technology efforts will improve decision-making processes and advance weaponry that outpaces our adversaries. The additional funding would accelerate the completion of these technology efforts.

#### CAPABILITY AND READINESS

36. Senator HIRONO. Secretary Wilson and General Goldfein, the National Defense Strategy clearly articulates a focus on near-peer and peer competitors such as China and Russia. How does the budget reflect the requirements of the Air Force to meet the challenges of the Great Power Competition?

Secretary WILSON and General GOLDFEIN. The National Defense Strategy directs the Air Force to increase lethality, restore readiness, and prepare for high-end conflict against a near-peer adversary. We are getting after the challenges of the NDS in our budget by funding programs that are vital to win in the high-end fight, such as: hypersonics, F-35, Next Generation Air Dominance, B-21 Raider, KC-46, T-X, Ground Based Strategic Deterrent, ABMS, and preferred munitions. However, as our Air Force We Need analysis shows the Air Force at 312 operational squadrons is too small to meet the demands of the NDS.

37. Senator HIRONO. Secretary Wilson and General Goldfein, your budget calls for increasing the Air Force by 4,400 airmen and 5,143 civilians. What are you doing to ensure that you can get the proper talent to fill these vital positions?

Secretary WILSON and General GOLDFEIN. In an environment with a fast growing competition for talent spurred by a robust economy, we are committed to improving how we recruit and prepare airmen to succeed, even as we have found success in attracting top talent from across our Nation. The increased airmen will go to support maintenance of our new weapon systems as well as increasing requirements in cyber, intelligence, rated and pilot production, career enlisted aviators and battlefield airmen. We have found success in recruiting most of these areas, and to ensure continued success we've adopted a total force recruiting approach which allows all recruiters to fill positions in the Active, Guard, Reserve and civil service. This ensures we maximize the productivity of each recruiter. We've added new recruiters to markets where we need additional support and focused our advertising and marketing program. Moreover, we've seen an increase in the number of leads through online career interest survey, Air Force Work Interest Navigator (AF-WIN). To date this survey has generated over 141,000 leads—an average of over 400 surveys per day. We also stood up a squadron that is solely responsible for recruiting battlefield airmen, as well as a recruiting detachment to focus on engaging the pre-accessions demographic as part of the Air Force's efforts to improve outreach to youth, specifically increasing opportunities and awareness to diverse populations. Using these multiple approaches and tools, we are confident highly talented and skilled Americans will continue to find quality of service and quality of life while serving their country as airmen.

The Air Force instituted numerous improvements to our civilian hiring and recruitment processes and developed a Comprehensive Recruiting Strategy in order to increase our applicant pools. We established a Talent Acquisition Team dedicated to recruiting civilian talent for mission critical and highly skilled fields. The Talent Acquisition Team combines workforce planning, forecasting, and analysis with innovative marketing, acquisition tools, and sourcing strategies to address both short and long-term hiring needs. The talent acquisition strategy includes leveraging social media and civilian sector recruiting sources and technology to improve the speed and quality of hiring. As one example, from January through March 2019, the AF conducted 23 outreach and hiring events across the nation at 22 colleges/univer-

sities. These efforts increased recruiting by 63 percent and generated 93,000 primary leads. There are numerous other more localized programs at our Major Commands and installations throughout the country. The Air Force also implemented changes to our hiring processes to reduce time-to-hire in order to ensure we do not lose top talent through lengthy delays in hiring. We continue to make steady progress in reducing hiring timelines and are continuing to press for greater reform to civilian hiring.

#### MILITARY CONSTRUCTION FUNDING

38. Senator HIRONO. Secretary Wilson and General Goldfein, in your recent MILCON fiscal year 2020 budget request, the Air Force continues to prioritize critical infrastructure requirements to meet mission needs and operational timeliness. The request states that its MILCON investments support the combatant commanders' highest construction priorities, new weapons system beddowns, and modernization of research, development and testing. What is the importance of MILCON investments to improve your capabilities to deter our adversaries in the Indo-Pacific region?

Secretary WILSON and General GOLDFEIN. Military Construction investments are critical to supporting the operational beddown, training and employment of our future force. At the same time, Military Construction is vital to supporting our people and their families. While we are exploring a variety of different approaches to future military operations within the Indo-Pacific region, Military Construction will continue to be a vital part of all approaches.

Air Force Military Construction supports combatant commanders, beddown of new weapons systems such as the F-35, and recapitalization of our existing infrastructure. Military Construction investments are powerful tools in the Indo-Pacific region, as they provide us with alternative airfields, fuels resiliency, modernized facilities, and surveillance capabilities in remote and isolated areas. Each completed project reminds our partners and adversaries of the United States' commitment to the Indo-Pacific Region.

#### SEXUAL HARASSMENT AND RETALIATION

39. Senator HIRONO. Secretary Wilson and General Goldfein, annual reports on sexual assault in the military and annual reports on sexual harassment and violence at the military service academies consistently document the direct correlation between incidents of sexual harassment and incidents of sexual assault. Many past witnesses in Senate Armed Services Hearings have testified to the seriousness of addressing sexual harassment and sexual assault in the military. Please provide an update on what the Air Force is doing on the issue of sexual harassment and retaliation.

Secretary WILSON and General GOLDFEIN. Training: Sexual Harassment is a topic highlighted during the curriculum for all initial training. We also reinforce sexual harassment policy at different stages throughout an Airman's career. Additionally, Sexual Harassment Awareness Education (SHAE) Training is a tool we provide to Key Leaders to reiterate sexual harassment policy. SHAE training includes the following:

- Define sexual harassment
- Identify behaviors that may constitute sexual harassment using DOD definition
- Identify the effects and describe the impact of sexual harassment
- Prevention strategies
- Individual roles and responsibilities when addressing sexual harassment
- Sexual harassment scenarios

Prevention: In addition to training, we utilize organizational climate assessment tools as a preventive measure for Commanders to identify and track problematic behavior trends (to include sexual harassment), and develop action plans to address and counter those behaviors within their unit.

Complaint Processing Options/Policy: Military sexual harassment complainants have the option to file informal and formal complaints through the military equal opportunity process. Civilian complainants have the option of filing a sexual harassment complaint through the equal employment opportunity process.

Retaliation: We advise all complainants of their rights in regards to reprisal and retaliation by equal opportunity practitioners during initial discussions, and upon any inquiries by customers who contact the equal opportunity office. Any allegations of reprisal presented to the EO office by military personnel, including cadets, are referred to the Inspector General. We are aligning the AF Equal Opportunity Retaliation Program with DOD's Retaliation Prevention Response Strategy (RPRS), which is designed to operationalize the following:

- Develop and employ a common definition of retaliation to describe the full spectrum of retaliatory behavior;
- Initiate a data-driven approach to inform retaliation prevention and response mechanisms through a case tracking system;
- Hold offenders appropriately accountable;
- Facilitate a variety of support resources for sexual assault victims, sexual harassment complainants, witnesses, bystanders, and first responders;
- Provide leadership with additional education and tools to promote unit climates intolerant of retaliatory behavior.

## SPACE CAPABILITIES

40. Senator HIRONO. General Goldfein, the Maui Space Surveillance Site provides a space capability combining operational satellite tracking facilities with a research and development facility. What are some areas in which we could make greater space investments (e.g., cyber)?

General GOLDFEIN. The Air Force is making a number of key investments in space, consistent with the National Defense Strategy. First, we are recapitalizing current generation systems with resilient, defendable capabilities along with the means to defend them. Second, we are developing capabilities to fight back, if necessary, at a time, place, and domain of our choosing. Third, we are investing in the people that will develop, field, operate and support these new capabilities.

41. Senator HIRONO. General Goldfein, what is the importance of a whole-of-government approach when working with our allies in this integrated and interdependent domain?

General GOLDFEIN. A whole-of-government approach when working with our allies in an integrated and interdependent space domain is critically important for ensuring the dominance and lethality to deter, defend and if necessary fight and win a future war. We are threatened by economic, military and political aggression, and we need to preserve the peace through strength. Our strength as a nation, however, is greatly magnified by embracing allies and partners who share our values and contribute to our common defense. As part of this approach, the Air Force is strengthening alliances, establishing new partnerships, leveraging industry and non-governmental organizations and increasing information sharing. A prime venue for this was the April 2019 Space Symposium, which brought together Air Force, other Government entities, industry, international and commercial leaders in a week-long conference to collaborate and share best practices across the space enterprise. Other activities being pursued by the Air Force in support of a whole-of-government approach include increased international space training where we consistently review course material for increased inclusion of allied nations and the participation of allies and partners in U.S. wargames. The Air Force is also appropriately sharing more classified information with our allies, and it is integrating more allies into operations centers such as the Combined Space Operations Center at Vandenberg Air Force Base, California. This center was established last year to coordinate space intelligence sharing among allies and commercial space companies. Current participants include Australia, Canada, France, Germany, New Zealand and the United Kingdom.

## EAGLE VISION

42. Senator HIRONO. Secretary Wilson, the fiscal year 2020 Air Force Budget briefing documentation includes a claim that through the identification of redundant capabilities, the AF was able to divest all funding for the Eagle Vision program through an agreement between the Air Force and a National Geospatial Intelligence Agency. A claim is also made that the Air Force receives a higher resolution of service at no cost to the Air Force saving \$21 million per year.

Please submit a copy of the referenced agreement between the Air Force and NGA.

Secretary WILSON. While there is no formal memorandum of agreement between NGA and the Air Force, NGA's NextView License allows release of Digital Globe imagery to the Air Force. NGA's NextView License provides similar services of which some are identical in nature to Eagle Vision. Please see Appendix A, page 776, "NextView License Sharing and Release Guidance."

43. Senator HIRONO. Secretary Wilson and General Goldfein, does the agreement take into consideration the fact that Eagle Vision, in addition to support for domestic operations, also provides support for natural disasters, humanitarian relief oper-

ations, Theater Security Cooperation, and military missions in partner nations where NGA does not fully release commercial imagery?

Secretary WILSON and General GOLDFEIN. The current NextView License allows imagery support for domestic operations, support for natural disasters, humanitarian relief operations, Theater Security Cooperation, and military missions in partner nations. Imagery released to combatant commanders can be shared directly with third party users where the mission is of U.S. interest.

44. Senator HIRONO. Secretary Wilson and General Goldfein, can NGA's commercial imagery be released to all coalition and partner nations? If not, please provide any restrictions to the share-ability of this imagery.

Secretary WILSON and General GOLDFEIN. NGA may share imagery with organizations beyond the USG, such as coalition and partners nations, provided that it supports a USG purpose with a direct benefit to the USG. The NextView License allows NGA to disseminate and share commercial data imagery, imagery services, and imagery derived products with members of the USG including all branches, departments, agencies, and offices for U.S. Government purposes. Imagery released to combatant commanders can be shared directly with third party users where the mission is of U.S. interest. In addition, NGA may share commercial imagery directly with the following organizations: State & Local Governments, Foreign Governments and Intergovernmental agencies, USG contractors and university researchers supporting USG contracts, and Non-Governmental Organizations (NGO) and Non-profit Organizations. NGA's corporate dissemination systems limit accesses to commercial imagery in accordance with intelligence oversight policies. NGA also provides commercial data to foreign partners in 42 countries across the globe and now can provide imagery to foreign government in support of combatant command requests.

45. Senator HIRONO. Secretary Wilson, please provide a copy of the analysis used to determine that the NGA could meet the requirements of the Eagle Vision system to include the need for timely imagery.

Secretary WILSON. It was through a body of evidence that the Air Force determined NGA could meet the requirements of the Eagle Vision system. Please see attached Air Force Audit Agency report and Air Force Requirement Office memorandum.

46. Senator HIRONO. Secretary Wilson and General Goldfein, without a Federally declared emergency, does the National Guard have access to NGA commercial imagery for all domestic response situations, both archived and new collections?

Secretary WILSON and General GOLDFEIN. Yes, as a result of updates to NGB processes, NGB confirms access to all NGA commercial imagery for both state declared and federally declared emergencies via the U.S. Geological Survey (USGS).

As a result of the NextView license in 2018, NGA approved "Limited Public Release" of imagery. For example, all commercial imagery related to Hurricane Matthew was released prior to the storm making landfall. This approval, along with expedited delivery of commercial imagery directly to FEMA servers, allowed the widest distribution of imagery to Federal, State, and Local authorities. Imagery was also publicly released to assist with storm preparations as well as post-storm rescues and damage assessments.

47. Senator HIRONO. Secretary Wilson and General Goldfein, does NGA currently have an unclassified SAR capability or contracts with commercial vendors to obtain unclassified SAR imagery?

Secretary WILSON and General GOLDFEIN. Yes, NGA has a bilateral agreement with the Canadian government, called the NorthernView Agreement, which enables NGA and its customers to have access to unclassified SAR collections world-wide. This capability is comparable to that of Eagle Vision's TerraSAR-X access.

48. Senator HIRONO. Secretary Wilson and General Goldfein, does NGA have a mobile, direct downlink capability from commercial imaging satellites?

Secretary WILSON and General GOLDFEIN. [Deleted.]

49. Senator HIRONO. Secretary Wilson and General Goldfein, one of Eagle Visions' strengths is a robust capability to process and produce unclassified and sharable imagery products from remote deployed locations. Does NGA have this mobile capability?

Secretary WILSON and General GOLDFEIN. Yes, as mentioned in question 52, the Domestic Mobile Integrated Geospatial Intelligence System (DMIGS) units can sup-

port domestic remote delivery and dissemination requirements. NGA does have some small tactical unmanned imaging systems used to support limited operations.

50. Senator HIRONO. Secretary Wilson and General Goldfein, the Air Force has other alternative imaging capabilities. What are the costs associated with utilizing alternative imaging capabilities? For example, what are the costs for utilizing such platforms as Global Hawk and U2 for imagery?

Secretary WILSON and General GOLDFEIN. There is no cost additive to the Air Force for utilizing alternative imaging capabilities. As with Eagle Vision, programs are federally funded for their sharable imaging capabilities as a part of their missions. However, in situations that drive addition flying hours or conflicts between title 32 or title 50, additional cost could be assessed above Air Force programed dollars.

51. Senator HIRONO. Secretary Wilson and General Goldfein, what is the process the Air Force customer uses to order domestic response commercial unclassified imagery from NGA? What is process for Eagle Vision imagery requests? What is the difference in the timeline?

Secretary WILSON and General GOLDFEIN. There are multiple facets with respect to the process Air Force customer(s) use to order domestic response commercial unclassified imagery from NGA and Eagle Vision. These are broken down into the following:

- 1) Access to data,
- 2) When Satellite is Overhead,
- 3) Customer Order,
- 4) Satellite Tasking, and
- 5) Product Delivery.

1) Access to Data—Both NGA and EV users have the ability to generally quickly access commercial unclassified imagery from their respective data repositories through web based access.

2) When Satellite is Overhead—When the satellite is overhead of the target area, both NGA and EV can gain collection of the image and it can be accessed by users generally on the same timeline.

3) Customer order—NGA can direct and update collection plans up until 20 minutes prior to satellite uplink and collection over target area. EV can request collection as late as the satellite rising over the horizon.

4) Satellite Tasking—NGA customers request their collection needs through an NGA Source Strategy. Analysts build collection plans that optimize sensor capabilities and maximize efficiency and effectiveness of the satellite time while satisfying requirements from across the IC, DOD, and Fed/Civ communities. These tasking(s) requests are fulfilled as the next available satellite collects the image request when over the target site. EV direct tasking can be accomplished by calling the EV Program Manager to request a collection, who then makes the request for the user which is met when the next available satellite passes the target area, including direct tasking as the satellite rises over the horizon.

5) Product delivery—NGA NextView license is contractually obligated to deliver 90 percent of their satellite data in under 100 minutes or less. Historically, to date 98 percent of that commercial data has been delivered in under 50 minutes, as the average delivery time. EV historically downlinks, processes and is available for delivery as the satellite sets over the horizon.

---

#### QUESTIONS SUBMITTED BY SENATOR MARTIN HEINRICH

##### HYPERSONICS

52. Senator HEINRICH. Secretary Wilson and General Goldfein, I am pleased to see the Air Force budget \$576 million for hypersonics. As you know, Sandia National Laboratories has played a critical role in developing this technology over decades and is the core reason for why we have a capability ready to prototype. I have spoken to lab directors who are eager to transition this technology to industry and believe it is important to co-locate the R&D and the manufacturing of these systems. Do you agree there is value in ensuring the core talent and expertise of the technology is nearby production efforts?

Secretary WILSON and General GOLDFEIN. Sandia National Laboratories (SNL) has been instrumental in the technical and design development of hypersonic system concepts. SNL expertise and technical data continues to be leveraged by the Air Force as it pursues its hypersonic strike capability, and in particular its Hypersonic



Conventional Strike Weapon (HCSW) prototype effort. For specific HCSW milestones, SNL is working with the Air Force to deliver the first several sets of hypersonic glide body hardware to Lockheed Martin Space (LMS) for integrated flight test and technical expertise. SNL will continue to be engaged for expertise in transitioning this technology to industry.

53. Senator HEINRICH. Secretary Wilson and General Goldfein, what are we doing to co-locate the R&D and manufacturing of these systems?

Secretary WILSON and General GOLDFEIN. The Air Force acquisition framework recognizes there are many ways to combine technical expertise, manufacturing capability, and testing infrastructure. The Air Force acquisition process does not prescribe to industry how they organize to deliver weapon system capability.

#### NEW MEXICO AIR NATIONAL GUARD

54. Senator HEINRICH. General Goldfein, the Air National Guard enterprise is based on established Capstone Principles that set the foundational framework for aircraft in the 54 states and territories. Specifically, one of those Capstone Principles is to allocate at least one unit-equipped wing and flying squadron to each state. Yet, the New Mexico Air National Guard is the only one in the country without an operational flying mission and one of three states—New Mexico, Virginia, and Washington—that lack ownership of aircraft. Are states that are currently unable to align with these core principles due to divestiture of aircraft in the past given priority for new mission opportunities?

General GOLDFEIN. While we recognize the value and intent of the ANG's Capstone Principles, our Strategic Basing Process does not give specific priority to states based on their alignment with them. We do, however, work hard to ensure the enterprise we define for each basing action is as inclusive as possible. The Strategic Basing Process evaluates candidates through a number of important factors (e.g., suitability of existing facilities, capacity to absorb additional mission, location demographics and environmental factors) and all three components are fully represented. As mission demands evolve and resource constraints remain, the Air Force continues to ensure it leverages the collective talent and experience of the Regular, Guard and Reserve Forces to compete, deter and win.

55. Senator HEINRICH. General Goldfein, will you commit to working with the National Guard Bureau to address the lack of a unit-equipped wing and flying squadron in the New Mexico Air National Guard and to address aircraft ownership in New Mexico, Virginia, and Washington?

General GOLDFEIN. I look forward to continuing our collaborative efforts with the National Guard Bureau on building a more lethal and ready Total Force. The New Mexico Air National Guard represents one of the many opportunities that can help us accelerate towards the Air Force We Need and the additional unit-equipped air, space and cyberspace squadrons that are required. That strategic design effort is led by the Air Force Warfighting Integration Capability (AFWIC), and the Air National Guard's integration into that office underscores our commitment to capitalize on the strengths and opportunity in the Reserve Component.

56. Senator HEINRICH. General Goldfein, considering the mission growth suggested by the Air Force We Need imperative, will a substantial proportion of that growth be realized in the Air National Guard?

General GOLDFEIN. The Air Force will need to grow across all components—Active, Reserve and Air National Guard. The assumption in the Fiscal Year 2018 NDAA 1064 Study was to maintain the current force mix ratios across all the mission sets. If the Air Force were to increase by 25 percent, more analysis would need to be conducted to determine the optimal growth across components based on operational, strategic, and cost factors associated with meeting NDS demand across many mission sets.

57. Senator HEINRICH. General Goldfein, if the Air National Guard will likely take on additional mission sets in line with the Air Force We Need guidelines, is it reasonable to expect that locations with available ramp space, infrastructure, and manpower will be given priority to maximize budgetary limitations?

General GOLDFEIN. The Air Force strategic basing process considers existing excess capacity first. Using existing excess capacity results in judicious use of taxpayer dollars and potentially reduces overall bed down costs.

58. Senator HEINRICH. General Goldfein, given the recognized performance enhancements of the CV-22 aircraft for both federal and state roles, will the airframe be purchased in larger numbers to meet the increased demands on Special Operations mission sets? If so, will they be considered for equipping Air National Guard units?

General GOLDFEIN. The Air Force Program of Record for the CV-22 is 54 aircraft; the Air Force has no plans to procure additional aircraft. Once the 54 aircraft are procured, the Air Force Special Operations Command's four Attrition Reserve CV-22s will be located where they are most needed based on CV-22 enterprise requirements. AFSOC has two associate ANG units.

59. Senator HEINRICH. General Goldfein, the proposed light attack program for the United States Air Force has gone through multiple iterations of aircraft competitions, testing issues, extended timelines and program de-prioritization. What is your current posture to realize an affordable option that has clear potential to fulfill a niche role in support of the National Defense Strategy?

General GOLDFEIN. Our current posture is to procure a small number of aircraft from two vendors for ACC and AFSOC to support continued experimentation. Beyond just airframe capability, our exploration efforts include an exportable tactical data network to enhance partner nation support to this NDS role. If the results of the experimentation are positive, the budget includes procurement funds in fiscal year 2022-24 to buy aircraft.

#### KIRTLAND MILITARY HOUSING

60. Senator HEINRICH. Secretary Wilson, Kirtland was one of the bases affected by issues associated with privatized military housing. Specifically, the Maxwell development at Kirtland is in disrepair; so much so that very few military personnel live there. However, the privatized-housing contractor is leasing the space to civilians. Can your team report back to me on the current status of this housing development and when did military personnel stop living there?

Secretary WILSON. The housing units on the Maxwell parcel are smaller units with older floorplans located off base. As these are older units, they do require more maintenance than newer housing units. While this housing neighborhood has more non-military residents than the main housing area on Kirtland Air Force Base, 37 percent of residents in the Maxwell neighborhood are military, including military families and unaccompanied military members.

61. Senator HEINRICH. Secretary Wilson, it is my understanding Maxwell Housing is slated for demolition, but that the homes are currently under a 5-year extension. Why, and under what terms, was the extension granted; and when can we expect demolition to take place?

Secretary WILSON. The Maxwell homes were extended through April 2024 in order to generate additional revenue for the Kirtland Family Housing Project and strengthen cash flow available for mid-term reinvestment. Even with this additional revenue, the project may still have significant long-term shortages in sustainment and recapitalization funding, which may drive another extension unless market conditions change. Currently, the units are slated for demolition upon the termination of the extension in April 2024.

62. Senator HEINRICH. Secretary Wilson, are the Maxwell homes still generating revenue? If so, where does that revenue go?

Secretary WILSON. The 5-year extension of the Maxwell homes is projected to generate a total of approximately \$5.3 million in additional funding for the Reinvestment Account after debt obligations and operating expenses are paid. The Air Force has approval authority for how Reinvestment Account funds are spent, and can direct the funding to be used for sustainment and reinvestment in any housing units within the Kirtland Family Housing Project (including homes in the main housing area on base).

Directed Energy Programs Designated as "Section 804" Accelerated Acquisition Programs

#### DIRECTED ENERGY PROGRAMS DESIGNATED AS "SECTION 804" ACCELERATED ACQUISITION PROGRAMS

63. Senator HEINRICH. Secretary Wilson, to my knowledge there are no Directed Energy programs currently designated as "Section 804" Rapid Prototyping or Rapid Fielding activities, which is different than many other Air Force acquisition efforts,

especially in space and hypersonics. Why have you not designated any Directed Energy programs as 804 activities?

Secretary WILSON. We have used similar rapid prototyping activities for our Directed Energy Experimentation Campaign. In addition, two prototype High Power Microwave Systems were funded using OSD-level Rapid Prototyping Funds. We have not specifically designated programs for 804, because airborne applications are still in the technology demonstration phase and ground-based applications are undergoing operational experimentation to assess military utility, concepts of operations, and policy issues. Once airborne Advanced Technology Demonstrators are built, current estimate in 2021, we will conduct a round of experimentation and consider airborne Directed Energy as a candidate for rapid prototyping. Once our ground-based prototypes conclude operational experiments later this year, we will consider them a candidate for 804 activities.

64. Senator HEINRICH. Secretary Wilson, would the 804 designation speed the prototyping and fielding of these much needed capabilities?

Secretary WILSON. Once the airborne technology demonstrators are built and ground-based prototypes complete operational experiments, the 804 designation would absolutely speed the fielding of these capabilities.

#### LABORATORY AND TEST RANGE BUREAUCRACY

65. Senator HEINRICH. Secretary Wilson, please provide an update on the use of the streamlining authorities that this Committee authorized under Section 233 of the Fiscal Year 2017 NDAA. These authorities allows lab directors and range commanders to cut red tape and move their organizations to embrace the agile and innovative activities that we all think will be necessary to enhance Air Force research, testing, and innovation and lead to more efficient deployment of new capabilities. They will also help make these Air Force institutions behave more like their private sector counterparts, and make them a more attractive employer for world class technical and innovative talent. The Navy, in particular, has aggressively and successfully used these authorities for its labs and warfare centers.

Secretary WILSON. The AF greatly appreciates the section 233 authority. The Air Force Flight Test Center, which oversees the developmental test ranges, and the Nevada Test and Training Range have used the authority resulting in three innovative activities. To date, the Air Force laboratories have not utilized the authority but plan to do so in the near future.

66. Senator HEINRICH. Secretary Wilson, what successes has the Air Force seen from using these authorities?

Secretary WILSON. The Air Force Flight Test Center (AFTC) has utilized the section 233 authority to update the Center Scheduling Enterprise software allowing communication between Edwards AFB and Eglin AFB scheduling centers, improving distributed test operations efforts. AFTC has also standardized instrumentation tasks for greater sharing of test instrumentation resources across the 412th Test Wing and the 96th Test Wing instrumentation groups. Lastly, the Nevada Test and Training Range (NTTR) has developed a threat simulation capability that cuts required development time for new or upgraded threats at reduced cost. The NTTR effort will begin production in June 2019.

67. Senator HEINRICH. Secretary Wilson, what are the plans for the use of these authorities in the near future?

Secretary WILSON. The Air Force Major Range Test Facility Base plans to continue to utilize Section 233 authority when and where applicable while the Air Force Research Laboratory is looking forward to take full advantage of the authority in the coming year.

68. Senator HEINRICH. Secretary Wilson, what has been the major challenge in using these authorities to date?

Secretary WILSON. There have not been difficulties in utilizing the 233 authorities.

#### INTERNAL AFRL RESEARCH FUNDING

69. Senator HEINRICH. Secretary Wilson, I note that the Air Force has struggled to develop a mechanism to fully use the authorities of 10 USC 2363—which would allow AFRL lab directors the ability to use funds available to them to fund internal R&D and fund other activities, including lab construction and workforce development programs. The GAO noted that the Air Force has not yet developed a mecha-

nism to charge research laboratory customers a fixed fee for costs that would fund these activities. Please provide an update and timeline for implementation relating to Air Force to respond the GAO finding on the inability to develop this charging mechanism.

Secretary WILSON. The Air Force is continuing to work towards establishing a special account within the Treasury to properly receive and expend these fixed percentage fees. Air Force has taken the necessary steps to request the creation of a Special Fund account through OUSD(C). Once OMB and Treasury approves and establishes the account the Air Force will begin collecting fees from Air Force Research Laboratory's customers. Special Fund account is the existing/optimal solution where collections can immediately be made available for execution. Air Force is optimistic a Special Fund account will be created sometime in fiscal year 2020 and collections will start shortly after that, but timeline is driven by OUSD(C), OMB, and Treasury as they control the Special Fund approval process.

---

QUESTIONS SUBMITTED BY SENATOR ELIZABETH WARREN

F-15EX

70. Senator WARREN. General Goldfein, how does the Air Force intend to field the new F-15EXs? Will they be fielded across both the Active and Guard components? Which do you expect to receive aircraft first?

General GOLDFEIN. The F-15EX is intended to replace the Air Force's oldest F-15C/D aircraft. The decision on fielding locations and timelines will be made using the Air Force Strategic Basing Process.

71. Senator WARREN. General Goldfein, the F-15EX aircraft in this year's budget are intended to replace legacy F-15C and D Eagles. The F-15C fleet is flown by Air National Guard units around the country. In your testimony this week to Congress, you've noted that transitioning units across "like-type" aircraft—in other words, from one model of F-15 to another—takes advantage of common infrastructure, parts and equipment. Can you elaborate on this? How do unit readiness and mission conversion costs and schedules factor into this F-15EX decision?

General GOLDFEIN. The F-15C/D begins to age out between 2023 and the last aircraft in 2028. The current buy profile is for 80 aircraft through 2024 and we anticipate replacing F-15Cs one for one with procured F-15EXs in the FYDP. We estimate that the transition time, to return to acceptable readiness levels, from F-15s to the F-35 (dissimilar aircraft) will take approximately 18 months for an Active Duty squadron and 36 months for an Air National Guard squadron. The transition time is due to aircrew and maintenance personnel training. Our estimate is it will take 6 months or less to transition from the F-15C to the F-15EX. The Air Force is still evaluating specific spare inventory requirements and equipment compatibilities. In terms of operating costs, we estimate that F-15EX will cost less to operate than the F-15C fleet; however, the exact operating costs are unknown at this time.

72. Senator WARREN. General Goldfein, what is your estimate of the cost and time required to convert an F-15C unit to F-15EX?

General GOLDFEIN. Our estimate is it will take 6 months or less to transition from the F-15C to the F-15EX.

73. Senator WARREN. General Goldfein, what is your estimate of the cost and time required to convert an F-15C unit to an F-35 mission?

General GOLDFEIN. It will take approximately 18 months for an Active Duty squadron and 36 months for an Air National Guard squadron. The transition time is due to aircrew and maintenance personnel training. Based on previous conversion efforts, we estimate cost to be upwards of \$60-\$70 million.

74. Senator WARREN. General Goldfein, under our current national defense strategy, it's important that we understand the Air Force's decision to procure new F-15s from an operational perspective. Can you clarify how a fifth generation fighter like the F-35 and a fourth-generation plus platform like the F-15EX would complement each other in a near peer fight?

General GOLDFEIN. The F-35 and F-15EX bring complementary capabilities to a peer fight. The F-35 design allows for penetrating adversary air defense systems to prosecute targets while passing targeting information back to other assets for additional target prosecution. F-15EX is an improved model from Boeing, teaming a new airframe with an improved radar, cockpit, electronic warfare suite and the abil-

ity to carry more missiles than previous F-15 model aircraft in service. Individually, both are good for what they are designed to do. The future fight requires more than just individual platforms which are good. It requires weapon systems working together for the enhanced capability required to deter and defeat peer adversaries. The F-35 and F-15EX complement each other and provide that greater capability to the U.S. in a peer fight environment.

75. Senator WARREN. General Goldfein, what unique capabilities, if any, does the F-15EX bring into your tactical fighter inventory, whether in terms of range or payload or stand-off?

General GOLDFEIN. F-15EX will be able to carry more air-to-air missiles than any other 4th generation aircraft in the USAF inventory. Additionally, the F-15EX will be able to employ large munitions in the above 2,000 pound weapons class. A more detailed discussion of the F-15EX's unique capabilities is best provided in a classified setting, which we are ready to provide at your request.

76. Senator WARREN. General Goldfein, earlier this year you stated the following regarding your plan to buy new F-15EX aircraft in fiscal year 2020: "We've got to refresh the F-15C fleet because I can't afford not to have that capacity to do the job and the missions. That's what this is all about. If we're refreshing the F-15C fleet, as we're building up the F-35 fleet, this is not about any kind of a trade." Is that still your position?

General GOLDFEIN. Yes.

---

#### QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

##### RC-26B RETIREMENT

77. Senator MANCHIN. Secretary Wilson, I see in the budget the Air Force is planning on retiring the entire RC-26B fleet. The RC-26B is an important part of not only the West Virginia National Guard contribution but also to the security of the United States in its domestic border surveillance and counterdrug missions. I am concerned that the Nation will lose a valuable asset and capability if we retire this aircraft. How is the Air Force going to mitigate the loss of the RC-26B if you follow through with the plan to retire it?

Secretary WILSON. The Air Force divested the RC-26 program in the fiscal year 2020 budget because there is no longer a DOD/AF/Title-10 requirement for this platform. There are other existing DOD (MQ-9 remotely-piloted aircraft, MC-12, Satellite imagery, Army Lakota helicopters) and other Federal agency (NOAA, NASA, DHS, CBP) assets that provide equivalent or better capability than the RC-26 to support border security and/or counterdrug missions. Over the past four years, 98 percent of National Guard support to the Counter-Drug missions was accomplished by assets other than the RC-26 (analysts, linguists, rotary wing, etc.)

##### NATIONAL GUARD C-130H MODERNIZATION / RECAPITALIZATION

78. Senator MANCHIN. Secretary Wilson, the Air Force still operates a large number of C-130H aircraft across both the Active Duty and National Guard. This aircraft, which was first delivered in 1965, is aging rapidly. This was highlighted by the propeller issues that led to the grounding of 60 C-130H aircraft in February of this year. I see no procurement of baseline C-130J aircraft in this year's budget, only the MC-130J specialized variant. Does the Air Force have a long term plan for replacing the aging C-130H fleet with C-130J or at a minimum modernizing all C-130—H aircraft to ensure consistent operations and readiness across the Total Force?

Secretary WILSON. Given limited Air Force funding and a focus on the National Defense Strategy priorities, at this time there is no plan to purchase additional combat delivery C-130Js beyond the current program.

However, the Air Force continues to program the Avionics Modernization Program Increment 1 and 2, as well as operational upgrades for C-130H aircraft to ensure that safety/obsolescence, airspace compliance, and fleet modernization are priorities.

Additionally, several C-130H aircraft have received a Center Wing Box upgrade, which extends the service life and equivalent flying hours of those aircraft.

The Air Force is conducting an Operational Utility Evaluation on the combination of the NP2000 (eight blade propeller), Electronic Propeller Control System, and 3.5 engine modifications, all on the C-130H aircraft.

## Appendix A

### NextView License Sharing and Release Guidance

#### NextView License Requests for Sharing and Release – NGA reviews requests to share and release commercial imagery on a case by case basis to maintain license compliance

Under the NextView License, members of the United States Federal Government (USG) and NGA gather information and clarify the scope of initiatives / projects using commercial imagery.

#### Key Factors to Capture Project Scope

USG personnel initiate requests to share and release NextView licensed imagery beyond the USG, with potential for public release, by providing the following information for NGA to review.

**Urgency and timeframe** – provide release dates with rationale to help prioritize all requests

**WHO** (USG lead/official; USG agency/office; contract/agreement; receiving organizations)

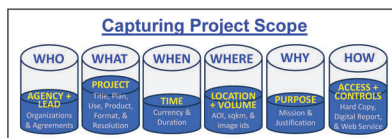
**WHAT** (Project title; description; use; imagery/product type; format; resolution)

**WHEN** (Time of imagery collections; date and duration of sharing or web posting)

**WHERE** (Geographic coverage of areas of interest (AOIs); sqkm; and image ids)

**WHY** (USG purpose/mission; justification capturing USG purpose and direct USG benefit of sharing and/or release of commercial imagery or imagery derived products)

**HOW** (Method of sharing/release: hard copy, digital reports, briefs, website URL, web service; access controls: password protection, IP limits, user account restrictions, bounding boxes)



#### Levels of Release

	Description	Scope	Coordination	Marking
<b>NextView License</b>	Use by USG (all offices, agencies, departments, and branches); share in support of USG purpose	USG uses its reasonable best efforts to <u>minimize effects on commercial sales</u>	End User License of EnhancedView Contract	© 2017 DigitalGlobe, NextView License
<b>Limited Public Release</b>	Public distribution for emergencies, disasters, and humanitarian efforts; limited to 30 days per request	30 day exception to <u>NextView License</u> ; after 30 days remove from public access and handle in accordance with NextView License	NGA contractually required to notify vendor within 24 hours after releasing imagery	© 2017 DigitalGlobe, NextView License
<b>Coordinated Public Release</b>	Public release coordinated for use in reports, briefs, websites, and other methods	Typically for <u>1-2 images</u>	NGA coordinates with vendor for business impact input	© 2017 DigitalGlobe
<b>License Uplift</b>	Full public dissemination by USG without restrictions	No product type or format restrictions; <u>annual volumetric limit</u>	NGA communicates decisions to vendor by project title, image ids, and sqkm	<i>Imagery courtesy of DigitalGlobe</i>

**NOTE:** Same day requests for public release require USG agency, project title, use, time, date, AOIs, image ids, sqkm, method of release, and sample products to expedite response.

### NextView License Sharing and Release Guidance

#### NextView License Requests for Sharing and Release – NGA reviews requests to share and release commercial imagery on a case by case basis to maintain license compliance

Under the NextView License, members of the United States Federal Government (USG) and NGA gather information and clarify the scope of initiatives / projects using commercial imagery.

#### Key Factors to Capture Project Scope

USG personnel initiate requests to share and release NextView licensed imagery beyond the USG, with potential for public release, by providing the following information for NGA to review.

**Urgency and timeframe** – provide release dates with rationale to help prioritize all requests

**WHO** (USG lead/official; USG agency/office; contract/agreement; receiving organizations)

**WHAT** (Project title; description; use; imagery/product type; format; resolution)

**WHEN** (Time of imagery collections; date and duration of sharing or web posting)

**WHERE** (Geographic coverage of areas of interest (AOIs); sqkm; and image ids)

**WHY** (USG purpose/mission; justification capturing USG purpose and direct USG benefit of sharing and/or release of commercial imagery or imagery derived products)

**HOW** (Method of sharing/release: hard copy, digital reports, briefs, website URL, web service; access controls: password protection, IP limits, user account restrictions, bounding boxes)



#### Levels of Release

	Description	Scope	Coordination	Marking
<b>NextView License</b>	Use by USG (all offices, agencies, departments, and branches); share in support of USG purpose	USG uses its reasonable best efforts to <u>minimize effects on commercial sales</u>	End User License of EnhancedView Contract	© 2017 DigitalGlobe, NextView License
<b>Limited Public Release</b>	Public distribution for emergencies, disasters, and humanitarian efforts; limited to 30 days per request	<u>30 day exception to NextView License</u> ; after 30 days remove from public access and handle in accordance with NextView License	NGA contractually required to notify vendor within 24 hours after releasing imagery	© 2017 DigitalGlobe, NextView License
<b>Coordinated Public Release</b>	Public release coordinated for use in reports, briefs, websites, and other methods	Typically for <u>1-2 images</u>	NGA coordinates with vendor for business impact input	© 2017 DigitalGlobe
<b>License Uplift</b>	Full public dissemination by USG without restrictions	No product type or format restrictions; <u>annual volumetric limit</u>	NGA communicates decisions to vendor by project title, image ids, and sqkm	Imagery courtesy of DigitalGlobe

**NOTE:** Same day requests for public release require USG agency, project title, use, time, date, AOIs, image ids, sqkm, method of release, and sample products to expedite response.





**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2020 AND THE FUTURE YEARS DEFENSE  
PROGRAM**

---

**TUESDAY, APRIL 9, 2019**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

**NAVY POSTURE**

The Committee met, pursuant to notice, at 9:30 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe (Chairman of the Committee) presiding.

Committee members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Perdue, Scott, Hawley, Reed, Shaheen, Gillibrand, Blumenthal, Hirono, Kaine, King, Heinrich, Warren, Peters, Manchin, and Jones.

**OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. Our meeting will come to order.

We have a number of nominees to confirm, here. Since we now have a quorum, I would like to move to that.

It is present, and I ask the Committee to consider a list of 82 pending military nominations. All of these nominations have been before the Committee the required length of time.

Is there a motion to favorably report these—

Senator REED. So move.

Chairman INHOFE.—82 pending military nominations to the Senate? There's a motion.

A second?

Senator WICKER. Second.

Chairman INHOFE. All in favor, say aye.

[A chorus of ayes.]

Chairman INHOFE. Opposed, no.

[No response.]

Chairman INHOFE. Ayes have it. That's done.

[The list of nominations considered and approved by the Committee follows:]

MILITARY NOMINATIONS PENDING WITH THE SENATE ARMED SERVICES COMMITTEE  
WHICH ARE PROPOSED FOR THE COMMITTEE'S CONSIDERATION ON APRIL 9, 2019.

1. **In the Marine Corps there are 12 appointments to the grade of major general (list begins with Julian D. Alford)** (Reference No. 33)
2. **General Stephen J. Townsend, USA to be general and Commander, US Africa Command** (Reference No. 378)
3. In the Army there is 1 appointment to the grade of major (Jason A. Anthes) (Reference No. 400)
4. In the Air Force there are 13 appointments to the grade of major (list begins with Jeremiah L. Blackburn) (Reference No. 424)
5. **LTG Timothy J. Kadavy, ARNG to be lieutenant general and Vice Chief of the National Guard Bureau** (Reference No. 460)
6. **RADM James W. Kilby, USN to be vice admiral and Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, N9** (Reference No. 495)
7. **LTG Jeffrey L. Harrigian, USAF to be general and Commander, US Air Forces Europe; Commander, US Air Forces Africa; Commander, Allied Air Command; and Director, Joint Air Power Competence Centre** (Reference No. 517)
8. **Gen. Tod D. Wolters, USAF to be general and Commander, US European Command and Supreme Allied Commander, Europe** (Reference No. 527)
9. In the Air Force there are 2 appointments to the grade of major (list begins with La Tanya D. Austin) (Reference No. 529)
10. In the Air Force Reserve there are 2 appointments to the grade of colonel (list begins with Michael T. Charlton) (Reference No. 530)
11. In the Air Force there are 2 appointments to the grade of major (list begins with Elissa R. Ballas) (Reference No. 531)
12. In the Air Force there is 1 appointment to the grade of major (Brian C. Bane) (Reference No. 532)
13. In the Army there is 1 appointment to the grade of lieutenant colonel (Robin N. Scott) (Reference No. 535)
14. In the Army there is 1 appointment to the grade of lieutenant colonel (Matthew R. Thom) (Reference No. 536)
15. In the Army there is 1 appointment to the grade of major (David M. Powell) (Reference No. 537)
16. In the Army there is 1 appointment to the grade of major (Ford M. Lannan) (Reference No. 538)
17. In the Army there is 1 appointment to the grade of major (Luke A. Randall) (Reference No. 539)
18. In the Army Reserve there is 1 appointment to the grade of colonel (Mark M. Kuba) (Reference No. 540)
19. In the Army there is 1 appointment to the grade of lieutenant colonel (Rhana S. Kurdi) (Reference No. 541)
20. In the Army there is 1 appointment to the grade of lieutenant colonel (Michael D. Norton) (Reference No. 542)
21. In the Army there is 1 appointment to the grade of major (Jason A. Byers) (Reference No. 543)
22. In the Army there is 1 appointment to the grade of major (Nathaniel C. Curley) (Reference No. 544)
23. In the Army there is 1 appointment to the grade of lieutenant colonel (Sewhan Kim) (Reference No. 545)
24. In the Army there is 1 appointment to the grade of lieutenant colonel (Early Howard, Jr.) (Reference No. 546)
25. In the Army there is 1 appointment to the grade of lieutenant colonel (Isaac L. Henderson) (Reference No. 547)
26. In the Navy there are 3 appointments to the grade of commander and below (list begins with Shawn D. Trulove) (Reference No. 548)
27. In the Navy there is 1 appointment to the grade of commander (Charles E. Jenkins IV) (Reference No. 551)

28. **In the Air Force there are 23 appointments to the grade of major general (list begins with Christopher P. Azzano)** (Reference No. 553)

29. In the Air Force there is 1 appointment to the grade of major (Benjamin D. Ramos) (Reference No. 554)

30. In the Air Force there is 1 appointment to the grade of major (Christopher D. Black) (Reference No. 555)

31. In the Army there is 1 appointment to the grade of major (James A. Broadie) (Reference No. 556)

32. In the Army there is 1 appointment to the grade of major (Brandon E. Resor) (Reference No. 557)

---

TOTAL: 82

All right, we have a—let's go ahead on this. I'm going to just go ahead with opening statements, then we'll have a round after we hear from our witnesses.

The Committee meets today to receive testimonies on the posture of the Department of Navy in its fiscal year 2020. We welcome our witnesses: Richard Spencer, the Secretary of the Navy; Admiral John Richardson, Chief of the Naval Operations (CNO); and General Robert Neller, Commandant of the Marine Corps. We thank you, all three, for your service.

The National Defense Strategy directs our Nation's military to prepare for the return of great-power competition. This means we must be prepared to deter and, if necessary, decisively defeat, our near-peer adversaries. I think we all know who we're talking about. It's China and Russia.

In order for the Department of the Navy to achieve that goal, our Navy and Marine Corps must be manned, trained, equipped appropriately. Significant progress has been made in rebuilding the readiness, but, still, there's a lot of work to be done.

With the alarming speed of modernization that we've witnessed, both conventional and nuclear forces, China and Russia now present a credible threat to the United States and our allies. It's past time for action. However, we must be smart, not hasty, as we modernize our military. Recently—recent history should be our guide, because, without better acquisition performance, we could fall behind, or further behind, our competitors. For example, the last eight combatant lead ships cost \$8 billion more than their initial budget, delivery the last 6 months late, with dozens of deficiencies. Another example is our—the 9 to 11 advanced weapons elevators on the USS *Gerald R. Ford* still have not been accepted by the Navy, nearly 2 years after the ship's delivery, and some other areas, also, the problems with that.

While the promise of new technology may be alluring, it's no substitute for demonstrated performance. I'm highly skeptical of claims by the Department of Defense officials that early retirement of the USS *Harry Truman* will result in a more modern and lethal force as well as increased industrial-base workload. The reality is, the *Ford* lacks functional weapons elevators and has significant reliability problems. No combination of unmanned systems has been shown to match and reach the lethality of the aircraft carrier and its Air Wing. The *Truman* proposal will result in reductions, not increases, of highly skilled employees. We'll have some questions and discussion on the USS *Truman* during the course of this hearing.

Senator Reed.

**STATEMENT OF SENATOR JACK REED**

Senator REED. Thank you very much, Mr. Chairman.

I want to join you in welcoming Secretary Spencer, Admiral Richardson, and General Neller to the Committee this morning to testify on the plans and programs of the Department of the Navy in our review of the fiscal year 2020 authorization request. We are grateful to each of you for your service and for the service of the men and women under your command, and for the support of all Navy and Marine families. Thank them for us, please.

I particularly want to thank Admiral Richardson and General Neller, as this is likely to be their last posture hearing before the Committee. We thank you for your dedicated years of service to our Nation. As the leaders of the Navy and the Marine Corps, you face huge challenges as you strive to balance the need to support ongoing operations and sustained readiness with the need to modernize and keep the technological edge so critical to military success.

In the near term, the Marine Corps has \$315 million in the disaster emergency relief supplemental that they need relatively quickly. I hope we can focus on the potential consequences of delaying recovery activities and move the disaster emergency relief supplemental forward.

In addition, because significant levels of funding are being transferred to build the wall on the southern border, the amount of reprogramming authority will be limited this year. I remain concerned that the Navy, Marine Corps, and other services may run short of headroom in reprogramming authority, which could lead to other delays and shortages. In addition, I'm concerned about the opportunity cost of deployments to the border.

The Department of the Navy faces serious readiness problems caused by deferred maintenance, reduced steaming and flying hours, and canceled training and deployments. We are all keenly aware of the collisions of the McCain and the Fitzgerald, and the loss of life that resulted. I'm interested in hearing about the progress the Navy is making in implementing changes that will ensure such incidents will not happen in the future.

All areas of our naval forces are maintaining an extremely high operational tempo. Demand is overwhelming for attack submarines, air and missile defense cruisers, destroyers, and strike fighter inventories. In addition, the Navy is now in its seventh year of operating with fewer than the legally required 11 aircraft carriers. The Ford is listed in the Navy inventory, but that ship, which is more than 4 years behind schedule, will not be ready to deploy for many more months. In addition, during the next decade, the Navy will need to buy the new *Columbia*-class ballistic missile submarines to replace the *Ohio*-class submarines. This is an extremely expensive undertaking that is on a very, very tight schedule.

The Marine Corps continues to make modernization of ground vehicles a priority, which requires balancing the procurement of new systems while upgrading existing platforms to meet current operational needs. The amphibious combat vehicle will replace the aging inventory of assault amphibious vehicles in order to provide the Marines with increased force protection and enhanced lethality.

The Marine Corps is also partnering with the Army to develop the joint light tactical vehicle, or the Joint Light Tactical Vehicle (JLTV), to replace the Humvee. I will welcome an update from our witnesses on the status of these programs, particularly in view of Army plans to cut back on the JLTV program.

Two years ago, Admiral Richardson, you released the Force Structure Assessment that identified a new force-structure goal. The Navy's current high level of operations contributed, in part, to your conclusions in this assessment that the goal for the Navy fleet needs to increase from 308 ships to 355 ships. I'd like to hear what progress the Navy is making in filling these needs. I'm also interested in learning how the plan to retire the USS *Harry Truman*, rather than refuel her, is consistent with achieving the 355-ship goal.

I, again, thank the witnesses for their service and their sacrifice. I look forward to their testimony.

Chairman INHOFE. Thank you, Senator Reed.

We'll now have our opening remarks by our witnesses. Your entire statement will be made a part of the record, and so, be brief, if you'd like.

Senator—or Secretary Spencer.

**STATEMENT OF THE HONORABLE RICHARD V. SPENCER,  
SECRETARY OF THE NAVY**

Secretary SPENCER. Chairman Inhofe, Ranking Member Reed, distinguished Committee Members, on behalf of our sailors, marines, and civilian teammates, thank you for your bipartisan efforts to restore funding stability.

I would like to take a moment right now, though, and have everyone pause for a minute. Yesterday, as you read, we lost three marines and one civilian in an attack. It is still a very risk-full world out there.

I would be remiss—

Chairman INHOFE. I would ask, right now, though, that we bow our heads in silence for the lives of these, and the families, of these individuals.

[A moment of silence was observed.]

Chairman INHOFE. Thank you, Secretary Spencer.

Secretary SPENCER. I'd be remiss, Chairman, if I wasn't to take a moment right now, since this might be my last time in front of you all testifying on a budget, to say that, wearing a businessman's hat, I could not have asked for two better business partners than in the CNO and the Commandant. I came into a situation that we are working our way out of. If I, again, carry the corporate term, it was a turnaround. We've done some herculean work, and these two gentlemen were side by side, no light between us as we went forward. I'd like to just acknowledge that.

The concept of a strategy is the application of limited resources to attain a goal. Aligned to the National Defense Strategy (NDS), the Navy strategy for restoring readiness, strengthening relationships, and reforming our processes has been set, and we will build on that with a disciplined focus on our people, capabilities, and processes. This budget prioritizes a strategy-driven, balanced approach to investment. It builds on prior investments, sustains the

industrial base, and maintains our competitive advantage, if not expands the perimeters as we move to a more cost-imposing, survivable, and affordable future of the—future—force of the future.

Restoration of readiness is underway, and we're seeing progress, ladies and gentlemen, every day. My analogy is that the wind vanes are all pointed in the right direction. Although we might be a little frustrated with the velocity of the wind, we are moving it continually, day by day. We're building the strength of our team through hiring in areas of critical need, such as cybersecurity specialists, aviation technicians, scientists and engineers, human resource specialists, shipyard workers, and digital warfare officers. We're aligning and enhancing our educational institutions' distributed-learning venues through the Education for Seapower Review. We're taking aggressive actions to return private military housing to a premium product, mindful that we recruit the individual, but we retain the family. All of these actions have one common thread through them: the goal of increased readiness.

We're building our capabilities through investments in hypersonics, machine learning, additive manufacturing, quantum computing, and directed energy. We're building the fleet in pursuit of a 355-ship Navy, manned and unmanned, to include the *Columbia*-class submarine, next-generation frigate, and remotely-piloted platforms, such as Sea Hunter and Orca. These efforts are increasing lethality through increased distributed maritime operations.

To reach the Secretary's goal of 80-percent mission-capable tactical aircraft, we've realigned investments to spares, aviation engineering, and logistical support through our newly-created Navy Sustainment System, which is based upon best practices from outside the wire, as I say, commercial best practices. As a pilot program, these activities have moved us to review our processes in all maintenance areas within the naval enterprise, to include ship, weapon, and vehicle maintenance and sustainment. Driven by the Marine Corps Force 2025 Capability Investment Strategy, we're investing in the amphibious combat vehicle, loitering munitions, and unmanned logistics systems in order to maintain our competitive advantage. Exercising the Marine Corps operating concept is moving us to rapidly progress as a continuous learning organization as we adapt and experiment in our new competitive environment.

Yet, while we effect the aforementioned, the Marine Corps is also contending with unprecedented double impact of Hurricanes Florence and Matthew, which together damaged or destroyed more than \$3.7 billion of infrastructure across many of our East Coast installations. Camp Lejeune is a primary force-generator for the naval services, directly contributing to the capacity and readiness of our force. That area took the majority of the blunt impact of those storms.

Over the past year, we have meaningfully increased our interaction with our allies and friends. Exercises and education have strengthened our ability to operate; therefore, increasing the depth of our collective ability to deliver the resources requested. Compared to a year ago, the increase and depth of our relationship with our allies and friends has been the prime contributor to this good outcome.

Our Navy has implemented 91 of the 111 readiness reform and oversight council recommendations, transforming a culture of accepting risk to one of understanding and managing risk. We've reviewed and are in the process of remediating our business processes following our first top-to-bottom audit. The audit is now proving to be a tool where we find we can leverage lethality. We're using this information to streamline operations and reimagine how support functions can be modernized in order to drive continued learning and, therefore, produce ever-increasing efficiencies for the American taxpayer. We owe it to them to ensure every dollar that we invest—every dollar—is invested in the most effective manner possible. I am proud to work with this Committee to keep that promise.

Thank you.

[The prepared statement of Mr. Spencer follows:]

PREPARED STATEMENT BY THE HONORABLE RICHARD V. SPENCER

Chairman Inhofe, Ranking Member Reed, distinguished Committee Members. On behalf of our sailors, marines and civilian teammates, thank you for your bipartisan efforts to restore funding stability to the Department of the Navy. The foundation for restoring readiness and increasing lethality has been set. Now we must build on that foundation with a sense of urgency. While we have much to do, we are well underway, and I will highlight some of our progress.

WHERE WE WERE

At my confirmation hearing in July 2017, I stated my intent to expeditiously assess the current situation, develop the tools needed to enhance its ability to fight, and to deliver on the title 10 responsibilities of the Office of the Secretary the Navy. My priorities for accomplishing these goals centered on three key areas: people, capabilities, and processes.

I expressed my determination to recruit, train and retain the best of our Nation for our military and civilian ranks, and to create a flat, lean and agile organization where those who manage critical situations have the ability to make decisions to solve the problems in front of them.

I committed to rebuild the readiness and lethality of our capabilities, citing cumulative effects of 16 years of wartime operational tempo, unpredictable funding, and challenges to our warfighting advantage as we return to a geostrategic environment dominated by great power competition.

As a businessman, I expressed my determination to improve our processes across the portfolio, analyzing all systems and platforms to extract additional efficiencies, incorporating private sector best practices, and migrating to a true continual learning enterprise.

WHERE WE ARE

Over the past year and a half, Admiral Richardson, General Neller and I have attacked these goals with a sense of urgency by investing in our people, capabilities and processes.

To build the strength of our people, we've invested in a ready, relevant and responsive force: A Marine Corps force with 186,200 active personnel and 38,500 reservists; the Targeted Reentry Program to enable key former personnel a streamlined return into Active Duty; quality of life and retention efforts like the MyNavy Career Center, which provides sailors with human resource services around the clock; and the military parental leave program. We've used the increased Defense Officer Personnel Management Act (DOPMA) flexibility from the fiscal year 2019 NDAA to support dynamic changes and requirements in technical expertise, agility and innovation in our officers. We've invested in our civilian workforce, including enhanced hiring and training at our public shipyards to reach our FY20 goal of 36,100 personnel one year earlier than originally planned.

We've enhanced our capabilities, through targeted investments in the lethality and readiness of our weapons platforms and munitions. We have accomplished this through strengthening our partnerships with the private sector. We've gleaned commercial best practices to increase efficiency and flow in our ship, ground and avia-

tion maintenance facilities. The Navy has added 22 Battle Force Ships over fiscal year 2017 and fiscal year 2018, while decommissioning nine, for a net addition of 13 ships. The Marine Corps has reset 99 percent of ground equipment and returned 72 percent of our equipment to the operating forces. We have also enabled personnel to “fix it forward” through technologies such as additive manufacturing, including the procurement of 160 3D printers capable of producing over 125 ground and 83 NAVAIR-approved parts on demand.

We’ve also significantly improved our operational processes, through the Comprehensive Review (CR) and Strategic Readiness Review (SRR). Over the past year, the Readiness Reform and Oversight Council has examined 111 recommendations from the review process. 91 have been adjudicated and 83 have now been implemented. Business processes were also reviewed and remediated after our first ever top-to-bottom audit of the Department of the Navy, and we’re using this information to streamline our operations and reimagine how support functions can be modernized in real time to drive greater readiness, lethality and efficiency. Through the development and implementation of the Navy Business Operations Plan and our Performance to Plan tool, we are beginning to accurately track the output impacts of our efforts.

It must also be noted that the Marine Corps is contending with the unprecedented double impact of Hurricanes Florence and Matthew, which together damaged or destroyed more than \$3.7B in infrastructure across many of our east coast installations. Camp Lejeune is a primary force generator for the Naval Services, directly contributing to the capacity and readiness of our force. The Marine Corps continues to feel the immediate impacts of these storms through lost and delayed training time; delayed deployments and redeployments; and daily quality of life challenges including the displacement of thousands of personnel and their families. Recovering from these disasters will require sustained investment and the ongoing support of this Committee.

#### WHERE WE ARE GOING

Now that the foundation for readiness and lethality has been set, we continue to move forward with a sense of urgency, continually thinking of how to deliver the people, capabilities and processes needed by the Navy-Marine Corps Team. The Naval Services have developed plans informed by the National Defense Strategy, which mandates increased lethality, strengthened alliances and partnerships, and improved business processes. Now we are aligning those plans with the right leaders, tools, budget and technology advancements.

This budget request invests in our people with the education and resources necessary to develop and retain the human capital we need to confront a changing world. We’ll expand hiring for areas of critical need, such as cyber security specialists, aviation technicians, scientists and engineers, human resource specialists, and digital warfare officers. We’ll add end strength to the Marine Corps Special Operations Command. We’ll complete the rollout of Sailor 2025, updating policies, procedures and systems to improve retention and readiness.

Education is a key component to developing the warfighter the Navy and Marine Corps Team needs. We will be effecting the blueprint developed by the recently released Education for Seapower Review, aligning and enhancing our educational institutions and distributed learning venues. And earlier this month, along with Secretary Esper and Secretary Wilson, I hosted University and College Presidents and other education leaders from across the country for a summit at the United States Naval Academy dedicated to eliminating the scourge of campus sexual assault and sexual harassment.

We are constantly mindful that we recruit the individual, but we retain the family. And without the family, we are not operating at full capacity. As I stated before this Committee last month, upon reviewing the issues surrounding Public-Private Venture (PPV) military housing, it is clear that in some cases we have fallen woefully short of our obligations, and there is culpability around the table. We have identified the problems, and are focusing resources on the solutions. We will correct bad practices and return private military housing to a premium product. This budget supports these efforts, with a request of \$21.975 million for the oversight of the Department’s PPV housing worldwide.

As we move from rebuilding readiness to owning the next fight, this budget prioritizes a balanced and strategy-driven approach, to provide for a bigger, better trained, and more ready force. It invests in our Force 2.0 capabilities in emerging areas such as applied artificial intelligence, machine learning, quantum computing, additive manufacturing, directed energy and more. We will continue to build the fleet in pursuit of the 355 ship Navy, manned and unmanned, to include the *Colum-*



*bia*-class submarine, Next Generation Frigate, and remotely piloted platforms such as Sea Hunter and Orca, as well as one *Ford*-class aircraft carrier, three *Virginia*-class submarines and three *Arleigh Burke*-class destroyers.

Driven by the Marine Corps Force 2025 capability investment strategy, we will continue to modernize the Marine Corps with a 21st century Marine Air-Ground Task Force (MAGTF) by focusing on six key priorities:

- C2 in a degraded environment;
- Long range and precision fires;
- Operations in the Information Environment (OIE);
- Air defense;
- Protected mobility and enhanced maneuver; and
- Logistics.

This budget invests in Networking on the Move (NOTM) capabilities, close combat equipment, loitering munitions, unmanned logistic systems, ground-based anti-ship missiles, Ground/Air Task Oriented Radar (G/ATOR), the Joint Light Tactical Vehicle, and the Amphibious Combat Vehicle to ensure the Marine Corps continues to adapt to meet the demands of the future operating environment and maintain our competitive advantage.

We will operate with data-informed end to end processes and incorporate leading practices to inform how we fight. To achieve the goal of 80 percent mission capable aircraft in our Fleet Strike Fighter squadrons, this budget funds the Fleet Readiness Centers (FRCs) to the maximum executable levels, realigns investments to spares, aviation engineering and logistics support, while pursuing reforms such as the Navy Sustainment System, which incorporates best practices from commercial airline maintenance leaders. We will also incorporate the lessons of private industry as we invest in shipyard infrastructure and training to improve performance and throughput.

These are just a few examples of how General Neller, Admiral Richardson, the entire Navy Marine Corps Team and I are building on the foundation of restored readiness and increasing lethality. We will continue to promote a culture of problem solving at every level, transform from a culture of risk removal to one of understanding and managing risk, and hold ourselves accountable for how and where we invest. Every day, we work with a sense of urgency driven by the knowledge that the American taxpayers provide us with their hard-earned treasure, and trust us to protect them from a dangerous world. We owe it to them to ensure that every dollar is invested in the most effective manner possible to fulfill our sacred oath. I'm proud to work with this Committee to ensure that we keep that promise. Thank you.

Chairman INHOFE. Thank you, Secretary Spencer.  
Admiral Richardson.

#### **STATEMENT OF ADMIRAL JOHN M. RICHARDSON, USN, CHIEF OF NAVAL OPERATIONS**

Admiral RICHARDSON. Thank you, Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee. Thank you for the opportunity to appear here alongside Secretary Spencer and General Neller to discuss the Navy's fiscal year 2020 budget.

You know, President Thomas Jefferson wrote that, "Industry, commerce, and security are the surest roads to the happiness and prosperity of our people." And the causal link between prosperity, order, and security is why he deployed the United States Navy to combat piracy off the Barbary Coast at the dawn of the 19th century. And it's why, for over two centuries, we have helped keep the seas open for all and opposed those who seek to control the seas at the expense of America and our allies.

Today, as outlined in the 2018 National Defense Strategy, nations like China and Russia are attempting to do just that, to stem the tide that has steadily lifted all boats by unilaterally redefining international norms on terms more favorable only to themselves. Chairman, you mentioned that in your opening statement. The

Navy and the Nation are responding with more than 60,000 sailors deployed aboard nearly 100 ships and submarines at this very moment by sustainably operating around the globe, advocating for our principles, and protecting our national interests.

To maintain this worldwide posture, the President's FY20 budget offers a strategy-driven, future-leaning, balanced approach to deliver a naval force up to the task in this era of great-power competition. The single most effective way to maintain our strategic momentum is to provide adequate, stable, and predictable funding. This makes everything possible. It solidifies strategic planning, incentivizes our commercial partners, and mitigates operational risk by maximizing our planning and execution time.

The foundation of naval power is our force of talented and well-trained sailors. Important to our success, we remain committed to recruiting and retaining diverse shipmates whose intelligence, curiosity, energy, different backgrounds, and varied viewpoints will catalyze the speed and quality of decisions we need to outperform our adversaries. As well, working with Congress, we continue to transform our pay and personnel system to 21st century standards.

This budget also builds a bigger fleet, 54 battle-force ships over 5 years, preserving our industrial base, strengthening our ability to prevail in any warfighting contingency. The budget fully funds the *Columbia*-class ballistic missile submarine program, fulfilling our existential imperative to deter nuclear attack on our Homeland.

The budget builds a better fleet, fielding state-of-the-art systems that are more agile, networked, resilient, and lethal. This budget recognizes that aircraft carriers will be central to winning the future fight, which is why it invests in the *Gerald R. Ford*-class, delivering far more combat power for less cost over their lifetime than their *Nimitz*-class predecessors.

This budget also builds a ready fleet, steaming days to exercise at sea, flying hours to train in the air, sufficient quantities of ammunition and spares, and the resources to conduct maintenance, today and in the future, as the fleet size grows.

Meeting the Nation's and the Navy's responsibility is not easy. It requires us all to work together. But, this is what great nations, and only great nations, can and must do. At the dawn of the Cold War, as this Nation took on the challenge to go to the Moon, President Kennedy, a naval officer, said, "We do these things, not because they are easy, but because they are hard, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one we intend to win."

I am grateful to this Committee and to your colleagues in the Congress for continuing this important work. We look forward to sailing alongside you to build and deliver the safest navy for our sailors, the strongest partner navy for our friends and allies, and a navy that is the worst nightmare for our enemies.

I look forward to your questions.

[The prepared statement of Admiral Richardson follows:]

PREPARED STATEMENT BY ADMIRAL JOHN M. RICHARDSON

Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, thank you for the opportunity to testify today on the Navy's fiscal year 2020 budget.

To place this budget in its appropriate tactical, operational, and strategic context, we must understand what America stands for in the world so we don't forget it or, worse, take it for granted; the United States Navy's unique and historic connection to those core tenets; the challenges to those principles and our national interests by competitors like China and Russia—and our Navy's response; and the investments made in the President's Fiscal Year 2020 Budget to deliver, operate, sustain, and maintain a Navy that is bigger, better, and more ready to sail anywhere and do anything in defense of our country.

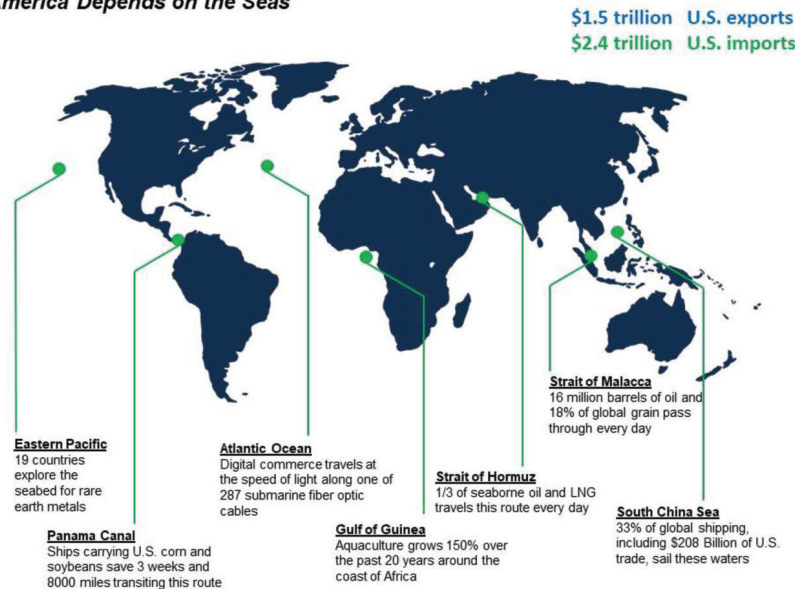
#### WE ARE A MARITIME NATION—WE RELY ON FREEDOM OF THE SEAS

Our first President, George Washington, best captured the value a Navy provides to the American people when he said: "It follows then as certain as that night succeeds the day, that without a decisive naval force we can do nothing definitive, and with it, everything honorable and glorious."

Over 600,000 Active and Reserve sailors and Navy civilians—alongside our partners in the Congress, academia, industry, and around the world—devote much of their lives to designing, producing, and operating a "decisive" naval force. Our decisive naval force operates around the world, defends our national interests, stands ready to fight if called upon, and de-escalates tensions on our terms. The President's Fiscal Year 2020 Budget delivers and sustains this decisive force and the investments contained therein will keep our Navy on a true course and making best speed to, as our oath declares, "support and defend the Constitution of the United States and the country whose course it directs."

Our founding values, as well as our livelihoods and collective national security, are tied to the world's oceans. The seas are a prime facilitator of our prosperity as a people. But prosperity does not and cannot exist in a vacuum. It is the result of secure and orderly conditions that enable the flow of goods and services, access to markets via open oceans and critical waterways, and the ability to move unimpeded across the seas.

#### America Depends on the Seas



The seas present both challenges and opportunities—and the rapid changes in the maritime environment are stark and profound. More than 90 percent of all international trade travels by sea—60 percent of that by value sails in containerized vessels. In recent years, approximately 735 million containers were shipped worldwide annually. If placed end-to-end, those containers would encircle the globe at the Equator more than 11 times. Beyond the numbers on trade, the global economy's reliance on the seas for resources—rare earth minerals for advanced technology, en-

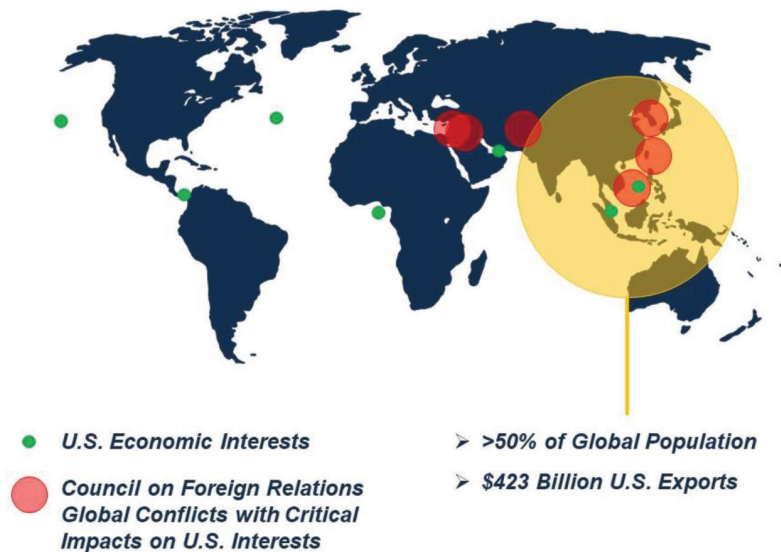
ergy, or aquaculture—increase their economic and strategic importance. The seabed also plays host to 287 undersea fiber-optic cables through which 99 percent of global internet traffic passes, fueling the modern economy.

Each of these developments serve to make the seas even more congested—and more vital.

#### CHALLENGES TO THE UNITED STATES AND THE INTERNATIONAL ORDER

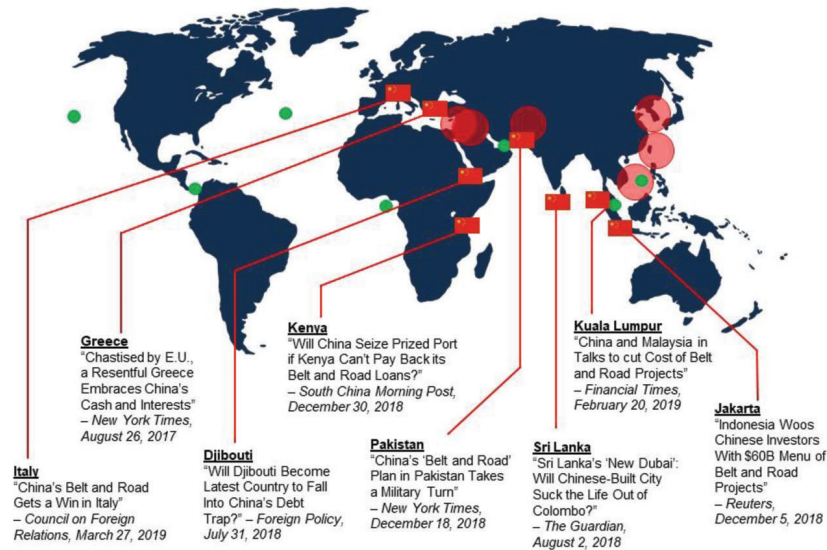
Despite the United States' persistent work over two centuries to keep the seas open to every nation and every mariner, there are those who seek to upend this free and open order and stem the tide that has steadily lifted all boats. As discussed in the 2018 National Defense Strategy (NDS), China and Russia are deploying all elements of their national power to achieve their global ambitions. China and Russia seek to accumulate power at America's expense and may imperil the diplomatic, economic, and military bonds that link the United States to its allies and partners. And these actions are not only directed at the United States: China and Russia are working to redefine the norms of the entire international system on terms more favorable to themselves.

#### ***Eurasian Hotspots Threaten Critical U.S. Interests***



China and Russia are determined to replace the current free and open world order with an insular system. They are attempting to impose unilateral rules, re-draw territorial boundaries, and redefine exclusive economic zones so they can regulate who comes and who goes, who sails through and who sails around. These countries' actions are undermining international security. This behavior breeds distrust and harms our most vital national interests.

### China's Belt and Road Initiative: Maritime Expansion



China's Belt and Road Initiative in particular is blending diplomatic, economic, military, and social elements of its national power in an attempt to create its own globally decisive naval force. China's modus operandi preys off nations' financial vulnerabilities. They contract to build commercial ports, promise to upgrade domestic facilities, and invest in national infrastructure projects. Slowly, as the belt tightens, these commercial ports transition to dual uses, doubling as military bases that dot strategic waterways. Then, the belt is cinched as China leverages debt to gain control and access. In the final analysis, these unfavorable deals strangle a nation's sovereignty—like an anaconda enwrapping its next meal. Scenes like this are expanding westward from China through Sri Lanka, Pakistan, Djibouti and now to our NATO treaty allies, Greece and Italy.

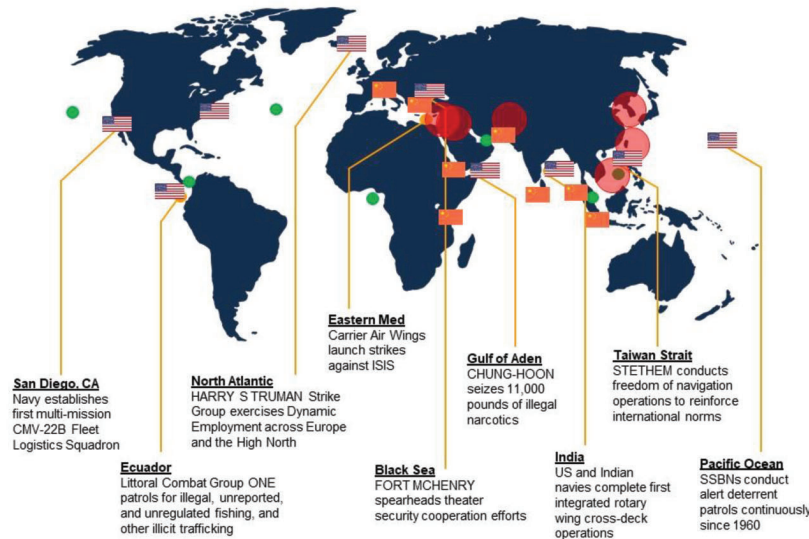
#### THE U.S. NAVY RESPONDING TO CHALLENGES AROUND THE WORLD

The U.S. Navy is responding to this changing security dynamic by playing to our strengths: deploying all around the globe, regularly enforcing common principles, strengthening the conditions that have enabled mutual prosperity, and protecting our national interests. As you read these words, more than 60,000 sailors are deployed on board nearly 100 ships and

submarines to enforce a free and open order that enables this unprecedented flow of goods and services.

As the National Defense Strategy makes clear, the U.S. Navy will compete aggressively to shape our modern maritime environment, ensuring that order and security continue to underpin our prosperity. We do so by harnessing the myriad forces at play—the increasing use of the maritime domain; the rise of global information systems and the role of data-driven decision-making; and the increasing rate of technological creation and adoption. We remain committed to challenging excessive maritime claims, strengthening relationships with allies and partners, and upholding time-tested values.

### ***The U.S. Navy Deployed Around the World***



How can we maintain this worldwide posture and compete given these strategic realities? How must we invest in order to build, sustain, organize, and strengthen ourselves so that we can continue harnessing the global maneuver power inherent in naval forces? The answers lie in the President's Fiscal Year 2020 Budget (PB-20), a submission firmly rooted in addressing Great Power Competition and moving boldly and swiftly into the future.

Importantly, the single most effective way to maintain the strategic momentum started in fiscal year 2017 is to enact the President's Fiscal Year 2020 Budget prior to the start of the fiscal year. This funding will help us fulfill our responsibilities in the National Defense Strategy by building the Navy the Nation Needs: a balanced force that will increase America's naval power and safeguard our economic, diplomatic, and military interests around the world.

#### **A BIGGER, BETTER, MORE READY NAVY**

President's Budget 2020 seeks \$160 billion for the U.S. Navy. For perspective, this request represents approximately three percent of the federal budget. According to the Congressional Budget Office, this investment represents approximately half of the amount currently expended on servicing the national debt and one-third of current expenditures on Medicaid.

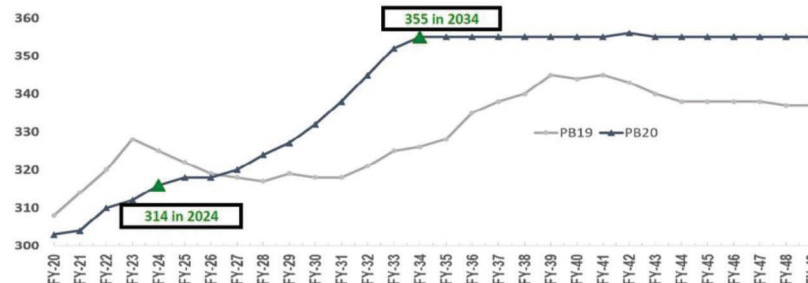
This budget request preserves our industrial base and establishes an aggressive, forward-looking, competitive posture. Our industrial partners are counting on us for consistent and continuous commitments. Absent this behavior, we may perpetuate, rather than end, the "boom-and-bust" cycles we have experienced in the past. Coincident with this aim to steadily grow the force and preserve our industrial base is the responsibility to "own" the additional inventory when it arrives. President's Budget 2020 embraces future capabilities while judiciously stewarding our current force.

The guiding principle of our budget request is to balance naval power across its many dimensions. Naval power is not a choice between increased capacity or better capability—it is a combination of both. Naval power is not a choice between readiness and modernization—it requires a balance of both. Naval power is not a choice between more complex stand-alone technologies or networked systems—it is achieved through both. The talent to operate and sustain a larger and more lethal force is not a choice between more people or better training—it must draw from both.

### Bigger

An ongoing force structure assessment will conclude by the end of 2019. While data-driven analysis may ultimately change the details of our long-term fleet architecture, all force structure analyses agree in one respect: we must build a bigger Navy.

#### A Bigger Navy: PB-20 vs PB-19 Shipbuilding Comparison



To increase America's naval power, we will build more platforms like ships, submarines, and aircraft, and expand our special operations forces. In 2018, Congress made a 355-ship Navy the law of the land, and this increased capacity will strengthen our ability to prevail in any warfighting contingencies, meet demand signals from combatant commanders, expand global influence, and support American prosperity by safeguarding access to critical markets, waterways, and chokepoints.

The fiscal year 2020 budget requests nearly \$24 billion in ship construction accounts to fund one nuclear-powered aircraft carrier, three fast attack submarines, three large surface combatants, one small surface combatant, two combat logistics force ships, and two auxiliary support ships. Expanded across the Future Years Defense Program (FYDP), President's Budget 2020 funds construction of 55 battle force ships to achieve a 301-ship Navy in fiscal year 2020 and a 314-ship Navy in fiscal year 2024. Along with class-wide service life extensions, this puts us on pace to reach a 355-ship Navy in fiscal year 2034 (approximately 20 years sooner than President's Budget 2019). The Annual Long Range Plan for Construction of Naval Vessels (also referred to as the "Thirty Year Shipbuilding Plan") accompanies this budget request.

There is no more existential imperative than deterring a nuclear attack on the Homeland. President's Budget 2020 fully funds the *Columbia*-class ballistic missile submarine program to do just that. Fully funding this request now will ensure that the lead ship's construction commences on time in fiscal year 2021, delivers in 2028, and conducts its first alert patrol in CY 2030. The *Columbia*-class will guarantee continuity of the most survivable leg of the strategic deterrent triad into the 2080s. This budget also procures 373 fixed and rotary wing aircraft (including 84 Block 3 F/A-18E/F Super Hornets), 226 unmanned systems, and over 17,000 weapons and munitions across the FYDP.

The recently approved block buy of two *Gerald R. Ford*-class aircraft carriers (CVNs 80 and 81) saves American taxpayers approximately \$4 billion. It also maintains our trajectory towards the requirement of 12 more survivable and powerful aircraft carriers, and it gives our industrial partners much-needed predictability. It also represents an investment in future technologies that solidifies the nuclear-powered aircraft carrier as a centerpiece of national defense through the rest of the century.

Finally, President's Budget 2020 funds an additional 5,100 sailors in fiscal year 2020 (and 18,600 over the FYDP) on top of fiscal year 2019 end strength levels to recruit, man, maintain, operate, and fight these added ships, submarines, and aircraft. Filling gapped billets at sea remains our top manning priority, and we are committed to operating safely, effectively, and sustainably over time as the battle force grows.

### Better

To increase America's naval power, we will build a better fleet—one that is more capable, agile, networked, and resilient across all of our naval platforms. This

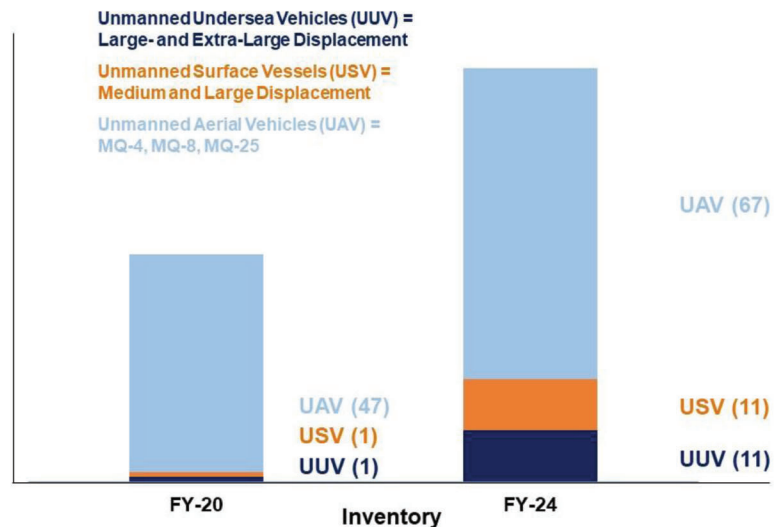


means fielding state-of-the-art systems and continually modernizing legacy equipment. In addition to other modernization efforts, the fiscal year 2020 budget includes \$18 billion for research and development—an increase of \$1.4 billion over fiscal year 2019 enacted levels.

For example, President's Budget 2020 includes \$4 billion across the FYDP to modernize 19 guided missile destroyers. This includes critical upgrades to AEGIS Baseline 9, enabling them to simultaneously perform Integrated Air and Missile Defense (IAMD) and Ballistic Missile Defense (BMD) operations. As well, improvements to Naval Integrated Fire Control Counter Air (NIFC-CA) will allow networked ships to share identification, targeting, and fire control data. President's Budget 2020 funds 160 F/A-18E/F Super Hornet Service Life Modifications (SLM) across the FYDP, equipping these aircraft with more lethality at greater ranges, improved signatures, and advanced networks.

The budget also increases investments in long-range offensive ship-, sub-, and air-launched weapon systems, including: Tomahawk Land Attack and Maritime Strike missile, Long-Range Anti-Ship Missile (LRASM), Standard Missile (SM) 6, Joint Standoff Weapon Extended Range (JSOW-ER), Harpoon Block II+, as well as investments in Conventional Prompt Strike hypersonics. The budget augments investments for acoustic superiority modernization by requesting \$93 million in fiscal year 2020 (\$633 million across the FYDP) to improve submarine quieting and sensor performance. To deliver capability faster, we are also leveraging accelerated acquisition and rapid prototyping by investing \$1.3 billion in fiscal year 2020 (\$4 billion across the FYDP) for the Navy Laser family of systems, SM-2/6 weapons, MQ-25 Stingray carrier-based unmanned aerial system, and Unmanned Underwater Vehicles.

### ***A Better Navy: Delivering Unmanned Capability***



*Note: This chart represents platform deliveries and therefore may include platforms procured in earlier budgets.*

The fiscal year 2020 budget builds on the progress made in fiscal year 2019 by pursuing near-term Naval Tactical Grid development and investing \$50 million in fiscal year 2020 (\$236 million across the FYDP) for the newly-established Digital Warfare Office to design and implement a comprehensive operational architecture to support emerging Distributed Maritime Operations concepts. The Navy will also invest \$440 million in fiscal year 2020 (and more than \$2 billion across the FYDP) to fund Fleet and industrial base cyber security, and hardening of ship hull, mechanical, and electrical systems among others.



As these investments indicate, the Navy is focused on controlling the high-end fight. Nuclear-powered aircraft carriers are, and will continue to be, central to this effort. *Ford* was designed to deliver more capability for today's airwing and to provide growth opportunity for tomorrow's airwing—more lethal systems, and increased power generation. *Ford* is also proving more cost effective with a 30 percent higher sortie rate with a 20 percent smaller crew than her *Nimitz*-class predecessors. This translates into \$4 billion savings over the life of the *Ford*-class when compared to *Nimitz*-class: in other words, more naval power for less cost.

*Ford* is innovation on a grand scale, offering a host of new technologies that will greatly improve the combat power of strike groups. As with naval innovations of the past, we didn't get everything right on the first try. We have learned with each test and most of the new systems are now operating. And we will continue to learn, iterate, and improve: the second *Ford*-class ship is being built with 18 percent fewer man hours. Despite this aggressive approach to adopt new technologies, *Ford* was delivered with less lead-ship cost growth than several other ship classes. *Ford* and her successors will set a new standard for afloat performance and combat power projection well into the second half of the century.

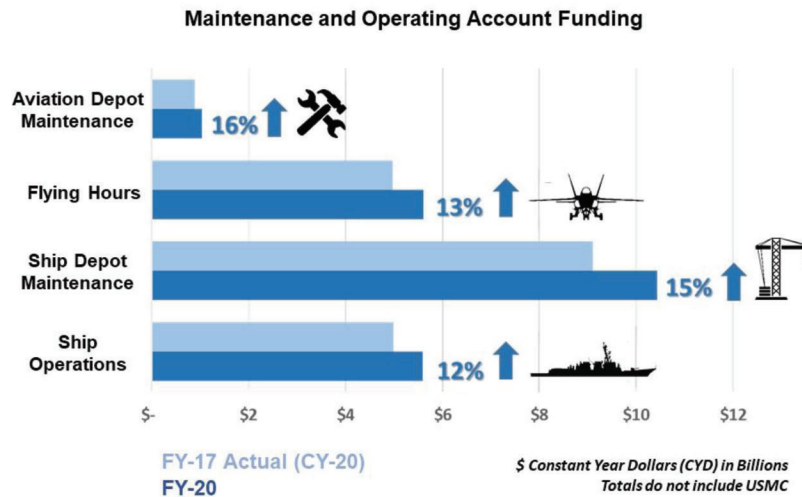
We are also making tough calls about the capabilities we need to tackle future challenges. President's Budget 2020 removes funding for USS *Harry S. Truman's* (CVN 75) Refueling and Complex Overhaul (RCOH)—\$3.4 billion over the FYDP. We are applying the funds from the RCOH decision to field cost-imposing advanced technologies faster. In parallel, we continue to validate this decision through a rigorous program of studies, wargames and experimentation to analytically validate the best way forward. We remain postured to respond to what our studies show us and to adjust pace in-stride, including reversing the CVN 75 decision, if needed.

#### *Ready*

To increase America's naval power, we will build a ready fleet. This means steaming days to exercise at sea, flying hours to train in the air, sufficient quantities of ammunition and spares, and the resources to conduct emergent and planned maintenance—not only for today but also for the future as the fleet grows in size. And it's not just about *buying* more parts: President's Budget 2020 includes \$23 million in fiscal year 2020 (\$66 million across the FYDP) to research and develop additive manufacturing (AM) capabilities. Among other AM goals—such as expanding this capability at sea to additional ships and beginning to network AM across the enterprise—we intend to produce 1,000 unique end-use components for fleet installation and operation by the end of 2019. Readiness—both materiel and training proficiency—transforms our Navy's potential power into actual power. The knowledge and efficiency gained from the Department of Defense-wide audit will ensure that we do so as effectively as possible.

The fiscal year 2020 budget continues the readiness and wholeness commitments we made in fiscal year 2017, fiscal year 2018, and fiscal year 2019 by funding ship and aviation readiness and enabler accounts. The fiscal year 2020 budget increases maritime and aviation spares funding compared to fiscal year 2019. Additionally, the fiscal year 2020 budget stabilizes and incentivizes the industrial base by funding 62 ship availabilities in public and private shipyards, shifting two attack submarine availabilities to private yards, and infusing \$546 million in fiscal year 2020 for naval shipyard infrastructure optimization. Finally, the budget includes capital investments of 12 percent in public shipyard depot facilities and 10 percent in Fleet Readiness Centers, exceeding the six percent legislative requirement and underscoring our commitment to increase our capacity to maintain and modernize our fleet.

### ***A Ready Navy: Fixing, Flying and Steaming More***

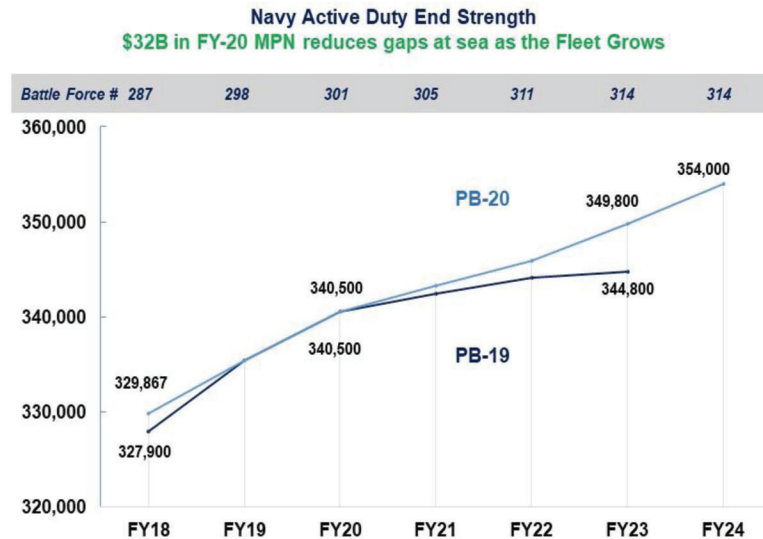


These investments will help on-time maintenance execution—aircraft and ship availabilities—which in turn gives our sailors the time they need at sea to build proficiency and confidence; not simply to operate safely but to prevail at the high-end of maritime conflict.

Recognizing the inherent link between readiness and lethality, we continue to modernize our logistics capabilities to better refuel, rearm, resupply, revive, and repair operational forces. At sea, we are prioritizing the recapitalization of auxiliaries and sealift capabilities to sustain the Fleet's enduring global posture and support mobility of the Joint Force. President's Budget 2020 includes an initial \$8 million research and development investment in the Common Hull Auxiliary Multi-mission Platform (CHAMP) for concept design. Ashore, we recognize that readiness is an enabler for force projection; in addition to investing in our shipyards, President's Budget 2020 increases investment in facilities sustainment, restoration, and modernization (FSRM) to \$3.1 billion (from 80 to 87 percent of the sustainment requirement).

Of course, ships, aircraft, and weapons are not, by themselves, sufficient to respond to today's complex challenges. The readiness of these platforms and systems depends on talented and well-trained sailors, led by commanders of competence and character. Our sailors are the glue that binds our Navy team together. This is our Polaris. It is also why we established the College of Leadership and Ethics at the U.S. Naval War College in April 2018. Just as we have done throughout our history, we will continue to develop and empower leaders who are driven to build winning teams.

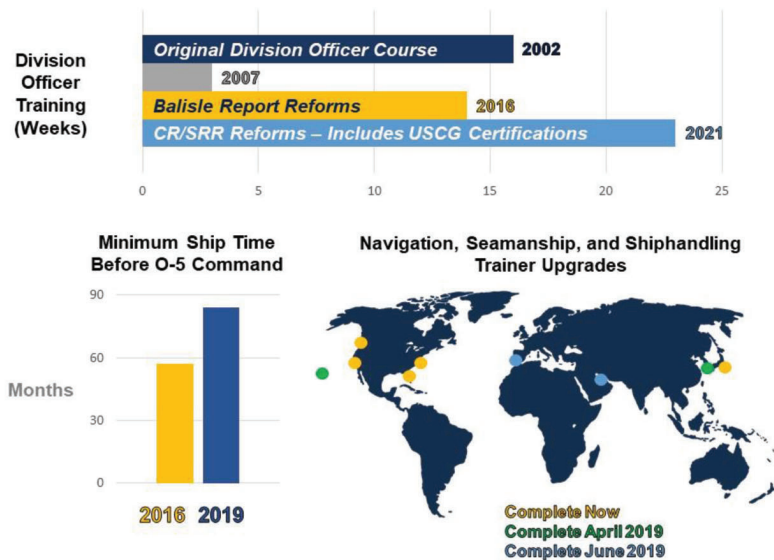
### *Manning a Bigger, Better, More Ready Navy*



The fiscal year 2020 budget continues our generational transformation of the Navy's manpower and personnel systems. We are investing \$235 million in a modern cloud-based personnel and pay system, while creating an expanded assignment marketplace and increasing career flexibility. For example, we are exercising the authorities granted to us in the reform of the Defense Officer Personnel Management Act (DOPMA) to make better use of investments in training and increase career opportunities and flexibility for our officer corps. These initiatives leverage state-of-the-art practices to put more control into the hands of our sailors. This includes more transparency regarding their career options. The sailor 2025 suite of programs will make today's burdensome and time-consuming process for executing orders—from updating pay and benefits to finding new housing and moving household goods—as easy as scanning a Quick Response (QR) code on a smartphone. Not only will this make the frequent relocations associated with military service easier for sailors and their families, it will minimize distractions so they can focus on warfighting.

And we continue to tackle the recommendations listed in the Comprehensive Review (CR) and Strategic Readiness Review (SRR). President's Budget 2020 assigns the highest funding priority to CR/SRR-related investments—\$346 million in fiscal year 2020 and \$1.1 billion over the FYDP—including construction of new Mariner Skills Training Program centers and simulators and programmatic commitments for the Next Generation Surface Search Radar. Additionally, we remain committed to assessing our ships and crews, understanding the impact of fatigue and other human factors, filling personnel gaps for ships on deployment or in sustainment, and dedicating time to maintain our forward-deployed Fleet. As of February 2019, 20 of the 111 recommendations remain to be adjudicated. While we are on track to begin implementation of these remaining items by the end of the fiscal year, we will continue to analyze the effectiveness of our new programs and iteratively improve them over the FYDP.

### A Ready Navy: Surface Warfare Training



Finally, we remain committed to recruiting and retaining diverse shipmates. In a time when evolving artificial intelligence and machine learning are factoring into future military capabilities, our sailors must bring creativity, innovation, and context to tactical and strategic decisions. This potent combination will make us more competitive and operationally effective. And it is the diversity of their backgrounds and viewpoints that will catalyze the speed and quality of decisions we need to outperform our adversaries.

#### CONTINUING OUR BUDGETARY MOMENTUM

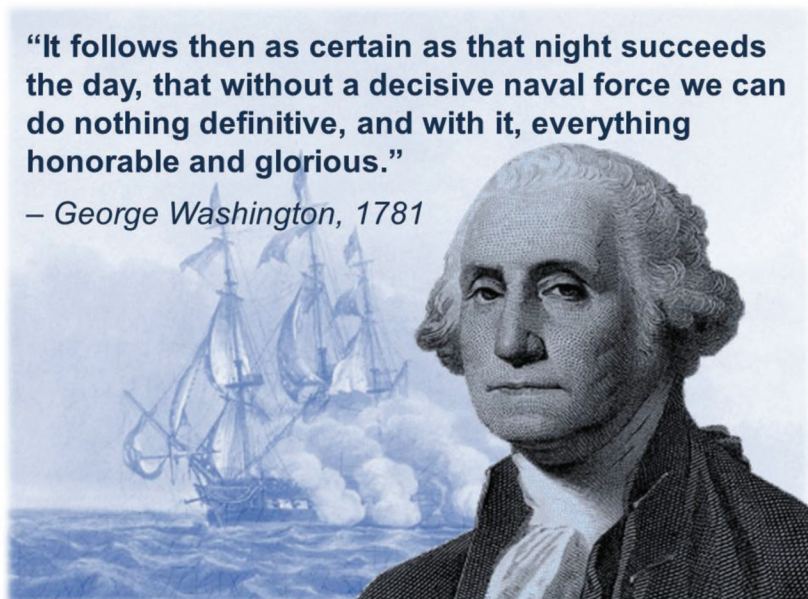
These realities highlight the importance of partnerships and a recognition that together we can do so much more. This past year's on-time budget put our Navy on a steady course making best speed. Prior to last year, when the fiscal year 2019 National Defense Authorization Act (NDAA) was enacted on August 13, a defense authorization bill had not been enacted prior to the start of the fiscal year since fiscal year 1997; the last time a defense appropriation was enacted by October 1 was fiscal year 2009. This meant nine years of continuing resolutions that averaged one-third of the fiscal year. This uncertain financial footing resulted in fluctuating topline and interruptions to government operations and services.

The Navy looks forward to working with the 116th Congress to continue the momentum developed in fiscal year 2019. Stable and predictable funding solidifies strategic planning, incentivizes our commercial partners, strengthens our industrial base, safeguards our sailors, and bolsters the interests of your constituents. And most importantly, stable and predictable funding mitigates operational risk by maximizing our planning and execution time.

With timely, stable, and predictable investments, the U.S. Navy will be bigger, better, and more ready to work every day—in every ocean—to set the conditions that allow Americans and all the citizens of the world to flourish and prosper.

**"It follows then as certain as that night succeeds the day, that without a decisive naval force we can do nothing definitive, and with it, everything honorable and glorious."**

**— George Washington, 1781**



The Navy has always maintained a strong connection to the flourishing and prosperity of the American people. President Washington's phrase—"everything honorable and glorious"—hearkens to American values that are derived from the inalienable rights outlined in the Declaration of Independence: "That among these are Life, Liberty, and the Pursuit of Happiness."

This last value has commonly been understood as the right to materially improve our circumstances. The Navy also maintains a deep and historic connection to America's economic strength, the engine that makes our country a global power. The Navy was founded to protect vital sea lanes like Gibraltar and combat piracy off the North African coast—a mission to safeguard free movement of trade and free access to markets that continues in earnest today.

"Honorable and glorious" also characterizes the mission of the United States Navy and the selfless service of more than 600,000 sailors and civilians, and their families. The U.S. Navy is a definitive military force in world events but the Navy also connects with every other element of our national power. The Navy is the face of the Nation and often the first point of contact between the United States and other peoples. U.S. Navy ships have shuttled American diplomats across all seven seas: think of the paddle-wheeled steam frigate USS *Mississippi* transporting Commodore Matthew Perry to Japan in the early 1850s; the Great White Fleet circumnavigating the globe at the turn of the Twentieth Century; and the USS *Quincy* (CA 71) carrying President Franklin D. Roosevelt to Malta in 1945. And our ships have hosted international events of the highest consequence that have shaped the global security environment, such as the Japanese surrender aboard the USS *Missouri* (BB 63), anchored in Tokyo Bay, which formally ended the Second World War. The Navy brings sovereign United States territory to the shores of other nations, fostering connections to extend American assistance to those who would be our friends and demonstrating resolve to those who may oppose us.

And ingrained in every mariner is the notion that we will never sail past another mariner in distress. We will continue to provide humanitarian assistance and disaster relief to our fellow citizens and neighbors wherever and whenever they are in need.

## CONCLUSION

This hearing comes at a critical time to both our Navy and our Nation. The challenges we face are varied and are growing more dynamic by the day. Let there be no doubt: America is a maritime nation and a maritime power. Our way of life and our economic prosperity have always been linked to the sea. For 243 years—through war and peace, uncertainty and stability, turmoil and prosperity—the United States Navy has validated founding father Thomas Paine's maxim that "a Navy when finished is worth more than it cost."

In the competitive environment we face now and in the future, we must increase naval power in a balanced approach to meet our national strategic goals. The President's Fiscal Year 2020 Budget ensures that the Navy and the Nation can continue to do everything honorable and glorious, as Washington intended.

I am grateful to this Committee and to your colleagues in the Congress for starting this important work, and we look forward to sailing alongside you to build and deliver the Navy the Nation Needs.

Chairman INHOFE. Thank you, Admiral Richardson.  
General Neller.

**STATEMENT OF GENERAL ROBERT B. NELLER, USMC,  
COMMANDANT OF THE MARINE CORPS**

General NELLER. Chairman Inhofe, Ranking Member Reed, distinguished Members of the Committee, I'm here today to testify on the posture of your Marine Corps, and I appreciate the opportunity to be here, and I look forward to your questions.

I know this Committee, the Congress, and the American people have high expectations for our marines. As our Nation's expeditionary force in readiness, you expect your marines to be ready to operate forward with our Navy in the contact and blunt layers of a global operating model, to assure our partners, deter our rivals, and respond to crisis across the range of military operations. And, if deterrence should fail and we are called to fight, you expect us to fight and win.

As we hold this hearing, approximately 41,000 marines are forward-deployed or postured in more than 60 countries around the world, some in harm's way, as we found out all too well yesterday, all engaged, doing exactly what you expect of them, throughout our history, if you have called upon your marines to respond immediately to crisis around the globe, either from the sea, from forward bases, or from home station. To meet your intent to be ready to suppress or contain international disturbances, short of large-scale war, we strive to prevent war by assuring our allies and deterring rivals with ready, capable, and persistently present naval expeditionary forces. Forward-postured naval forces remain critical to that end, providing the Nation a significant operational advantage through maneuver access and our presence.

Now, supporting day-to-day operations through theater security cooperation, building partner capacity, humanitarian assistance, and disaster relief, or supporting current global contingencies requires your expeditionary force in readiness to be present. We recognize the strategic environment is constantly changing, requiring adaptations to our organization, training, equipment, and warfighting concepts in order to provide our Nation the lethal naval expeditionary force it demands. Your Marine Corps is committed to building the most ready, capable, and adaptable force the Nation can afford. This requires hard choices as we balance commitments to our current operations, work to rebuild our readiness,

and pursue modernization efforts designed to increase our competitive advantage over our adversaries. Thanks to your efforts in Congress to provide increased and on-time funding, you have made some of our choices far less difficult.

Still, we remain challenged by the lasting effects of Hurricanes Florence and Michael, both mentioned by Ranking Member Reed and the Secretary, that hit the East Coast last fall. The financial cost of these two storms totals around \$3.7 billion, but their impacts go deeper. And I look forward to answering any questions on this issue that you may have.

I do want to thank the Office of the Secretary of Defense, the Congress, and the administration for their work and support in approving \$400 million of reprogrammed resources so we can immediately begin addressing some of the most pressing needs at Camp Lejeune. The Marine Corps continues to work to address the remaining shortfall within this fiscal year.

Despite these challenges, the Marine Corps remains on the right path as we implement the National Defense Strategy. We continue to develop effective warfighting concepts through experimentation and invest in the right capabilities while experimenting ruthlessly to validate our choices in order to prepare for the future.

Most importantly to the success of your Corps, we continue to recruit and train the most qualified men and women our Nation has to offer, men and women who raise their right hand, yearn to earn the eagle, globe, and anchor, and serve something greater than themselves, and represent the best our Nation has to offer around the world.

The Navy/Marine Corps team remains our Nation's naval expeditionary force in readiness, forward-deployed, forward-postured, competing every day. And with the Congress's continued support and commitment, we will ensure that we must send our sons and daughters—if we must send our sons and daughters into harm's way, they will have every advantage our Nation can provide.

Lastly, as mentioned by Ranking Member Reed, this was likely to be my last appearance in front of this Committee as I close out 44 years as a marine, the last 4 as the Commandant. And I want to personally thank this Committee for your support that you show every day to your marines.

Thank you, and I look forward to your questions.

[The prepared statement of General Neller follows:]

#### PREPARED STATEMENT BY GENERAL ROBERT B. NELLER

##### MARINES—READY, EXPEDITIONARY, AND LETHAL

The purpose of your Marine Corps remains unchanged since mandated by the 82nd Congress—to be *ready*. Not just ready to go—but ready to go *now*, ready to *respond and compete* wherever sent, and if necessary—ready to *fight and win*. This idea of a “force-in-readiness,” reaffirmed by the 114th Congress, requires a Marine Corps that is “most ready, when the Nation is least ready.” As a naval service, marines are *soldiers of the sea* ready to secure or protect national policy objectives by military force when peaceful means alone cannot. And if we must engage in the violence of battle to secure our interests, we stand *ready* for the violent struggle, and prepared to impose our will on our enemies. It is this idea of total readiness—a constant preparedness, expeditionary mindset, and aggressive warfighting philosophy—that remains the driving force behind your marines today. Yet we recognize the strategic environment is changing, requiring adaptations to our organization, train-

ing, equipment, and warfighting concepts in order to rebuild our competitive advantage and provide our Nation the lethal, expeditionary naval force it demands.

The Marine Corps is committed to building the most ready, lethal force the Nation can afford. Unfortunately, the testimony that follows is presently a conditional statement as the Marine Corps confronts the impacts of recent Hurricanes Florence and Michael in the fall of last year. Hurricane Florence was the wettest tropical storm ever recorded in the Carolinas, dropping 39 inches of water in less than one week. Just a few short weeks later we felt the impacts of Hurricane Michael, the strongest storm in terms of maximum sustained wind speed to hit the United States since Hurricane Andrew in 1992. The impact of these two disasters in terms of cost to the Marine Corps is estimated to be \$3.7 billion, but their impacts go much deeper and the gravity of these unforeseen disasters may not be fully known to this Committee:

- 3,000 military personnel displaced including 1,000 family members living on base.
- North Carolina installations are home to II Marine Expeditionary Force which comprises 1/3 of the combat power of the Marine Corps.
- North Carolina installations are also home to Marine Corps Forces Special Operations Command (MARSOCC), Fleet Readiness Center-East, and the Center for Naval Aviation Technical Training.
- 800 buildings across Marine Corps Base (MCB) Lejeune, Marine Corps Air Station (MCAS) New River, and MCAS Cherry Point were damaged or compromised.
- 100 structures were damaged at Marine Corps Logistics Base Albany.
- Almost 4,000 of the 6,200 homes across these installations sustained damage.

Your Marine Corps is feeling the immediate impacts of these storms through lost and delayed training time; delayed deployments and redeployments; and daily quality of life challenges. Many of our ranges and training areas remain degraded. Damaged infrastructure to include roads, railroad trestles, and beaches have degraded our strategic capacity to deploy. All of these present an unacceptable challenge to the Nation's expeditionary force in readiness who must remain ready at a moment's notice. From a force posture "risk to force" and "risk to mission" perspective, we assess our current risk to both as "moderate." Effective 1 June of this year however, we assess our risk to both moving to "high" as we enter the next hurricane season.

Thanks to the hard work and support of the Office of the Secretary of Defense, Congress, and the Administration, the Marine Corps recently received \$400 million of reprogrammed resources to immediately begin addressing our most pressing infrastructure needs. We continue to work tirelessly to address our remaining \$449 million shortfall within fiscal year 2019, and \$2.8 billion required over fiscal year 2020, fiscal year 2021, and future plans to fully recover. We continue to make the decisions necessary in the short term to return our personnel, repair our facilities, and restore our readiness. Funding the remainder of this requirement internally, however, may jeopardize the readiness gains made over that last few years through the efforts of Congress and your Marine Corps. We must continue the hard work described in the remainder of this testimony to rebuild our readiness and modernize our Corps to maintain our competitive advantage against rising competitors.

#### *Expeditionary*

Throughout our history, marines have been called upon to respond immediately to crises around the globe either from the sea, forward bases, or home station. To meet Congress' mandate to be "... ready to suppress or contain international disturbances short of large-scale war," we strive to prevent war by assuring our allies and deterring rivals with ready, capable, and persistently present expeditionary forces. Forward postured naval forces remain critical to that end, providing the Nation a significant operational advantage through maneuver and access. Supporting steady state operations through theater security cooperation (TSC); building partner capacity; supporting humanitarian assistance/disaster relief (HA/DR); and non-combatant evacuation operations (NEO); or supporting current global contingencies, requires your expeditionary force-in-readiness to be present.

The 2018 National Defense Strategy (NDS) clearly requires forward-deployed naval *expeditionary* forces that can compete, deter, and provide "inside" forces capable of denying adversary freedom of maneuver as part of our integrated naval defense-in-depth. "Expeditionary," however, is more than a simple definition contained within joint publications. Marines view the term expeditionary as a pervasive mindset that is fundamental to our character, and an idea that shapes all aspects of our organization, training, education, equipment, and employment. Marines must be able to deploy rapidly, leverage the sea as maneuver space, enter the objective area, accomplish a broad range of operations, sustain itself, withdraw quickly, and



rapidly reconstitute while forward deployed to execute follow-on missions. The Marine Air Ground Task Force (MAGTF)—by design a tailorable, self-sustaining, and scalable expeditionary unit—provides our Nation a combined arms force capable of exploiting advantages over an adversary. Equally important, the MAGTF provides a forward deployed *dynamic force* available *now*. Marines approach this expeditionary mindset holistically—from our training, capability development, employment in austere conditions, and Service culture. Although our warfighting concepts must be continually revised and our capabilities modernized to sustain our ability to respond when called, it is our expeditionary nature, forward presence as a naval force, and preparedness for the violence of combat that define our unique role in the Nation's defense.

#### *Competition, Lethality, and Deterrence*

The strategic environment is complex, informationally and technologically charged, volatile, and dangerous. The proliferation of modern conventional weapons and social media capabilities to a broader range of state and non-state actors, along with the erosion of our competitive technological advantage in areas where we have long enjoyed relative superiority, is likely to continue as peer competitors attempt to contest our influence globally. Competition below the traditional level of armed conflict and global campaigns such as China's One Belt One Road initiative, create a wide range of strategic and operational challenges that underscore the need for a globally responsive naval force capable of providing an asymmetric maritime advantage.

Threats posed by revisionist powers and rogue states require a change to how your Marine Corps is organized, trained, equipped, employed, and integrated with the Navy. *We must become a more lethal, resilient, and capable competitor and deterrent.* The Navy-Marine Corps team no longer relies on concepts and capabilities premised on uncontested sea control. We must establish a forward deployed defense-in-depth, anchored on naval "inside" forces, capable of Expeditionary Advance Base Operations (EABO) in support of the naval campaign. Modern sensors and precision weapons with expanding ranges and lethality are redefining how we assess our posture and relative combat power. Advanced adversary defensive networks are forcing us to reconsider methods of assured access required to compete against rising peers within a contested maritime space. As naval "inside" forces, the Navy-Marine Corps team must develop complementary capabilities to compete, deter, and win in all domains and facilitate the maneuver and projection of Joint Force capabilities. Our warfighting contributions must help shape the strategic environment to prevent conflict—one of the original mandates of the 82nd Congress for a "force-in-readiness."

The Marine Corps assures allies and partners and competes globally every day within the Contact and Blunt Layers articulated in the NDS, in support of respective Fleet Commanders and Geographic Combatant Commands (GCC). Your Marine Corps maintains approximately one third of its operating forces, or roughly 39,500 Active and Reserve component marines, forward deployed and forward stationed. Amphibious Readiness Groups / Marine Expeditionary Units (ARG/MEUs), Special Purpose Marine Air Ground Task Force (SPMAGTFs), MARSOC, Marine Expeditionary Force Information Groups (MIGs), Task Force South West, and allocated forces are forward-deployed and forward-stationed to contest the malign behavior of our foes, improve interoperability with our allies and partners, and prepare to delay, degrade, and deny adversary aggression should deterrence fail and competition turn to armed conflict. And if our adversaries mistakenly choose to test our will, we must be capable of providing a combat credible force ready to absorb the initial blow; hold the line; contest their advance; facilitate sea control/denial; win the information operations fight; attrit adversary naval, land, and air forces; and fight until our allies, partners, and the Joint Force reinforces.

At home, your Corps is preparing to contribute to the war-winning Joint Force should deterrence fail. We are preparing to respond to global contingencies against peer rivals in contested environments; to rapidly aggregate forces from across the globe to deliver capable mass to the fight; and prepared and ready to wage violence in all domains—from degrading and penetrating anti-access area denial (A2/AD) networks—to assuring access and projecting power with command and control (C2), fires, maneuver, and logistics. Every Marine throughout the MAGTF is constantly preparing through training and exercises that approximate the conditions of war as much as possible, and conducting training that introduces friction in the form of uncertainty, stress, disorder, and opposing wills. At the institutional level, we are testing our concepts and developing new tactics, techniques, and procedures. At the unit level, we are focusing on our foundational core competencies, individual discipline, and continuing actions in order to develop the mindset and skills necessary to pre-

vail in any future fight. Only through hard, demanding, and realistic preparation can we achieve total readiness.

We must increase the lethality of our integrated naval forces in order to deter our adversaries; and if deterrence fails, to win. Deterrence requires a combat credible force that possesses lethal capabilities, at sufficient capacities, paired with innovative operational concepts in order to alter the decision making choices of our adversaries. Lethality spans the Corps from the tactical to the operational levels of war, and from small unit formations to scalable MAGTFs. Ground formations must still locate, close with, and destroy the enemy by fire and maneuver, or to repel the enemy's assault by fire and close combat. The Marine Corps is committed to providing every lethal advantage available to our tactical warfighting formations to ensure overmatch against peer threats and improve the lethality of our close combat squads. No Marine should ever enter into a fair fight.

At the MAGTF level, lethality provides the means by which we alter the decision making choices of our adversaries. A *lethal*, integrated naval force that can deny adversary freedom of maneuver is paramount to this idea. That said, sea control is more challenging now than in past decades. Long-range detection and targeting methods possessed by adversaries, combined with extended ranges of their land-based anti-ship missiles, is increasing the interaction between land and naval forces in the littorals, requiring the Marine Corps to further develop and integrate force capabilities in support of the Navy—“*Green in support of Blue*.” While power projection and forward presence remain foundational to our naval force, we are developing new concepts and capabilities for assured access, sea control, and sea denial that include long-range precision strike, raids, Distributed Maritime Operations (DMO), Operations in the Information Environment (OIE), and EABO. The product of those efforts, through speed, lethality, and an asymmetric competitive advantage, is *deterrence*. Ships and aircraft acting within a networked fleet must contribute to the lethality of the fleet with the ability to protect themselves from air, surface, and sub-surface attack, while possessing organic ship-to-ship and ship-to-shore strike weapons required by future naval campaigns. Current amphibious ships lack these capabilities, and therefore, must rely on support from other combatants to perform sea control and assured access missions.

To increase the lethality and deterrent effect of our existing amphibious fleet, the naval force must upgrade C2 suites; introduce organic ship-to-ship and ship-to-shore precision strike weapons; integrate organic air defense; decrease ship signatures; and launch/recover the MAGTF's growing fleet of unmanned aerial systems—together, a more cost-effective approach than seeking a replacement of existing platforms. An amphibious fleet so equipped is a force multiplier to the larger naval force. The Marine Corps, in support of the Navy, must shift from a focus on a near symmetric land-based enemy to an asymmetric view in which Marine forces, operating from expeditionary advanced bases, threaten enemy naval, land, air, and unmanned forces. Marines must be prepared to task organize in support of fleet operations in highly contested maritime environments; employing mobile, low-signature, operationally relevant, and survivable expeditionary forces to mitigate challenges created by adversary advantages in geographic location, weapons system range, and precision. These are the capabilities and concepts possessed by an integrated naval force that offer our adversaries a choice—a choice to de-escalate to a state of manageable competition, or a choice to escalate and face a lethal naval force at a time and place of our choosing.

#### *Concepts and Experimentation*

Marines continue to innovate to build the 21st century MAGTF—a lethal, adaptive, and resilient Corps that executes combined arms as a means to conduct maneuver warfare across all domains. This transformation began in 2016 with the implementation of the Marine Corps Operating Concept (MOC). The MOC represents our institutional vision for how the Marine Corps will operate, fight, and win despite the challenges of the strategic environment, and like the larger institution, will continue to be revised as the character of naval warfare changes. The MOC provides the foundation and context for subordinate operating and functional concepts—like Littoral Operations in a Contested Environment (LOCE) and EABO—and it guides our analysis, wargaming, and experimentation. These concepts, and our associated thinking on warfighting, are naval concepts which complement broader visions and conclusions articulated in the Navy's DMO concept.

Whereas the MOC, DMO, and EABO provide the concepts for how marines will fight and prevail, it is through extensive experimentation and wargaming that we validate our force development choices, and inform our resourcing and programming strategies. Our experimentation and wargaming efforts focus on designing a lethal, agile, and resilient MAGTF optimized for the future that incorporates marines capa-

ble of integrating cyber, OIE, artificial intelligence, and long range precision fires capabilities in support of the Navy. As a driver of innovation, our Marine Corps Warfighting Lab completed the first phase of our long-range experimentation plan called Sea Dragon, and over the next five years will focus on MAGTF hybrid logistics, OIE, EABO, DMO, maritime fires, and maritime C2. Through these efforts, the Marine Corps continues to adapt and refine our capability development, force structure, and resourcing decisions that modernize the force.

#### OUR 2020 BUDGET

*“Competing with a Peer Threat”* is the theme of our President’s Budget 2020 submission, and directly aligns with the Secretary of Defense’s guidance to increase lethality, improve warfighting readiness, and achieve program balance. This year’s budget of \$45.9 billion builds on the momentum gained over the previous year and seeks to further adapt and modernize our Corps by focusing on three key budget priorities—*modernization, readiness, and manpower*. Through programmatic reforms, divestiture of legacy systems, and key investments in manned / unmanned teaming and autonomous systems, we are transforming today’s Marine Corps into the future force required by our Nation and building the most ready force our Nation can afford. To accomplish this goal, we require adequate, sustained, and predictable funding to properly plan for and resource a ready, capable, lethal force.

The Marine Corps remains committed to fiscal transparency and responsible stewardship of our taxpayers’ dollars. The results of Full Financial Statement Audits for fiscal years 2017 and 2018 generated efficiencies through improvements to financial processes, systems, internal controls, and accountability of equipment. The Marine Corps continues to remediate audit findings and remains focused on achieving a modified opinion by fiscal year 2020. Continued emphasis on executing corrective action plans, improving information systems, and better managing funds provided to us by the taxpayer demonstrates our commitment to achieve and sustain favorable audit opinions.

Marine Corps business reforms identified more than \$389 million in savings and cost avoidance in fiscal year 2020 to reinvest in modernization and warfighting readiness. When combined with reform efforts in fiscal year 2019, the cumulative reforms and divestitures over the past two years total \$956 million. Examples of vetted and approved reform initiatives include:

- Multi-Year Procurement for Aircraft
- H-1 (Aviation) Program Procurement Savings
- Infrastructure Reset
- Enterprise Lifecycle Maintenance Program
- Legacy Counter-Radio Controlled Improvised Explosive Device (CREW) System Divestment
- DoN Under-Execution Review

Marine Corps business reforms enable us to make strategic choices in the divestiture of certain programs to reinvest our limited resources toward building a more modern, lethal, expeditionary force. We are focused on continuing business reforms in fiscal year 2020 that foster effective resource management, support audit readiness, and streamline the requirements and acquisition process.

#### Modernization

Modernization remains critical to meeting the demands of a strategic environment marked by revisionist and revanchist powers, long-term strategic competition, and rogue regimes that have immediate access to advanced, lethal, and disruptive technologies. As part of a naval expeditionary force, what we desire to achieve is a Corps capable of denying freedom of maneuver to deter our adversaries, or when necessary, capable of exploiting, penetrating, and degrading advanced adversary defenses in all domains in support of Naval and Joint Force operations. Deterrence is no longer measured solely by the threat of violence. We require a force capable of operating and winning in the information environment before the physical fight ever begins. Should deterrence fail, we require a future force that can deny adversary freedom of action, impose costs, control key maritime terrain, shape the operational environment in support of integrated sea control and maritime power projection operations, and impose our will in all domains while under attack.

In order to achieve the modern, lethal force required, we must experiment with new technologies available on the market, determining what will work best in the future operating environment, and then deliver those capabilities to the force quickly to mitigate the rapid rate of technological change. The Marine Corps Rapid Capabilities Office (MCRCO) makes this possible, seeking emergent and disruptive technologies to increase our lethality and resiliency. The MCRCO leverages fiscal year 2016 and fiscal year 2017 NDAA provisions and partnerships to accelerate the re-

quirements development and definition process—with the consistent and steadfast support of Congress—we will continue to fund this office. We also embrace the idea of alternative acquisition pathways. We are using and seeing value in other transactions authority and intend to apply middle tier rapid fielding authority at the first appropriate opportunity as a solution to expedite modernization, where production is achievable within five years or less. Accelerated modernization is an essential part of the remedy to our long-term readiness problems and we must not allow ourselves to bury modernization efforts under cumbersome acquisition processes.

Modernization investments represent roughly 30 percent, or \$13.9 billion of the total President's Budget 2020 budget submission, and are synchronized with Marine Corps Force 2025 (MCF 2025), the capability investment strategy which modernizes the force toward implementing MCF 2025, MOC, EABO, and the NDS. The following capability areas support building a 21st century MAGTF across the Active and Reserve components of the force, and are prioritized in the following manner:

- *Command and Control (C2) in a Degraded Environment:* The Marine Corps requires a sustainable, defensible, and resilient C2 network, integrated with Navy and Joint Force networks, which allows for timely and persistent information exchange while enhancing battlefield awareness to dispersed tactical units across the MAGTF. Investments in Networking-on-the-Move (NOTM), Fused Integrated Naval Network (FINN), Terrestrial Wideband Transmission System (TWTS), MAGTF Integrated Command and Control (MIC2), and MAGTF Digital Interoperability upgrades provide significantly increased capabilities associated with maneuver and fires across the battlespace. Additionally, in a contested information environment, artificial boundaries between a “tactical” network and a “garrison” network erode; the marines at the tactical edge will need seamless connections to the marines supporting them further back from the front line. We have to modernize our enterprise network and move our data stores to the cloud so that marines can access the information they need any time, in any place. The Next Generation Enterprise Network (NGEN) program and future programs like it are critical to supporting the warfighter.

- *Long Range and Precision Fires:* The modern day battlefield requires forces capable of conducting lethal strikes at range, in depth, and with precision from air, land, and sea. Marine Corps investments include 5th Generation F-35B/C aircraft, maritime Group 5 MAGTF Expeditionary UAS (MUX) with precision weapons, Guided Multiple Launch Rocket System (GMLRS) Alternate Warhead (AW), Ground-Based Anti-Ship Missiles (GB-ASM) as well as ground vehicles and Long Range Unmanned Surface Vessels (LRUSV) armed with loitering munitions enabled by Low Cost UAV Swarming Technology (LOCUST).

- *Operations in the Information Environment (OIE):* Adversary use of “information” to manipulate facts, mobilize mass perceptions, and contest our ability to C2 forces undermines our traditional military advantages. We cannot count on uncontested access to the electromagnetic spectrum any more than we can count on uncontested freedom of maneuver on the sea. Establishment of the Deputy Commandant for Information (DC I) provides headquarters advocacy while the development of the MEF Information Group (MIG) enables the planning and integrating of OIE with traditional military activities to enhance lethality and our competitive advantage.

- *Air Defense:* Forward deployed/stationed marines are vulnerable to attacks in ways we have not considered for decades. Most lack protection and sufficient resilience from long-range kinetic attacks that jeopardize our ability to prepare, project, and sustain combat power. Expeditionary forces operating away from bases in a distributed/dispersed manner provide some degree of resilience through distributed mass and reduced signatures. Investments in Medium-Range Air Defense Systems, Counter-Cruise Missile, squad-level Counter-UAS, swarming technologies operating in a networked manner, and the Ground/Air Task Oriented Radar improve the resilience of our posture and our air defense capabilities.

- *Protected Mobility / Enhanced Maneuver:* To distribute and concentrate forces and effects, we must be able to maneuver to positions of advantage, and engage and defeat threat forces in all geographic, topographic, and climatic environments from littoral waterways to urban areas. The Corps prioritizes modernization and investments in three key vehicle replacement programs required to improve mobility and increase force protection: Amphibious Combat Vehicle (ACV), Joint Light Tactical Vehicle (JLTV), and the Armored Reconnaissance Vehicle (ARV). To improve dismounted mobility, we are investing in lighter, better fitting body armor. Aviation investment priorities include procurement and Block 4 capability upgrades for F-35B/C; and the CH-53K which will provide an exponential leap in vertical heavy lift capability.

• *Logistics*: In a distributed and contested environment, logistics takes on greater significance as a key enabling function requiring global logistics awareness, diversifying distribution, improving sustainment, and optimizing installations to support sustained operations. This requires innovative methods, the ability to leverage new technologies, and integration with Navy, Joint, and Coalition forces. Science and Technology (S&T) efforts in Additive Manufacturing (AM) drove the procurement of 160 3D printers, with more than 125 ground and 83 NAVAIR-approved aviation parts; immediately improving readiness and lethality. Additional investments in developing enhanced logistics C2 systems, bulk fuel transportation and storage, unmanned logistics systems—to include quadrotor cargo delivery systems and littoral connectors—are paving the way in Next Generation Logistics (NexLog) capabilities.

It is equally important that the Marine Corps provide every lethal, modern advantage available to our tactical warfighting formations to make sure our infantry is deadly and protected to the maximum extent possible. Aligned with the Secretary of Defense's Close Combat Lethality Task Force (CCLTF) initiative, the Marine Corps continues to invest heavily in its close combat formation capabilities, including—enhanced combat helmet; binocular night vision devices; M-27 Infantry Automatic Rifle; M320 grenade launcher; M38 Squad Designated Marksman Rifle; and Javelin anti-tank missile. Additional investments include Squad unmanned aerial systems; MAGTF electronic warfare; Joint Battle Command Platform; Handheld C2; target hand-off system; adaptive threat force augmentation; future integration training environment; pattern of life automated behavior development, and warfighter augmented reality. These capability investments, combined with demanding unit training and Service-level force-on-force exercises, provide the path forward to ensuring close combat superiority against peer competitors.

#### *Readiness*

The Marine Corps is committed to building the most ready force the Nation can afford. Readiness, however, is the product of two metrics. The first is the ability of the force to execute its mission with ready people, ready equipment, and the right training. The second compares the force against potential adversaries, the importance of which grows dramatically in an environment of rising peers and global competition. If our near-term readiness levels are high and our units are ready, then by the first metric we are ready. If, however, that force is outranged or outpaced by potential adversary capabilities, then by the second metric we are not. This requires an additional long-term view of readiness through capability modernization, as discussed in the preceding section of this statement. As a Service, we will take a deliberate approach to continue the positive trends in our overall readiness while simultaneously balancing the need to modernize our current force, satisfying existing GCC demands, and building the force required by the strategic environment to remain relevant in the future. Thanks to your efforts in Congress to provide increased funding, you have made the choices the Marine Corps has to make less difficult. Our President's Budget 2020 budget provides \$14.3 billion, or approximately 31 percent of our total submission towards near-term readiness.

#### *Aviation*

While readiness concerns exist across the MAGTF, our most acute readiness issues are found in aviation units. Recent increases in funding enabled the Marine Corps to simultaneously invest in both readiness and modernization, adding capacity to the flight lines by fully funding readiness enabler accounts, depot and Defense Logistics Agency (DLA), spares, training, and people. The Marine Corps has been able to accelerate aviation readiness recovery efforts along four lines of effort:

1. Depot Readiness Initiative: resources to accomplish certain unit level maintenance while an aircraft is being re-worked at the depot, which means aircraft that return from the depot to a squadron are ready to fly almost immediately.
2. Non-Mission Capable Maintenance (NMCM): the qualified maintenance marines and needed supporting resources (engineers, support equipment, etc.) are available to fix aircraft without delay.
3. Non-Mission Capable Supply (NMCS): all parts are available when needed to prevent extended aircraft down times awaiting parts.
4. In-Service Repair: higher-level maintenance needed at the squadron is properly resourced to perform these repairs without delay, avoiding excessive aircraft down time.

Although much work remains to achieve our aviation readiness recovery goals, we continue to see significant gains realized along these lines of effort: depot throughput met Service goals, NMCM rates have decreased, NMCS rates have dropped, and in-service repairs have reached our Service goal. In short, these gains mean that marines are able to keep existing aircraft in a mission capable (MC) status for

longer periods, affording aircrew more flying hours and training time. In addition to our dedication to fully funding aviation readiness accounts, other readiness recovery initiatives include the CH-53E Reset program, Depot Readiness Initiative, MV-22 Readiness Program, and talent retention efforts aimed at retaining experienced maintainers in operational squadrons. Leading indicators of readiness improvements resulting from these efforts include: an increase in overall flight hours, an increase in average monthly flight time for our aircrew, an increase in MC rates of our aircraft, and an improvement of our aggregate aviation T-Rating. These gains are a direct result of funding provided in the fiscal year 2017 and fiscal year 2018 defense appropriations bills, which allowed investments in readiness enabler accounts at maximum executable levels. These investments are now realizing significant results. Should funding decrease in fiscal year 2020 or beyond—aviation readiness will also likely decrease.

The Secretary of Defense released guidance to the Services directing accelerated readiness recovery of tactical aviation (TACAIR) to achieve 80 percent mission capable rates by the end of fiscal year 2019. The Marine Corps is taking action to achieve this goal along five lines of effort. The Marine Corps is working towards this goal by increasing the number of aircraft available and operating within aircraft and maintenance capacity levels. Our investments in fiscal year 2017, fiscal year 2018, and fiscal year 2019 will produce ready aircraft from our depots, \$1.6 billion in spares from Navy Supply, and \$16 million in additional consumables from DLA. Additional goals from industry partners include accelerated completion of aircraft modifications and retrofits, accelerated depot repair capability, and shifting maintenance to the appropriate levels. Successful implementation of these efforts will ensure we meet the 80 percent goal and sustain it in the future.

#### *Ground Equipment*

Ground equipment readiness rates continue to show significant gains after years of focused effort to reset our equipment. As of 1 October 2018, the Marine Corps completed reset of 99 percent of our ground equipment programs and returned 72 percent of our ground equipment to the operating forces. The operational readiness of key Principal End Items (PEI) remains high, and we project to complete our ground equipment reset efforts in third quarter fiscal year 2019. High operational readiness rates of key PEIs, however, mask certain underlying readiness issues. Units preparing to deploy are still experiencing shortfalls in equipment to train for core mission tasks as we support global equipment sourcing for forward deployed units such as Special Purpose MAGTFs. Equipping requirements for these rotational forces are disproportionately high due to their unique mission sets, placing high demand on low density equipment that approaches or exceeds availability. The result is risk in equipment availability to respond to contingencies and training for non-deployed units. We are addressing these issues through aggressive acquisition and redistribution actions.

#### *Amphibious Fleet*

Use of the sea as maneuver space remains as vital today as any time in our history. The Joint Force must maintain access to, and the ability to maneuver through the global commons, assure access, compete in the maritime domain, and defeat any competitor attempting to deny our freedom of action. To adequately accomplish these tasks, the naval force must be distributable, resilient, and tailorable while being employed in sufficient scale and for ample duration. The amphibious fleet allows the naval force to do three basic things:

- Conduct steady state operations around the world, including TSC, building partner capacity, HA/DR, and NEO.
- Execute a global cost imposition strategy if we have to fight.
- Project and sustain the force in a contested environment.

Due to existing shortfalls and maintenance issues within our amphibious ship capacity, the naval force currently struggles to satisfy these basic requirements—an issue that will only grow worse over time if not properly addressed. The operational availability of the existing amphibious fleet is insufficient to meet global demands and negatively impacts the unit training necessary to recover readiness for major combat operations. Consequently, the strategic risk to the mission and the larger Joint Force is increased.

The Navy and Marine Corps are currently operating below the minimum amphibious shipping requirement detailed in the 2016 Force Structure Assessment and 30-year shipbuilding plan. The stated requirement of 38 amphibious warships is the minimum number required to fulfill our title 10 obligation. Resourcing to a lower number puts contingency response timelines and the Joint Force at risk. Yet, amphibious readiness is more than the simple product of capacity and availability; it

requires an amphibious fleet with the right capabilities to remain survivable, resilient, and lethal in a contested environment. Today's naval campaigns still demand an amphibious fleet capable of conducting raids, demonstrations, assaults, withdrawals, and support to other operations (TSC, HA/DR, NEO, etc.) in both permissive and non-permissive environments. The naval force must be able to maneuver; gain temporary lodgments to establish expeditionary advanced bases from which marines hold adversary naval, land, and air forces at risk; and then withdrawal quickly as the naval campaign advances. Our amphibious fleet lacks the ability to protect itself from air, surface, sub-surface, cyber, and information attack; and absent organic ship-to-ship and ship-to-shore strike weapons, must rely on support from other combatants to perform sea control and assured access missions. To increase the lethality and readiness of our amphibious fleet, the naval force must:

- Upgrade C2 suites, introduce organic ship-to-ship and ship-to-shore precision strike weapons, organic air defense, and decrease ship signatures to become less targetable.
- Modernize the manned and unmanned surface connector fleet that, when combined with our aerial connectors, enable the naval force to establish a web of sensor, strike, decoy, and sustainment locations based on land and sea that will complicate the strategic and operational decision making of our most advanced rivals.
- Address modernization in our prepositioning program to ensure persistent forward positioning of our critical equipment and sustainment supplies in a manner that is scalable, flexible, expeditionary, and survivable in a contested environment; and that will further enable our naval expeditionary inside forces to persist inside the enemy's weapons engagement zone (WEZ).
- Continue to explore innovative ways to employ alternative platforms for amphibious and maritime operations in more permissive environments in order to compensate for the shortfall of amphibious warships and provide more global coverage in the most resource-appropriate manner.
- Continue to develop and employ Naval Task Force elements consisting of multiple ship types for optimal lethality and force protection; including possible development of more functional and operationally suitable naval vessels and craft to expand the competitive space and create an asymmetric maritime advantage globally.

#### *Deployment-to-Dwell*

The rate by which marines deploy largely depends upon what unit they are assigned to and the operational demand for those units. The majority of Marine units experience a deployment-to-dwell (D2D) ratio that is challenging; we confront this daily. While these demands are clear and unmistakable evidence of the continued relevance of marines, this tempo is difficult to sustain as it limits our time to train to our full naval mission sets. Our goal is to return to a 1:3 D2D force, which would allow us time to train for the high-end fight and achieve balance for our marines and their families at home.

There are three types of marines in our Corps: those who are deployed, those getting ready to deploy, and those who just returned from deployment. President's Budget 2020 supports an 186,200 Active and 38,500 Reserve component end-strength force, maintaining an overall 1:2 D2D ratio. Operating at a 1:2 D2D ratio, although challenging, is a conscious, short-term decision to balance modernization, meet current demand, and simultaneously recover our readiness. We owe our marines and their families the necessary time to reset and train for the next deployment or contingency. For many decades prior to the attacks of September 2001, Marines in the operating forces benefited from a 1:3 D2D ratio. The marines that were not deployed had time to prepare, time to train, and were ready to reinforce their fellow marines if a major contingency happened. A return to a 1:3 D2D would require a substantive increase in manpower, or decrease in operational requirements—we do not seek a significant increase in end-strength in this year's budget and we continue to experience high operational requirements. Although we manage the risks associated with a 1:2 D2D in the short-term, our long-term goal is to return to a 1:3 D2D force.

#### *Infrastructure*

The Marine Corps previously accepted risk in facilities funding to protect near-term readiness and service-level training. Taking risk in the facilities sustainment, restoration and modernization, and military construction programs resulted in the degradation of our infrastructure, which in turn increases lifecycle costs. We must ensure our infrastructure, both home and abroad, is resilient against attacks, and long-range precision strikes while modernizing to support future capability integration and training facilities needed to hone our warfighting skills. Our Infrastructure Reset Strategy must be a priority—we must improve infrastructure lifecycle man-

agement and ensure investments are aligned with Marine Corps capability-based requirements to support our warfighting mission and contribute directly to current and future force readiness. The state of our facilities is the single most important investment to support four critical force enabling functions our installations provide:

- Housing for our marines and their families
- Deployment platforms from which our expeditionary forces fight and win our Nation's battles
- Training facilities required for our MAGTFs to train and hone their combat readiness
- An organic industrial base for depot-level maintenance, storage, and prepositioning of war reserve equipment to maximize readiness and sustain combat operations

As leaders we have fallen short of our full obligation to our marines and their families with respect to privatized military housing; we are correcting this shortfall. The Marine Corps has instituted a voluntary Marine Housing Outreach program aimed at every marine and sailor residing in government quarters, privatized military housing, or an off-base civilian rental property. This outreach program is designed to raise our awareness of the marines' living conditions to ensure it is safe, secure, and environmentally healthy; identify maintenance or safety issues affecting the residence, determine any actions taken to date to remedy them, and determine how the chain of command can assist in the resolution process; and ensure our marines and their families are aware of and understand the support processes and programs available. In concert with the Department of the Navy, the Marine Corps is also reviewing the reporting mechanisms and oversight procedures that govern the way privatized military housing discrepancies are reported, remediated, and verified through our Public-Private Venture partners. The Marine Corps is committed to our marines and families, to improving the military housing offered aboard our installations, and to ensuring unit commanders are personally involved in advocating for the wellbeing of the marines they serve.

The Marine Corps' Infrastructure Reset Strategy ensures every dollar is targeted and spent on the highest priorities at the lowest total lifecycle costs, optimizing investment over the long-term to support our warfighting mission and align investment with our strategic priorities. These prioritized investments align with NDS guidance to increase lethality by supporting new capabilities and platforms; modernizing inadequate and obsolete facilities; relocating and consolidating forces; and improving quality of life. fiscal year 2020 Military Construction (MILCON) and Facilities Sustainment, Restoration and Modernization (FSRM) accounts support:

- Guam relocation investments: Barracks, central fuel station, and central issue facility
- MCF 2025 initiatives: Consolidated Sensitive Compartmented Information Facility (SCIF) for I MEF MIG and 10th Marines HIMARs complex
- New platform investment: F-35B/C hangar, apron, landing pads, and training simulator; ACV maintenance facility; and CH-53K cargo loading trainer
- Training: Wargaming Center at MCB Quantico
- Quality of Life: Barracks replacement at MCB Hawaii and mess hall replacement at MCB Camp Pendleton
- Recapitalization and replacement of inadequate facilities

#### *Manpower*

Our people—marines, civilian marines, and families—are our institutional center of gravity, and remain fundamental to our ability to *Make Marines and Win Battles*. Maintaining the most ready, lethal Marine Corps possible requires talented and dedicated people. Our President's Budget 2020 provides \$16.1 billion towards manpower accounts, approximately 35 percent of our total submission, to continue implementing MCF 2025. The strategic environment our Nation faces requires a more experienced, better trained, and more capable Corps. It requires more than just new equipment and technologies, it requires the right force structure and marines with the right skills to effectively operate. Modernization priorities require a complementary element of force structure changes to ensure we have the right people, with the right skills, for the deployment and employment of new capabilities and to ensure the future force is compatible and mutually supportive. Our goal is to provide a more mature, experienced force to leverage individual skill and professional talent with emerging technology through select force structure changes that recruits, trains, educates, and sustains the most lethal force possible.

To achieve our goals, our actions focus personnel growth in the right areas. Our President's Budget 2020 end strength plans for an 186,200 Active and 38,500 Reserve component force. This limited growth of 100 marines is targeted in specialized fields such as MARSOC and several specialties encompassed by OIE: intelligence,



electronic warfare, and cyberspace operations. Equally important, our manpower efforts are addressing the need for more experienced and better trained leaders within our infantry formations to ensure the superiority of our close combat formations. In order to optimize selection of the most talented infantry squad leaders, we have increased the pool of infantry Sergeants by 330 marines through realignment efforts within our internal structure. Everything we do must focus on making marines better, more resilient, lethal, and capable of outpacing our adversaries.

Central to our role in providing a lethal force is recruiting the most qualified men and women within our Nation who are willing to raise their hand, affirm an oath, and earn the Eagle, Globe, and Anchor. We must ensure that we recruit the right people, devoted to upholding the values of Honor, Courage, and Commitment. Our new marines must be provided the highest level of training that not only prepares them for the rigors of combat, but also successfully transforms and sustains them in their career paths. As such, a fourth phase has been added to Recruit Training. This fourth phase focuses on mentorship and leader-led instruction to better prepare new marines for transition to the operating forces.

Education and training is continuous for marines. We must ensure we *train to fight, and educate to win*. New technologies require smarter, more mentally agile marines capable of exercising sound judgment and decision making in uncertain and challenging situations. Professional Military Education remains essential in developing leaders with the analytical and critical thinking skills required to adapt in ever changing environments. To increase the capabilities of our leaders, the Marine Corps has developed the College of Enlisted Military Education (CEME), creating a pathway for enlisted leaders to increase skill and proficiency through continuing education. We have revamped our PME process, adding new PME courses, and enhancing academic rigor to grow our force with the intellectual skills and capabilities necessary for the future.

As a marines, we must hold ourselves to the highest standards of personal conduct and ensure all marines and family members are treated with dignity and respect. This requires us to take an introspective look at our culture to ensure the long-term success of our efforts. To demonstrate our commitment to strengthening our culture, we created the Talent Management Oversight Directorate (TMOD). This office supports the Assistant Commandant in his role as the Talent Management Officer of the Marine Corps, and addresses all personnel and cultural issues impacting the Corps' ability to invest in and leverage a diversely skilled and talented force. The TMOD's mission is to ensure compliance with all objectives, policies, and directives that supports the Corps' efforts to recruit, promote, and retain the best talent the Nation has to offer. Focused on mission readiness, the TMOD helps ensure we maintain an organization where all members are valued based on their individual excellence and commitment to warfighting. Treating all marines and their families with dignity and respect, as well as fostering a culture of inclusion throughout the service, is central to our core values.

Taking care of marines and their families is a key element of overall readiness and combat effectiveness. The adage "we recruit marines, we retain families" remains as true today as ever. Our comprehensive system of services, to include Sexual Assault Prevention and Response; Suicide Prevention; Personal and Professional Development; Drug and Alcohol Abuse Counseling/Prevention; Business and Recreation Services; and Spouse Employment; seeks to create the holistic fitness and readiness of our marines and families—body, mind, spirit, and social. In addition, our Wounded Warrior Regiment continues to execute our Recovery Coordination Program to "keep faith" with those who have incurred life changing impairments in service to our Nation.

Our civilian workforce has the leanest civilian-to-military ratio of all the military services, at a current ratio of one civilian employee to every ten marines. Approximately 95 percent of our appropriated funded civilians work outside the Washington, DC beltway at 57 bases, stations, depots, and installations around the world. Sixty-nine percent are veterans who have chosen to continue to serve our Nation; of those, 18 percent are disabled veterans. Civilian marines perform vital functions at our bases and stations, and are integral to the daily operations and overall capability of the Marine Corps. Challenges with recruitment and retention—notably burdens like the threat of sequestration, possible furloughs, antiquated hiring processes, and limited pay increases—inhibit our ability to retain top talent. Thanks to the hard work of Congress in passing a civilian pay raise this year, we continue to fund these critical members of our team.

## CONCLUSION

The Marine Corps serves as a naval expeditionary “inside” force that is *most ready, when the Nation is least ready*. We seek a constant state of readiness—lethal, forward postured, assuring allies, deterring adversaries, capable of absorbing the initial blow, and holding the line—and if required, prepared to fight and impose our will on the enemy. We are an integrated naval force—transiting the oceans, aggregating at sea, fighting at sea, and coming from the sea. We are organized, trained, and equipped to operate across the range of military operations, in every domain, and thrive in uncertainty—facilitating assured access operations, sea control operations, or maritime security in support of the fleets. We are self-sustaining for predetermined lengths of time, and capable of quickly reconstituting for follow-on tasking globally to support dynamic force employment. We continuously live “with our sea-bags packed” and remain the most lethal, credible combat forces available.

However, despite notable improvement in readiness during the past two year years, the preceding seventeen years of war have perilously degraded our overall capability and capacity, as those of our adversaries have increased. We must increase the lethality of our “inside” combat credible forces in order to compete with our threats, deter our adversaries, assure our allies, and if necessary—prevail in any fight. As the force at the forward edge, the force first to make contact and hold—we require the most modern, technologically advanced, *capable* Marine Corps our resourcing will allow. To achieve this end, the Marine Corps must evolve from today’s “1.0” force capable of addressing our current warfighting needs; to a near-term “1.1” modernized force that leverages select, existing platforms to achieve new warfighting concepts; to a “2.0” future force with revolutionized capabilities and the ability to execute new warfighting concepts.

The Marine Corps is increasing lethality and evolving our force through prioritized investment in modernization, readiness, and manpower. This evolution is necessary to ensure we maintain current operational readiness and address whatever contingencies may arise today, and anticipate what our force of tomorrow must look like to be capable of addressing unforeseen threats. But we need Congress’ continued support. To accomplish this goal, adequate, sustained, and predictable funding is required to properly plan for and resource a ready, capable force. Our Marine Corps will ensure there will never be a fair fight . . . our Nation is not afforded that luxury. We will continue to innovate and build a 21st Century Marine Corps—a lethal, adaptive, and resilient Corps that can dominate all domains, that is ready to *fight tonight—and win*.

Chairman INHOFE. Thank you, General Neller.

I’ve had a couple of systems I’ve talked about, and we—that I think are worthy of bringing up in this hearing. First of all, Admiral Richardson, what is your current requirement for aircraft carriers?

Admiral RICHARDSON. Sir, the 2016 Force Structure Assessment lists 12 aircraft.

Chairman INHOFE. I understand that you’re now talking about—giving consideration to taking out the USS *Harry Truman*. Now, my question—my first question to you is, Why would you—it’s my understanding that, over the last—for 22 days last summer, there was not a single aircraft carrier strike group deployed. Right now, we know that we have a need. And to take out, I guess, the Truman, you’d—you could characterize that as being in midlife at this time—to take that out of the system, will you have something, then, that can actually change our deficiency from two to one? In other words, come up with 11, as opposed to 10. So, what would motivate that decision?

Admiral RICHARDSON. Chairman, thanks for that question.

I like to think of the budget submission as a—particularly with respect to the Truman, as a bit of a discussion centering around three elements of the budget. One is that we have, indeed, proposed not refueling the Harry S. Truman at her midlife so that we can take those funds and invest them into advanced technologies,

all with the idea of increasing naval power into the future. Our budget, as I said in my opening statement, is forward-leaning into those technologies.

Chairman INHOFE. But, that would have the result of bringing our numbers down—

Admiral RICHARDSON. It would, indeed.

Chairman INHOFE.—to buy one additional carrier.

Admiral RICHARDSON. Yes, sir. And so, the third leg of that stool, Chairman, is really important, which is that we've got a Force Structure Assessment currently underway, and we've—the combatant commanders are also studying their requirements or OPLANs [Operational Plans].

Chairman INHOFE. Now, when is that due?

Admiral RICHARDSON. This is due later on this year. And so, if we need to, it's early enough in the program that we can reverse this decision. I think it's about \$16 million, \$17 million in the budget year. We are ready to readdress that. If these studies show—

Chairman INHOFE. Well, I think that may happen, because we're going to be—of course, we're going into our reauthorization, and that would be one thing that's—I've heard—I'm not the only one who questions that decision, but—and you'll have a chance to respond more, because I know others are interested in that.

Let me—I know, Secretary Spencer, the question that—obviously, our favorite subject is, When do you project that all 11 weapons elevators on the Ford would be ready to be accepted by the Navy?

Secretary SPENCER. Mr. Chairman, as you know, this is a subject of great interest to me. What we're looking at right now is, when she sails from her post-shakedown availability, right now scheduled to be October. We've taken two deliveries since we last talked. We're making progress. We're working with contractors, application and resources are being applied, and, rest assured, attention is focusing down on it.

Chairman INHOFE. Okay. Well, let me just be sure that we're clear, here. There are other areas of underperformance, as you are fully aware, such as the catapults, the resting gear, radar, and the propulsion plan. They're going to have to demonstrate reliability at the same point that we'd be looking at the weapons elevators, isn't that correct?

Secretary SPENCER. That is correct, Mr. Chairman.

Chairman INHOFE. And that was going to be July the—July of this year, of 2019.

Secretary SPENCER. That is correct. There are other items that are pushing the availability out, such as the main thrust bearings, propulsion, and just the whole general PSA [post shakedown availability] schedule.

Chairman INHOFE. And that now is going out to October? Is that correct?

Secretary SPENCER. That is correct.

Chairman INHOFE. All right. How confident are you that this is going to take place by October?

Secretary SPENCER. I—

Chairman INHOFE. Now's a good time to express that—

Secretary SPENCER. It——

Chairman INHOFE.—since——

Secretary SPENCER.—certainly is, Chairman. I am fairly confident. This is new technologies. I don't want to use that as an excuse, but I will tell you that we're confident, working with the contractor, that this is the goal that we will get the Ford out the door——

Chairman INHOFE. Yeah.

Secretary SPENCER.—in October.

Chairman INHOFE. That's a good idea, because we've scheduled a meeting for October, so we'll have a chance to——

Secretary SPENCER. I will——

Chairman INHOFE.—to look at that.

Secretary SPENCER. I will call up the CO [commanding officer], and we'll have lunch——

Chairman INHOFE. All right.

Secretary SPENCER.—on the ship.

Chairman INHOFE. Okay.

Now—and one other system, here, because I know there's some discussion on the CH-53K replacing the CH-53E, and I'd like to get, kind of, an update on that. It could be from you or from any of the other witnesses.

Secretary SPENCER. Let me start, and I'm more than happy to have the Commandant weigh in if he has other comments.

I think that you remember this has always been a program, since I've been onboard, that we've kept an eye on. As of this winter, it was not progressing to the speed that I thought was appropriate, nor our acquisition folks. We are having some negotiations with the prime supplier, Lockheed Martin Sikorsky. I just most recently, Mr. Chairman, sat down with the leadership of Lockheed Martin, and we have, "aligned our priorities as partners."

Chairman INHOFE. Okay. I think that's a good idea. You have new leadership there, you have a different corporate setting than we did before, and that has to be taken in consideration.

Yeah, we're going to stay with our time—timing on this, this round.

Senator Reed.

Senator REED. Well, thank you very much, Mr. Chairman.

Mr. Secretary, we mentioned, several of us, the damage by Hurricane—several hurricanes to Navy installations. And Section 335 of the fiscal year 2018 NDAA required the services to send up the top ten installations that are vulnerable to weather, extreme weather. We have not received that yet. Your colleagues in the Air Force and Army have committed to do so. Can we get a commitment for promptly sending up to us the list of the ten most vulnerable installations?

Secretary SPENCER. At 12:01, I will make sure that is underway, Senator, and I apologize for the delay.

Senator REED. It's—thank you. It's—you're in good company with Secretary Wilson and Secretary Esper. So, thank you very much.

One of the things that we've noticed through the course of these hearings is that—particularly when talking, again, with Secretary Esper and his colleagues in the Army—they did a deep dive into their budget to try to find savings before they asked for additional

resources. Has the Navy, Mr. Secretary and Admiral Richardson and General Neller, Navy and Marine Corps made such a deep dive and made proposed cuts?

Secretary SPENCER. Yes, Senator. A way to look at—I think you're talking about the Army's Night Court that they were having, et cetera.

Senator REED. Yes, sir.

Secretary SPENCER. Navy goes through a similar process every single budget cycle, although this next cycle that we're doing, we're actually calling it zero-base budgeting, where we are zeroing everybody out, and everyone has to come in and sing for their dinner as to their requirements. But, if you look at our savings—I was talking to Senator Perdue about this—if you look at our savings from authorities you've given us, whether it be block buy, multiyear buys, process improvements, from fiscal year 2017 on, we have about \$30 billion worth of savings, compared to business as usual.

Senator REED. Your comments, Admiral Richardson?

Admiral RICHARDSON. Senator, I'd just echo what the Secretary said. We do this pretty much every year, but we've really turned up the heat, under the Secretary's leadership, and those tens of billions of savings are exactly what I'm tracking, as well.

Senator REED. And Commandant?

General NELLER. Sir, there are specific programs that we have dropped from the budget that we felt we could accept risk. There was risk to dropping them, but we did it, because we wanted to generate resources for other more important things. And we continue to look at what we call core/non-core actions that we do and things where we could possibly, maybe, outsource that or not do it at all in order to generate additional resources based on the fact that we—as generous as the Congress has been, we have to be prepared to be able to do with whatever we receive in the future.

Senator REED. Thank you.

Mr. Secretary, there is a significant amount of MILCON [military construction] that has been designated by the White House to be shifted to the wall. And I presume, simply by the fact of asking for the MILCON, that these are serious investments, and that, from a military standpoint, your position would be, they should be—they should take priority, perhaps, over other funding, including the wall?

Secretary SPENCER. Yes, Senator. The process that I've been made aware of is that the list was going up, then we will be asked to prioritize, at some point. I will make sure that my prioritization expressions are given.

Senator REED. I—the sheer size of the request will limit, to a significant degree, what you can protect. And I would presume that there will be projects there that are critical to the Navy and the Marine Corps that, for the demands of the southern wall, will be taken away. And from, again, a military standpoint—there are other factors, I'm sure, but from the military standpoint, do you think that's a wise diversion?

Secretary SPENCER. When asked, Senator, I will give my best advice to the Secretary.

Senator REED. Thank you.

General Neller, I mentioned the JLTV [Joint Light Tactical Vehicle]. Can you give us an idea how you and the Army are going to work together if they try to scale this program down, in terms of putting it in the field?

General NELLER. Senator, we have a stated requirement right now in the acquisition objective. I think it's about 8800. And we're starting to field, actually, this year, for the first time. So, I have not heard specifically from the Army that they are definitely going to reduce their acquisition objective, because that may have some effect on the unit cost, which will be passed on to us. So, overall, we have—we've been looking at ground vehicles, and we're trying to get no more ground vehicles than we need. And so, I'll have to engage with the Chief of Staff of the Army on this. But, right now, we're fielding the vehicle and trying to get rid of our old Humvees and—the oldest Humvees first, and replace them with JLTVs to give marines the newest piece of gear that they can get their hands on.

Senator REED. Thank you.

And just a final comment, in just seconds left. Admiral Richardson, again, you mentioned the *Columbia*-class. It's going to require a lot of scrutiny, a lot of oversight, and a lot of collaboration. It's a great challenge, but necessary. We have to replace the *Ohio*-class. So, thank you for your work, and I encourage you to keep a close and sharp eye.

Thank you, Mr. Chairman.

Senator WICKER [presiding]. Thank you, Senator Reed.

Senator Inhofe has stepped out for a few moments and asked me to preside for a few moments.

General Neller, let me begin with you and, certainly, thank you for your four decades-plus of service.

Let's talk about amphibious ship procurement and the current budget proposal. I was heartened to hear Admiral Richardson say that the budget submission is an opportunity for a bit of discussion about some of these issues. The Navy deferred LPD procurement to 2021 and LHA procurement to 2024, saying that, in pursuing the National Defense Strategy priorities, it was unable to take advantage of last year's addition of advanced procurement funding for either fiscal year 2020 LPD or an adjustment to the LHA. Does the Marine Corps still have a stated need for 38 amphibious ships, as indicated in the Force Structure Assessment?

General NELLER. Yes, Senator.

Senator WICKER. And do we have those 38 ships today?

General NELLER. No, we do not.

Senator WICKER. Do you foresee eliminating the Marine Corps' core mission of amphibious operations at any point in the future? For example, in a potential conflict with China or Russia, would our amphibious Marine Corps likely play a key role?

General NELLER. Based on the plans I've seen, I would say yes, but it's more than that. It—I think we have to look at the ability to come from the sea with the Navy as part of a maritime strategy. And I think the CNO and I are aligned with that. So, yes, they would be part of that planning and in those operations.

Senator WICKER. Okay. Let me just ask you, then, how the F-35 exercise went, recently. The Essex Amphibious Ready Group

and the 13th Marine Expeditionary Unit (MEU) recently completed the first combat deployment of the F-35 Joint Strike Fighter. During this deployment, the F-35 saw action in Iraq, Afghanistan, and Syria. How does the F-35 expand the effectiveness of U.S. amphibious forces? And what did we learn about the F-35's logistical and material footprint aboard the USS *Essex* that can be applied to future iterations of large-deck amphibious ships, sir?

General NELLER. Senator, I have not received the After Action from the 13th MEU. I expect to get that within the next week. I can tell you that the material readiness of the airplane while they were deployed was—exceeded what I expected. They averaged above 70-percent readiness at some point. Actually, in 1 month, they were close to 80. They had six jets aboard the aircraft. They did operate in the airspace above Afghanistan and Syria. So, their material readiness was good. There actually—there are lessons learned, as far as the aviation maintenance onboard ship and the things you have to do, but they set themselves for success. They had us—they did a good job on the parts block, and they did a good job bringing experienced maintainers. This is a bigger jet than we're used to, so there are some deck-handling things that have to go. So, all that stuff will come out. As far as the capability, as far as information and the passage of information and what they were able to do or not do, that's what I'm looking forward to hearing in the After Action Brief.

Senator WICKER. And when do you think—

General NELLER. Overall, it was—in the next week. I believe they will be up on the Hill to brief, also, Senator.

Senator WICKER. But, overall, it's a positive—

General NELLER. It was—material readiness was the thing we were concerned with, being away from a home base. And the material readiness was excellent.

Senator WICKER. Great.

I think Senator Reed, in his opening statement, mentioned that he'd like to have a comment, at some point, about how not refueling the Truman is consistent with our goal of 355 ships. But, let me ask this question instead, Secretary Spencer. And it's with regard to the amphibs. Last month, during the Seapower Subcommittee hearing on Navy shipbuilding programs, I asked Secretary Geurts if, instead of deferring procurement to 2021 and 2024, could the Navy apply incremental funding to the LPD and LHA in fiscal year 2020? He said the Navy could apply incremental funding to the LPD and LHA in fiscal year 2020, if authorized to do so by Congress.

I'll ask you the same question. Could the Navy apply incremental funding to the LPD and LHA in fiscal year 2020, as—if authorized by Congress? And, if Congress approves incremental funding in the fiscal year 2020 NDAA for the LHA and LPD, would that allow the Navy to accelerate how it spends the 350 million that was appropriated in fiscal year 2019?

Secretary SPENCER. Yes, Senator. If, in fact, you authorize and appropriate our authorities or—to go forward with the funding, yes, the answer is, indubitably.

Senator WICKER. Thank you very, very much. Well, we're certainly going to pursue that. I appreciate the candor of our witnesses today.

Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.

And thank you, gentlemen, for being here this morning.

Admiral Richardson and General Neller, thank you both very much for all of your years of service and the excellent job that you provided to this country and to the Committee. I'm sure that the Committee is going to miss you a lot more than you're going to miss the Committee.

Secretary Spencer, you and I have had the opportunity to talk about the importance of the Shipyard Infrastructure Optimization Plan and the commitment that you have to make progress on that. It calls for \$21 billion in investment over the next 20 years, and a number of needs, one of which is drydock capitalization—recapitalization. I just wanted to pick up on Senator Reed's concerns that he expressed about money being taken from military construction projects, like those that are laid out in the Shipyard Optimization Plan, because of their need to address our military needs, going forward. Four of the projects that are on that list of military construction projects are at the Portsmouth Naval Shipyard. At least three of those are critical to the continued expansion of the drydock and the ability of the shipyard to continue to work on our attack submarines that are so critical to maintaining the defense of this country. So, can you talk about the importance of these projects to maintain our submarine fleet, and how delaying or taking money from these projects would impact our national security?

Secretary SPENCER. Senator, you and I have talked before, and I'm more than happy to present to the whole Committee the importance of our ability to, not only purchase, but, equally important, maintain the ships that we have, to get them back out to the fight. When we score our MILCON projects, there is a prioritization. This is obviously a very serious prioritization. As I said earlier, my job, in this case, is to provide the best advice that I can to the decision process. I will represent exactly that.

Senator SHAHEEN. Have you been asked to do that yet? And is there any new criteria that has been laid out by Secretary Shanahan in the Department of Defense about how they're going to determine which projects to take money from?

Secretary SPENCER. None of that already has been discussed, and the timing has not been presented to me as to when he'd like my opinions.

Senator SHAHEEN. So, you haven't been told of any reprioritization that is being done by DOD.

Secretary SPENCER. Not as of this date, Senator.

Senator SHAHEEN. Thank you.

General Neller, there's been recent reports, that I know you're aware of, where you've expressed concern about the readiness challenges that are presented by taking funding and troops to address the southwest border. Can you talk a little bit more about what your concerns are there?

General NELLER. Senator, I wrote a memo to the Secretary of the Navy laying out eight fiscal shortfalls that the Marine Corps had,



one of which was the cost of putting marines on the border. So, the marines on the border, their readiness, I've checked—personally checked the readiness of every unit down there. And, with only one exception, there was no impact to their actual readiness. In fact, a couple of units improved their readiness. So, to say that going to the border was degrading our readiness is not an accurate statement.

That said, there is a cost there, a small cost compared to the others. And we have a shortfall of just under \$300 million, of which the border mission is less than 2 percent.

So, what I was looking for was some assistance in trying to get money to reprogram, because we have to pay our bills. And short of that, we would have to look at other places to get the resources. So, that was the intent of the memo. But, there are a number of things out there that we don't have funding for, some due to other mandates put on us by this body, some by the Department of Defense. So, my intent was to just simply lay out for my boss what these were and ask for his support in trying to figure out how we might fund them.

Senator SHAHEEN. Well, thank you. I appreciate that clarification.

One of the concerns, Secretary Spencer, that has been expressed about our current state of readiness in terms of—is the industrial base that we have, that we're going to need as we ramp up our shipbuilding. Can you talk about the efforts that the Navy's taking to rebuild this industrial base and to focus on research and development to support shipbuilding efforts?

Secretary SPENCER. Yes, Senator. It goes across the board. Whether it's shipbuilding, aircraft building, weapons building, we are tremendously focused on the supply chain, because, beyond the prime, who we interface with directly, is this underlying matrix of organizations providing parts into the platforms. It's critical, on many fronts, whether it goes to the cyber protection of the data that they're holding to produce the parts to us, all the way to the actual parts. You're finding that, in the Navy/Marine Corps enterprise, the acquisition side is going deep, personally, themselves, alongside contractors to ensure the health and the warning signs and friction points that we have in the supply chain, and how we can rectify them. As an example, in certain areas we're sitting there, going, "Okay, if, in fact, supplier A is industrial-capacity-limited, why don't we go to our allies, if, in fact, it's not a critical, confidential part, and actually rely more on our allies?" As you know, we're legally allowed to, in many cases, include up to 50 percent foreign parts. We're now flexing that muscle again to make sure that we are exhausting the whole field of availability.

Senator SHAHEEN. Well, thank you.

I'm out of time, but I'll submit a question for the record to try and learn a little bit more about exactly what we're doing.

Chairman INHOFE [presiding]. Thank you, Senator Shaheen.

Senator Cotton.

Senator COTTON. Thank you, gentlemen.

Secretary Spencer and Admiral Richardson, I want to return—it was touched upon briefly, the collisions of the Fitzgerald and the McCain. In 2017, after those collisions, you both initiated a review

of the root causes, and arrived at a number of corrective actions. Our National Defense Authorization Act last year also included 11 provisions related to those reviews to improve the readiness of our naval surface forces. Could you please update the Committee on the current state of readiness, in light of those corrective actions, and also tell us what corrective actions have not yet been fully implemented?

Secretary SPENCER. Senator, I'll start and then be more than happy to turn it over to the CNO.

Out of the 111, 91 we discussed and arbitrated, we have underway corrective actions, some that were immediate, such as turning on AIS, which is the identification system, when transiting busy passages, through our longer-term remediation, which is the education process, four ships for watch-standing, and also the equipment and systems that we are putting in place to enhance the education process.

CNO?

Admiral RICHARDSON. Senator, I'll just pick up from there. Every one of the measures that we committed to do, both to ourselves and with the Congress, are on track or complete. And we have really moved the discussion from, certainly, regaining a safe-to-operate perspective to moving through a climate of compliance into a culture of excellence, which is where your Navy should always be operating. This included a number of different measures across a very wide spectrum, including, first and probably foremost, the return of schedule and training and certification discipline in the 7th Fleet. And so, now we are ensuring that we certify all ships to go out and do the missions that they are assigned, and they have the requisite maintenance and training time to do those.

We also addressed the surface warfare officer career path. And so, as I alluded—illuminated in my written statement, the amount of training throughout that career path, and the amount of sea time that an officer accrues before he goes to command, has almost doubled, across the board. And so, there's a lot more experience being gained.

Finally, in addition to the amount of training, the quality of that training has increased considerably through the use of high-fidelity simulators, which are being installed in our schoolhouses and in our fleet concentration areas. So, to put it broadly, we're making progress across this entire broad front to get to that culture of excellence.

Secretary SPENCER. Senator, we can send you a little followup that I know Senator King had asked for. And being a data-centric person, it's the numbers behind what we just presented you.

Senator COTTON. Thank you.

Just to tie a bow on this line of questioning, how confident are you that we have no more ships in our Navy that have some of the deficiencies that those After Action Reviews cited, and that the leaders and sailors on our ships now have been fully trained and have the skills that they need to avoid such a terrible tragedy in the future?

Admiral RICHARDSON. I'm confident we're on the right track, sir.

Secretary SPENCER. Ditto.

Senator COTTON. Okay.

Secretary Spencer, let's turn back to the Truman now. There's always been a few lines of questions here. Could you tell us, very simply, was the decision about the Truman a decision driven by budget considerations or by strategic considerations?

Secretary SPENCER. It was a hybrid, Senator. Then-Deputy Secretary Shanahan, when we were planning budget rollout, the thinking amongst the Navy that we worked on was, we have three buckets. We have legacy systems, we modernize legacy systems, and the third bucket was what we call Funding Force 2.0, which is what we've referred to as our future warfare systems, whether that be quantum computing, AI, machine learning, et cetera. Couple that with the fact that—I want to make sure everyone understands this—the Ford will work. The Ford is not a Nimitz. The Ford has 30-percent higher launch capability for sorties than the Nimitz. It takes 25-percent less people. It is a more efficient machine. So, as I look at modernizing a fleet, much like in the commercial world, when organizations modernize aircraft, modernize trucks, modernize cars, modernize ships, they will move for 20-percent efficiencies and abandon the assets that they have. This is not an easy decision whatsoever, Senator, but, in light of the technologies that we have coming forward—and I defer to the Chairman that there's still work to be done, here—the thought process was, we have a much more capable, much more lethal, much more projecting platform. Three of those in the fleet will make up on a capacity argument. That was the primary decision. So, we can take those dollars and then deploy those into Force 2.0 as the competitive—changes.

Senator COTTON. So, my time's almost expired, but just to—one final question here. Surely, though, if this Congress provided you the money necessary for both the Truman refueling and also the rest of your shipbuilding plan, you wouldn't turn that money down and say, "No, we don't need the Truman."

Secretary SPENCER. I would not turn that money down.

Senator COTTON. I didn't think so.

Chairman INHOFE. Thank you, Senator Cotton.

Senator Warren.

Senator WARREN. Thank you, Mr. Chairman.

So, thousands of Active Duty troops and National Guardsmen are currently deployed on the southern border. This operation is going to cost at least a half a billion dollars. So, I've repeatedly written to the Department of Defense, asking whether the deployment impacts military readiness. Each time, the answer has been no. General Neller, last month you wrote a memo to the Navy Secretary identifying nine factors, "imposing unacceptable risk to Marine Corps combat readiness and solvency." One was the border deployment, and a second was the President's plan to take funding away from military construction for a border wall.

Now, General Neller, I know you did not expect this memo to become public, you did not release it, you were just doing your job by assessing risks. Ranking Member Reed and I, along with several other Committee members, sent another letter to the Department yesterday, because that's our job as Members of this Committee, to ask questions about the impact of these risks. So, let me ask. Have any exercises been canceled, or were any units sent to the border

instead of going to scheduled training exercises? Just factual questions. General?

General NELLER. No exercises, to my knowledge, have been canceled. There have been some, due to funding.

So, Senator, if I could just embellish for a second. You're correct, I had a list of eight unresourced requirements, of which one was the mission to go to the border. And what I tried to articulate was, if we did not get funding for these, the total cost of these, about \$300 million, of which the border mission, right now, to date, costing about 6.2—if we didn't get additional money, then we would have to look at other sources for money, which could potentially include other exercises, which would eventually affect the readiness of the force.

Senator WARREN. So, I understand that, but I'm not quite sure I heard the answer to the question. Are you saying no exercises were canceled?

General NELLER. There was an exercise that we reduced the number of people that were going there, but we have relooked at our finances, and we're going to cashflow, at least for this quarter, those exercises, and we're going to continue to do the exercises.

Senator WARREN. Were any exercises delayed because people were sent to the border?

General NELLER. No.

Senator WARREN. Okay. Were any units sent to the border instead of going to scheduled training exercises?

General NELLER. There were some units that went to the border that were scheduled to participate in exercises, and they were not able to do so because they were in that mission.

Senator WARREN. So, they were diverted to the border instead of doing their—

General NELLER. A small number, yes—

Senator WARREN.—their exercises. Okay. Can you just say a word about what are the opportunity costs of the border deployment?

General NELLER. It depends on the unit. Some of the units have gone down there, and they have done tasks that are more in line with their core mission, like engineer units or MP units. Aviation units that were assigned to that early on have actually improved their readiness, because they are able to fly certain profiles. Other units, one particular unit is doing a mission today that's not part of their core competency, so it—but, for 60 days, they can handle that, but it will affect their readiness.

Senator WARREN. Okay. So, when I have raised these issues with DOD officials, they seem to deny disruptions to readiness. I'm seeing something of a disconnect here.

Secretary Spencer, maybe you can shed some light on this. DOD officials assured me, in writing, that the President's southern border deployment and the transfer of military construction funds for a wall do not present significant readiness risks. But, we now know that concerns about readiness have been raised internally. Same question to you. What are the opportunity costs of the border deployment?

Secretary SPENCER. I answered the same as the Commandant, Senator. There are some that actually benefit from the deployment,

because they can actually do their job that their core competency is, some not. But, let's bring it up—and the whole reason that I asked both the CNO and the Commandant for a memo such as this is, I feel I have to know, being the chief executive of the service, to know where the stresses are. This was item G on the whole list. The main stress that we were dealing with at the time, Senator, was the hurricane, which was imposing the greatest cost on the Marine Corps. Five-hundred men for a month at the southern border is \$1.25 million. In my mind, is that affecting my readiness stress? No, it's not.

Senator WARREN. All right. I understand that it's in a context. But, as I said before, part of our job is to explore where we have valid concerns to military readiness. You're doing your job when you raise those concerns. We're doing our job when we ask about them.

The Commandant of the Marine Corps has said that border deployment and the transfer of military construction funds for a wall contribute to an unacceptable risk to the Marine Corps' combat readiness and solvency. I think it's time for the President and Congress to listen to him, and we should keep asking these questions.

Thank you.

Thank you, both.

Chairman INHOFE. Thank you, Senator Warren.

Senator Rounds.

Senator ROUNDS. Thank you, Mr. Chairman.

Gentlemen, first of all, thank you for your service to our country.

Secretary Spencer, you recently commissioned a report to review your cyber operations within the Department of Navy. In it the report was very critical of current naval operations with regard to cyber operations, and it went to great lengths to point out some of the failings within the system today. But, I also found it very refreshing, in that it laid out, for everyone to see, the challenges that you face, and it clearly puts a focus on the need to make significant changes. I find that, if you would have taken out the Department of Navy and you would have put in any one of our other branches, I suspect, other than the anecdotal examples, you would have found a consistency across the entire Department of Defense. So, number one, I want to thank you for laying this out for everyone to be able to see and to review, but also for laying out, not just the challenges, but some solutions that I think are moving in the right direction.

I'd like you to talk a little bit about one part, in particular. And that is, as we move to a 355-ship Navy, and as we talk about the security of every one of those ships and all of the work that we do to protect each one of those ships, compare that with what our near-peer and peer competitors are doing. They're not stealing our ships. They're stealing our information. And we need to take a change, in terms of the culture, about how we protect our information, just like we protect our other assets.

Would you care to comment a little bit about, number one, where you're going with that? And I've got one other question I'm going to—I want to ask you about. So, if you could, a little bit, share where you're going with this, and just how deep in this went to not

just cybersecurity, but to all other aspects, whether it be acquisitions, logistics, and so forth, modernization.

Secretary SPENCER. Senator, thank you for the question, because it is timely. This was driven primarily out of some exfiltrations that happens in our supply system. And that's where the concern for the study started. Rest assured, when it comes to classified information within the Navy itself, we are good at that. Where we're concerned about is out in our contractor—cleared-contractor relationship base. That's where it started.

Now, where did it progress from there? One, we need to take immediate remedial actions, which we are underway right now, with our supplier base, when it comes to our cyber protection. You will hear the Navy and ourselves talk about—it's not how quickly we can get to the fight. One of our battles is going to be getting off the pier, because cyber is around us continually, 100 times a minute, a second, whatever analogy you want to use. It's there, it's present, it's not going away. We need to up our game, not only on cyber defense, because you can't have one side of this equation, you have to be offensively agile as you do defensively agile. They both complement each other. We have to move into that realm. We're going to be asking for probably more authorities, in general, the DOD, when it comes to this, because it's a balanced equation.

Immediately, in the Navy, we are in the process, right now, of—underneath Ron Moultrie, who was a primary member of the team, he is helping us coalesce our business plan to go forward with our cyber remediation process. That goes from data hygiene all the way to organizing what the organization would look like. We're sending a leg prop up to you all to entertain adding a fifth Assistant Secretary. One of the reasons here is that we need to get the people of gravitas, who have the education, who have the experience to deal in cyber, to get them into a position like that and give them the authority to organize and effect the solutions that we need.

Senator ROUNDS. I found one other part of this to be interesting, in that I think this could be transferred—this concept of using the outside resources to not only look at the cyber side, but also on your acquisition side and on your maintenance side, as well. Last fall, I asked specific questions about your attack submarines, the numbers that you've got. You've still got a number of them sitting at dock, because you're not getting them in to drydock, which means we've got nuclear attack submarines taxpayers have paid for that can't be used today. In fact, a number of them, including the USS *Boise*, can't dive. You've also got legacy and Super Hornets, of which, 2 years ago, I believe, we were estimating the operational capability at 40 percent. My understanding is, it's pretty close to that same level today. Can you share with us a little bit about the direction that you're going with regard to those, and whether or not you're making progress on those legacies, both the Navy and the Marines?

Secretary SPENCER. The good news that I'm very happy to bring to you right now is, our F-18, both Navy and Marine Corps, the Es and Fs and the legacies are not boasting somewhere up around 67 percent availability. And this is part of our Navy sustainment effort that we're focusing in right now. We have a ways to go when it comes to surface ship and subsurface ship maintenance. That is

apparent. Senator Shaheen brought it up. We need to do our shipyard modernization. This is all about flow. We have the fundamental understanding now. Now we need to apply the resources to get those out into—

Senator ROUNDS. You need to be at 80 percent, correct, on the Hornets, to make your mission?

Secretary SPENCER. By end of fiscal year, yes, Senator.

Senator ROUNDS. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you. That's good news. I was not aware that that's where we were right now. Because we were down as low as 40 percent.

Thank you, Senator Rounds.

Senator JONES.

Senator JONES. Thank you, Mr. Chairman.

And thank you each for your service.

But, Secretary Spencer, I want to particularly thank you for the time and—that you've shown me in my first 15 months here. It's been a really enjoyable and informative experience, what I've had. So, thank you for that.

You have stated—I guess this would be mainly to Admiral Richardson and General Neller—that we have increased rates—we're looking at 5100 sailors and trying to increase the rates. I'm particularly interested in the pilot ranks. How diverse are our pilot ranks in the Navy? And what is the Navy doing to kind of increase the diversity for men, for minorities, as well as females? Senator Cotton and I have a bill that we introduced to try to increase Junior ROTC and some other things to try to increase that diversity. Could you talk about those programs a little bit, and what you're doing?

Admiral RICHARDSON. So, I'll tell you, in the Navy, and then I'll turn it over to the Commandant.

Just like you, Senator, we're doing everything we can to make sure, as I said in my opening statement, that we bring in a diverse workforce across the entire Navy, not only in our pilots, but everywhere, in that regard. We've opened up all of our jobs to women. Certainly, we encourage, you know, a diverse population across the board, not only in terms of assessing them, but also—you know, look at that population 25 years down. Is the leadership retaining that diversity as it gets more senior? And so, we've got a number of efforts that I'd be happy to come and brief your—you and your staff on in detail to get after that. But, suffice it to say that this is the competitive edge of the future, is diversity, and we take it very seriously.

Senator JONES. Great. Thank you.

General?

General NELLER. Senator, if I look at the gross numbers, particularly in aviation right now, for pilots, the stats are not really good. So, it's going to take a concerted long-term effort to create a better statistical look at—so that we have more men of color and ethnicity and women across the whole force, let alone in aviation. But, I can tell you, for the last 4 years, the number of accessions for officers in the Marine Corps has been 24, 25, 26, and, last year, over 30 percent of those that accept a commission into the Marine Corps

were men of color and ethnicity and women. A lot of that comes from the Naval Academy, because we have been able to increase the number of midshipmen that can join the Marine Corps. Used to be limited to 16.6 percent. In the last couple of years, it's been around 25. That's been a great source of us for men and women.

So, it's going to take—it's not going to get fixed in 4 years, because it takes 22 years to make a colonel, to be an air group commander or be a MEU commander. It takes 15 years to make a squadron commander. So, we'll continue to track this and pay attention to it, but anything you or any other of the Committee Members can do to encourage people to serve in the military, to be involved in science, technology, and math, whether it be high school JROTC, although that is, by itself, not supposed to be a recruiting place; that's just a place to develop leadership in our high school students. But, anything you can do in any area to encourage young men and women to join the military—Army, Air Force, Navy, or the Marine Corps—it would be appreciated.

Senator JONES. Great. Thank you, General.

Secretary Spencer, Admiral Richardson, as you know, Alabama's had an important role on building of the LCS, and we're kind of looking forward to the transition to the fast frigate. Can you tell us, just briefly, about the importance of the frigate's role in the NDS? And do you see the Navy holding to the procurement schedule for the frigate?

Admiral RICHARDSON. Senator, we do. It's extremely important that we make this transition to a—frankly, a more lethal, small surface combatant as we look at—forward and do the Force Structure Assessment, as we look at employing the Navy in a distributed way, using this distributed maritime operations concept. These fast frigates are going to be an important part of that. Yes, sir.

Secretary SPENCER. Just to add to that, Senator, putting my business hat on and my title 10 hat on, this is going to be one of the most robust competitions that we'll have, having five potential forms being submitted into the competition. It's quite exciting.

Senator JONES. Great. Thank you.

Thank you, Mr. Chairman. I yield the remainder.

Chairman INHOFE. Thank you, Senator Jones.

Senator PERDUE.

Senator PERDUE. Thanks, Mr. Chairman.

I want to thank the three of you and all your teams for a couple of things. One is, last November, we received our first ever in U.S. history DOD audit. I'm not a beancounter. I don't think that's what we should be about, but I do think we need to look at being the most efficient we can be so our men and women get everything they need. I also want to thank you for the \$30 billion of what looked like to me real savings, Mr. Secretary and the team, in the—just in the last 2 years. So, this is, directionally, very encouraging.

Admiral RICHARDSON. Billion, sir.

Senator PERDUE. I'm sorry. Billion.

Admiral RICHARDSON. Yeah.

Senator PERDUE. Thirty billion. Let's put a B in front of that. Apologize. Thank you.



I have two questions. Mr. Secretary, I'd love for you to talk to us—you made a quote, 2 years ago now, or in December of 2017. I'm going to quote you, if that's okay. I think you won't mind this. "Continuing Resolutions (CRs) have cost the Department of the Navy—continuing resolutions have cost the Department of the Navy roughly \$4 billion. Between 2011 we've put 4—since 2011, we've put 4 billion in a trash can, put lighter fluid on it, and burned it." Do you still stand by that?

Secretary SPENCER. Most definitely, Senator.

Senator PERDUE. So, would you also acknowledge that \$4 billion—compared to the deployment at the border, \$4 billion would have really materially impacted our readiness, would it not?

Secretary SPENCER. It would, Senator.

Senator PERDUE. Sir, would you talk to us just a little bit about the specific impacts of continuing resolutions? We've had—in the last 44 or 45 years since the 1974 Budget Act, we've had 187 continuing resolutions. In the last 10 years alone, one-third of our time has been, basically, under a CR. So, I'm very concerned. We're half-way through our fiscal year right now. We're looking at September 30th this year. Would you talk to us about what momentum damage that would do to what we've done in the last 2 years? And then I have one more question about maintenance, if we can get to it at the end.

Secretary SPENCER. I'll be very quick with this, Senator. The work that you all have done in both this chamber, across the way at the House, both in authorizations and appropriations over the last 3 years with the 2017 Regulatory Accountability Act (RAA), the 2018/2019 budget, is absolutely spectacular. You've heard me say that it's the foundation of readiness, and we're building upon it. We are. A CR will knock us off our game. It'll be the most painful thing we've had. And what's more bizarre to me is that it would self-induced.

Admiral RICHARDSON. Senator, if I could pile onto that—

Senator PERDUE. Yes, sir.

Admiral RICHARDSON.—just a little bit. I'll tell you, I completely agree with the Secretary. This would be like a punch in the gut. Just some specifics. It would—it looks like it would be almost 16 billion less than the budget request. Of course, it's not just the amount, but also the inability to start new things. And so, there would be no start to the aircraft carrier refueling, the fast frigate program that we just discussed, the advanced helo training system, and a number of others. There would be no quantity increases to the *Virginia*-class SSN, the carriers, the oilers, and many other programs. And so, the list goes on. And we would not be able to assess the people that we need to fill gaps at sea. And so, it would be devastating.

Senator PERDUE. General Neller, you have a helicopter I also believe is due for delivery this year that would be delayed until at least 1 full year. Is that correct?

General NELLER. As the CNO and the Secretary said, Senator, I mean, everything is impacted. You know, we come up with a program and a plan based on what an anticipated budget number's going to be. And, although it would be better than the BCA [Budget Control Act] number, it still would have impact and cause us to

have to go back, and would stall our progress on readiness and modernization.

Senator PERDUE. Thank you.

Admiral, supply chain. We've—other people have talked about it. You guys have talked about it repeatedly here. After sequestration years and cutting the military by 25 percent, the supply chain is totally devastated. I've seen that. I've lived in the supply chain most of my career, and I've seen that just in the last week. I was—I visited—you guys were gracious enough to let me visit the Truman yesterday. I want to thank you for that.

One of the things I'm concerned about is, at procurement now, you do have some flexibility over a multiyear facet. I think it's 3 years. Under maintenance, though, if you don't spend money in one year, it rolls to the—it doesn't roll to the next, it basically has to be reappropriated. Would you be comfortable—or do you see value in a pilot program to test providing multiyear flexibility in ship—in depot maintenance appropriations?

Admiral RICHARDSON. Sir, thanks for that question. Thanks for coming out to Truman yesterday. It was an honor to have you on-board.

Sir, absolutely is the answer to your question. A pilot program, I think, would be terrific, because it would match the funding window to, really, the job at hand. And so, this would give us flexibility throughout the—before, during, and after a maintenance. Before, we could get the supply chain, the material purchased, the planning done, all of that, in order and in place. During, as adjustments always occur, it would give us more flexibility to move funds from one project to another. And then after, it would allow us to recoup funds that we didn't spend efficiencies and apply them to other projects. So, across the board, that type of flexibility would be very helpful. And I'd be happy to participate in a pilot program of that type.

Senator PERDUE. Thank you, sir.

Secretary SPENCER. It only makes business sense, Senator. It would be a great pilot to try.

Senator PERDUE. Well, that would be a shame, to try something commonsense that might help you guys, wouldn't it?

In closing, Mr.—General Neller, I just want to thank you. Forty-four years is a long time to be doing anything, and America is better off because you were at the—on the wall. Thank you, sir.

Thank you.

Chairman INHOFE. Thank you, Senator Perdue.

Senator Blumenthal.

Senator BLUMENTHAL. Thanks, Mr. Chairman.

I want to join in thanking you, General Neller, for your service. Forty-four years is a long time, but you have an extraordinary and distinguished career, and it will be a model for many of our marines for a long time.

Thank you, Mr. Secretary and Admiral, for your service, as well.

I was encouraged to see, Admiral Richardson, your remarks about the *Virginia*-class submarine. I was encouraged that you agree that we should seize this moment of opportunity to build at the rate of three per year. I would assume that you also believe

that we need to strengthen our workforce with training and the capability to build those submarines, correct?

Admiral RICHARDSON. Sir, I had the chance to go up to Groton and visit Electric Boat. And one of my main topics was exactly that. I'll tell you, this is something that is really good for the Nation. Electric Boat and Newport News Shipbuilding, together, the two shipyards that build our submarines, have reached deep into the community colleges and high schools to start building skilled workforce at that level, at that age. All of those folks who would, historically, maybe go to low-paying service jobs or those sorts of things are now doing really high-level work—pipefitters, welders, electricians, et cetera—to meet this workforce demand that's going to allow us to build these amazing ships.

Senator BLUMENTHAL. They have begun expanded apprenticeship programs and skill training, on-the-job training that is building that kind of dedicated workforce in southeastern Connecticut. Not only there, but throughout the supply chain, which is critical to the future of our national defense. The construction of three *Virginia*-class submarines in fiscal year 2020 is good news for our national security as well as for that workforce and for Connecticut. I'm going to do everything I can to support and bolster this effort. I hope it will be a smooth process in this year's budget cycle. But, I appreciate your commitment to this effort.

Let me ask you about another area that I think is tremendously important to our national security. I know that, Secretary Spencer, you've been asked about the report, which I think you said is due at noon today.

Secretary SPENCER. I said I'd get it underway, sir, at noon today. I don't know if I can deliver it today.

Senator BLUMENTHAL. Well, we'll anticipate it whenever it's delivered.

Secretary SPENCER. Thank you, sir.

Senator BLUMENTHAL. But, you would agree that climate change is a national security issue, correct?

Secretary SPENCER. Rising waters are a threat to me at all times, yes, sir.

Senator BLUMENTHAL. The prospect of famine, of flooding, drought, wildfires, the disruption that climate change causes around the world is a national security threat, correct?

Secretary SPENCER. I would agree with you, sir.

Senator BLUMENTHAL. Do you believe that opinion is shared throughout the Department of Defense among your fellow service Secretaries?

Secretary SPENCER. I loathe to comment on something I haven't asked them about, but I know that, in discussions, we share concerns about the events that you just discussed.

Senator BLUMENTHAL. Are you satisfied that our Department of Defense is, not only acting, but also planning adequately into the future for this national security threat?

Secretary SPENCER. I do, Senator. And the reason I'm pausing, I'm thinking about three reports I just read internally, primarily on how the Navy is hiping into direction from the Department of Defense and what we're doing in that regard. So, the answer would be yes.

Senator BLUMENTHAL. Climate change is really a threat multiplier, because it inflames the global instability, it exacerbates those floods and food shortages and droughts and all of the humanitarian crises, which increasingly breed terrorist threats to this Nation. We live in that world now. I thank you and your fellow members of the Department of Defense for your awareness of this issue, no matter what the climate of opinion is elsewhere in this administration.

Thank you very much, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Blumenthal.

Senator Sullivan.

Senator SULLIVAN. Thank you, Mr. Chairman.

Gentlemen, thank you for your testimony and your service.

I think—Admiral Richardson and General Neller, I think this is your last posture hearing. So, thanks for your wonderful service. Forty-four years, General. I'm sure the one thing you probably won't miss, in terms of your Marine Corps, is these kind of hearings. So—you don't have to answer that.

I'm also glad to see our colleagues, like Senator Warren, are raising their concerns about combat readiness for the military. I think we all share that. What did the 2010 to 2016 25 percent cuts in the DOD budget do to combat—to readiness for our combat forces? Twenty-five-percent cuts—

Admiral RICHARDSON. I'll—

Senator SULLIVAN.—from 2010 to 2016. A lot of people don't remember that, but—

Admiral RICHARDSON. I think that—Senator, I'll just take the first stab at this, then I'll just—I think it's been said before, that budget instability and insufficiency has done more damage to the military than any enemy.

Senator SULLIVAN. General?

General NELLER. Sir, as much as we don't want to admit it, we need resources to be able to buy gear, train, and maintain the force. So, when we were in the period of time—the forward-deployed forces, I believe, we're as ready as we could make them, but the difference between that and today is that the folks that were back home and on the bench, their overall readiness was—is not what it is today.

Senator SULLIVAN. Just want to talk about an issue—probably won't surprise you—I want to talk about the Arctic. You know, China and Russia are making big moves into that part of the world, because of resources, transportation routes. We're an Arctic nation because of my State, Alaska. The Russian buildup has been dramatic. Four new Arctic brigades, a new Arctic command, 50 airfields by 2020, 30-percent increase in Russian special forces in the Arctic, 40 icebreakers, 13 more being built, huge snap exercises, in the tens of thousands. This Committee, in a bipartisan way—I see Senator King is here—has been very focused on this issue—new Arctic strategy, strategic Arctic ports, icebreakers. I want to commend you, the three of you, on your focus on this issue, as well.

Mr. Secretary, can you talk about some of the Navy's plans, in terms of freedom of navigation operations, training on Adak, that you and I have gone out to see that very strategic naval base that kind of breaks your heart to see that it's been shuttered, but the opportunities there. Then, General, cold-weather training and other

opportunities in Alaska and other places. You know, when you look at our military and our threats, North Korea, Russia, China all present cold-weather, mountainous threats, in terms of terrain. I think we need to do more in training in that area.

Can you three gentlemen talk about some of our interests and what you're doing in that important strategic space for America?

Secretary SPENCER. More than happy to, Senator. Let me lead off, and I'll be more than happy to hand it over to both the CNO and the Commandant.

As you and I have discussed and we've presented to this Committee before, the Arctic is a focus of ours, and we've never taken our eyes off of it. We've been up there since 1964, if I'm not mistaken, under sea, making sure our presence was known under sea, and in the air. But, now we're taking a more proactive step. We have up to three exercises that you've been made aware of in Alaska. We have one on Adak that we hope to have funded. NORTHCOM is the COCOM that is coordinating that.

Senator SULLIVAN. And that's amphibious operations and—

Secretary SPENCER. That is amphibious operations.

Senator SULLIVAN.—other P-8 sub-hunter ops?

Secretary SPENCER. Correct. Exactly. Take the airfield, then bring in the P-8s, fundamentally.

We have been, in concert with the Coast Guard and you, looking at the needs and the possibility of a strategic port up in Alaska. I think this summer—

Senator SULLIVAN. At this Committee's behest, correct?

Secretary SPENCER. That is correct, Senator.

We—the CNO and I have been talking about the possibility of bringing some ships up, maybe up to Valdez—again, training north of the Arctic Circle. We learned this in the most recent Trident Juncture, where we had ships above the Circle. We need to learn again what we have done in the past, exercise those muscle movements, get the sets and reps so we're ready to fight up there, if need be, and/or just to do our freedom of navigation and/or diligent maneuvers up there.

CNO?

Admiral RICHARDSON. So, I'll just pile on to that, if I could. Since the last time we testified before this Committee, I've signed out the Strategy Outlook for the Arctic—I'm happy to share that with you immediately—which talks about our strategic objectives to defend United States sovereignty up in the Arctic—as you said, we are an Arctic nation—to ensure the Arctic remains stable and conflict-free, protect the freedom of the seas, and promote partnerships with United States Government and other Arctic nations.

Since that time, we've been putting our money where our mouth is, too. You know, we're not just talking about this, we've done four major exercises up in the Arctic. Arctic Edge, where more than 1500 military personnel were up in Alaska to test our ability to operate up there. As the Secretary mentioned, we did the Ice Ex, with two United States submarines and one British submarine up there. Trident Juncture, where we brought a carrier strike group north of the Arctic Circle for the first time since 1991, in November. I can tell you, much has changed since 1991, but it's still extremely cold and hard to operate, up north of the Arctic Circle. We regained

some of those muscles. And then, in February, Arctic Exercise. Then, as the Secretary mentioned, looking forward to September of this year, if we can get the environmental clearances and everything to do an exercise up in the Arctic, amphibious with our Marine Corps partners, as well, which will include not only a takedown and a P-8—in Adak, but also the important part of logistics and refueling ashore, and all of those things.

Senator SULLIVAN. Thank you, Mr. Chairman.

And, General, I can get your details from you later on this.

[The information referred to follows:]

General NELLER. The Marine Corps consistent position regarding the Arctic is that “the Marine Corps must be prepared to deploy wherever the Navy (and Coast Guard) deploy. The Marine Corps maintains capability to support Naval operations in “any clime and place,” including the Arctic. Depending on seaborne lift, the Service plans for a baseline of two MEBs that can conduct offensive operations in extreme cold weather environments. To develop and maintain this capability, the Marine Corps routinely deploys Marine Air-Ground Task Forces (MAGTF) of varying sizes to conduct cold weather training. The units train both in CONUS at the Marine Corps Mountain Warfare Training Center, and other venues including Camp Ripley, Minnesota and Fort McCoy, Wisconsin. The Service also trains in Alaska, in Exercise ARCTIC EDGE and in Norway, in exercises such as TRIDENT JUNCTURE as well as winter training rotations above the Arctic Circle. These training exercise feature interoperability training with NATO allies such as the Norwegian Army and the British Royal Marines. Additionally, the Marine Corps conducts cold weather training in the Pacific, alongside our Korean allies in the Korea Marine Exercise Program (KMPE), and in northern Japan, in winter exercises such as FOREST LIGHT. The Marine Corps has recently upgraded its Infantry Combat Clothing and Equipment (ICCE) cold weather inventory. The Service maintains sufficient cold weather ICCE for the entire Active and Reserve population and Extreme Cold Weather Clothing System (ECCWCS) ICCE (sufficient for temperatures to minus 25 degrees F) for 35,000 marines, with plans to acquire sufficient sets for an additional 4,000 marines when funding becomes available. The resulting ability to outfit 39,000 marines for extreme cold weather supports the Arctic-capable two MEB objective. The Service is currently (May, 2019) undertaking a study to review and update the requirement to provide increased numbers and capabilities of cold weather/Arctic-capable units, given the emerging requirements of potential operations in northwest Europe and northeast Asia, particularly above the Arctic Circle and north of the permafrost line.

Senator SULLIVAN. Thank you.

Chairman INHOFE. Thank you, Senator Sullivan.

Senator Heinrich.

Senator HEINRICH. Thank you, Chairman.

Gentlemen, I was very pleased—

Chairman INHOFE. Yeah, let me interrupt for just a moment.

We do have a vote coming up. And so, Senator Reed is going to go down and vote early, and come up, relieve me, and I’ll vote late, and we’ll keep on working through.

Senator Heinrich.

Senator HEINRICH. Thanks, Chairman.

Gentlemen, I was very pleased to see the focus that the DOD is now putting on hypersonics, and, in particular, the \$2.6 billion request for prototyping across the services. As you probably know, Sandia National Labs has long played a critical role in developing this technology, and is the core reason why we have—we actually have a capability now that’s ready to prototype.

One of the things I’ve discussed with lab directors, who are really eager to transition this technology to industry, and believe it may actually be important to co-locate the R&D and the manufacturing of these systems. What will the role of the lab community and in-

dustry partners be as we seek rapid development of this capability? And is there some value in making sure that the feedback loop between R&D, engineering, and manufacturing is as tight as possible?

Secretary.

Secretary SPENCER. Senator, from day one coming here, one of my comments was that I have to be able to work, and so does Navy enterprise, as a partner with our—with industry. This is a prime example of it. But, what's really exciting about this project is, not only are we partners with industry, the Navy, Air Force, and Army are partners, as we signed out a Memorandum of Understanding (MOU) to work together across our traditional stovepipes. So, we're applying combined resources together to get the goal forward, which is why you're seeing hypersonics dragged to the earlier dates. It's going to be critical, as we transition from R&D to manufacturing, that there not be a stutter-step, there's no light between R&D and the transfer to actual production. I believe everybody's onboard with that. The proof will be in the pudding, but you can guarantee that the—

Senator HEINRICH. Yeah.

Secretary SPENCER.—three service Secretaries and their acquisition arms are looking at it this way.

Senator HEINRICH. Well, I really appreciate the joint approach on this, because we're behind the eight ball, we're a little late to the party, and we need to speed things up. And I think making sure that all of those capabilities, the center of excellence in manufacturing, are as tight as possible. It's going to be really important.

Admiral Richardson, I was very encouraged by the Navy's rapid demonstration of laser weapon systems on surface ships. In a short period of time, the Navy has successfully deployed a 30-kilowatt laser on the USS *Ponce*, the 150-kilowatt laser on the USS *Portland*. You have an \$80 million unfunded requirement in this area. If that were funded, what would it allow the Navy to do?

Admiral RICHARDSON. Sir, first, let me thank the Committee and the entire Congress for all the support in this part of our business. It's really been terrific.

What the—including that on the unfunded priority list does is allow us to accelerate it even further, right? The budget moves very aggressively in this area already—the submitted budget. But, if we got a little bit more money, we could move even more aggressively, still. And so, I've been, you know, privileged to kind of visit the direct-energy corridor. I was just recently out at our labs in California. They're working at every possible part of this, from the weapon itself, getting higher and higher powers, and then the integration with the combat system, shore-based test facilities. We're taking this very seriously across a full range of powers.

Senator HEINRICH. Is the Navy looking at high-powered microwaves, as well, for—

Admiral RICHARDSON. We are.

Senator HEINRICH.—high-velocity threats, like cruise missiles or hypersonics?

Admiral RICHARDSON. Indeed, we are, sir. And so, we—when we talk about directed energy or electric weapons, a lot of times we go right to the lasers, because—

Senator HEINRICH. Right.

Admiral RICHARDSON.—that's so exciting, but there's also a tremendous amount of work being done in high-power microwave.

Senator HEINRICH. Secretary Spencer, I want to sort of finish up here with a workforce question on artificial intelligence, and really the need to make sure that we're building the workforce for these coming changes now. I had a conversation last week with Secretary Wilson, General Goldfein, on the idea of potentially—whether it would be beneficial to create a mission occupational specialty for this type of workforce. I'd just love to get your input on what you think we need to be doing now to make sure that we're developing a workforce that can handle and care for the kind of data that is going to be required, and whether it would be helpful to consider a mission occupational specialty for that type of workforce.

Secretary SPENCER. Senator, a very timely question, because this obviously does feed to Force 2.0, as I just was describing earlier. When I look at it through Navy lenses, the way that I view artificial intelligence is, that is the development of an algorithm that I can take and then apply to my machines so they can learn. I think, in the clearest path, what I would like to see is possibly, at the DOD level, have your AI development, and Navy be able to go up and check that algorithm out of the locker, out of the development field, and then apply it to the needs that they have, or amend it to the needs that they have. That would be the most efficient, I believe, way to go forward.

That being said, we need to ring the bell right now, say, "Doors are open," and bring as many of the great minds to interact with AI right now.

Senator HEINRICH. Great. Thank you, Secretary.

Thank you, Chair.

Chairman INHOFE. Thank you, Senator Heinrich.

Senator Peters.

Senator PETERS. Thank you, Mr. Chairman.

Thank you, gentlemen, for your testimony here today.

Secretary Spencer, this budget does not request funding for additional littoral combat ship procurement. I understand that the Navy plans to shift from buying LCS to the next-generation frigate, called the FFGX. I know you plan to purchase nine hulls by fiscal year 2024, with the first purchase coming fairly quickly, in fiscal year 2020. But, recently, Vice Admiral Merz, the Deputy Chief, testified to the House that the Navy will be reevaluating its force structure plan, citing specifically—and I'm going to quote him right now, "We know we are heavy on large surface combatants, and we'd like to adjust that to a more appropriate mix, especially with the lethality we're seeing coming along with the frigate."

My question to you is, How are you approaching the industrial base, given the potential to increase the Force Structure Assessment requirement above the current requirement for 52 small surface combatants?

Secretary SPENCER. Senator, you've hit a nail on the head. The supply chain is absolutely critical in this regard, no matter which way we move, with what provider. As I said earlier, the excitement about this program is—as you know, there are five forms that we're considering, so it's going to be a very competitive competition. But,



we're not just looking at the ship, per se. One of the things that we have really moved forward on is, when we look at the acquisition of a platform, equally important is the sustainment of that platform. You might have heard us say that, traditionally, if you look back, 70 cents on the dollar was spent on acquisition, and 30 on sustainment. We're shifting that model completely because of what we've, obviously, learned. It's going to be critical that, in this competition, we understand where the supply base is, the health of that supply base, and the ability of that supply base's resiliency.

Senator PETERS. Well, do you believe the current budget request, then, bridges the gap? Because we're going to have a gap there in funding to make sure the industrial base can continue to operate.

Secretary SPENCER. I believe it does. We're going to listen to industry. Right now, that has not become an issue, but we will listen to industry when it comes to that point.

Senator PETERS. Very good.

The Navy's budget also—request—includes a request for ten large unmanned surface vessels across the future years defense plan, and planned at about two per year, beginning in fiscal year '20. So, it's clear the Navy is continuing to embrace the benefits of unmanned platforms, particularly given the opportunities for low-cost, high-endurance platforms that can be reconfigured with a variety of payloads and can often serve as a force multiplier to the manned force out there.

So, my question is to both Secretary Spencer and Admiral Richardson. Can you provide more detail on how you expect the Navy's unmanned surface vehicle family of systems to develop? What are the specific benefits that you hope that these platforms are going to offer the fleet?

Secretary SPENCER. Let me just provide, again, from a title 10 point, buying of these platforms. You all have told us, in no mixed terms, that we are to move with urgency. That message is being transferred all the way down throughout the whole naval enterprise. This is a prime example of where we're going to acquire these platforms, and we're going to build, you know, use, break, learn, cycle, continually. This is a prime example of a platform that we'll do this on.

CNO?

Admiral RICHARDSON. Sir, the benefits of unmanned in this area almost speak for themselves. We can send a ship out there for a lot longer. Oftentimes, in terms of endurance, the people are the limiting factor there. We can send them into higher-risk areas, you know, so all sorts of benefits. I agree with you that this large vessel will allow us a diversity of payloads, from weapons payloads to logistics payloads. The Commandant and I have been talking about some terrific opportunities for naval integration using these. The first couple, we'll be working very closely with the Strategic Capabilities Office to get those two going, and then we'll partner very closely with industry. We'll probably use mature designs for the hull form and those sorts of things. The real R&D part in this is, you know, what about the unmanned, what are the autonomy, how do we get into that, particularly when it—I mean, there's all sorts of dimensions, not only from a safety dimension, a security dimension, an ethical dimension, when you start to think about weapons

employment. That's why we have them in the account—the R&D account, where they are right now.

Senator PETERS. Great. Thank you.

General Neller, you—the Marine Corps has been conducting advanced naval technology exercises with the Navy to leverage both the industrial and academic intellectual base with prototypes and get it into the hands of marines as quickly as possible so that we can be on the cutting edge of new technologies but learn from our marines in the field. Could you briefly just tell us and inform us, What lessons did the marines learn during the technology exercise in 2018, and are we going to be continuing those kinds of exercises?

General NELLER. Well, first, Senator, yes, we will. We just did another one down at Camp Lejeune, as far as mine counter-measures, where we have—basically, we invite vendors to show up for certain technologies. The one in 2018—they're all kind of running together. We've been doing about one big one a year, give a certain theme with these surface-to-surface movement, and they show up with their capabilities, and then—they talk to the marines, they learn what the marine requirements are, they make a change to their thing, and the marines kind of say, "Hey, we think this has got value, and this one does not." And so, we can narrow it down.

So, we'll continue to do that. We just recently did a big exercise with the Navy on the West Coast, called Pacific Blitz, where we had a number of technologies and ideas being demonstrated, where we looked at expeditionary-based operations where we would employ a marine force to, as part of the naval force, control maritime seaspace. So, we'll continue to do that, and we'll—the ships that you were just talking about with the CNO and the Secretary are of great interest to us. They could be platforms, as the CNO said, to carry weapons, they could carry logistics. We're seeing now that we need to have some sort of a connector that allows us to move from place to place. If it's unmanned and it can still do the job, that just makes it safer and easier, and it reduces our costs and our risk.

Senator PETERS. Thank you.

Chairman INHOFE. Thank you, Senator Peters.

Senator TILLIS.

Senator TILLIS. Thank you, Mr. Chair.

Thank you, gentlemen, for being here.

Secretary Spencer, thank you for the work out at Annapolis last week on sexual assault. I think that it was a great discussion, great coming together of expertise. And so, it was a good meeting. A great outcome will be specific proposals that we can work together on to make sure that we make progress in this Congress. But, I thank you for being here.

I want to go quickly with limited time, to General Neller. General Neller, you don't strike me as the sort of person that gets rattled very easily, but I've seen and had a number of discussions with you on the MILCON challenges that we have down at Camp Lejeune. I don't know if it's been covered in any of the other meetings—I've got two competing meetings going—or discussions, here—but, can you outline for this Committee your chief concerns over the billions of dollars of MILCON backlog that we have at

Camp Lejeune, how it affects capabilities, readiness, and the operations of the base?

General NELLER. Senator, it's really not a backlog, it's an emerging requirement. As you know, Hurricane Florence struck the Carolina coast in September of last year. Fortunately, the storm went from a category 4 to a 2, but then, when it did come ashore, it sat on top of the—that part of North Carolina, rained for 3 straight days, rained over 30 inches of rain. And so, when the roofs came off some of these 40-, 50-, 60-, 70-year-old buildings, and the water went in, we had a lot of damage. And it's not visible. It's not like down in the Panhandle, when Michael came across with category-4 winds and actually leveled buildings. So, it—when you drive around, you don't see it. It's more inside.

And so, we've gone through. The PPV vendor is working to fix the housing that was damaged aboard the base. And they're about a 50-percent improve in their process. That was a painful thing, to get that going. But, they're working that. But, we've gone through and looked at all the buildings, and we've prioritized about 30 buildings we think the costs of repair is not worth it, that we think they need to be replaced. And the total bill's about \$3.5 billion. The 400 million that we got in reprogramming last week will be helpful, but—so, we still have this remaining bill. A lot of this money, the Department says they're going to put it in fiscal year 2020. And so, we're hopeful that that will be part of the program. But, we still have about \$450 million we could legitimately apply this fiscal year if we were to get the money.

Senator TILLIS. You tell me what the impact is on—what are you doing to make do? Some of these buildings, I would assume, are inhabitable, and you're having to figure out how to continue to operate. Can you give me an idea of how it's disrupting the day-to-day operations at Lejeune?

General NELLER. We've had to move people around to different places and spaces. We've had to make adjustments on some of the communications. And, in some cases, the marines are just continuing to operate in the building, making the best of what they have. The buildings are not unsafe, but their ability to have heating or air-conditioning is limited. And so, it's a pretty expeditionary environment, which is something we're used to, but—and you can do that for a limited period of time, but it would be nice to be able to work in a more normal environment, in a garrison environment.

So, we're confident that we'll get these things fixed. Some of the buildings that they're in eventually would be razed and a new building would be built, because that's what we think it's going to take. We know for a fact from the storm that all the new buildings—and the Congress has been very generous with all the MILCON down at Camp Lejeune and many of our other bases—all the new buildings suffered very little to no damage. So, we've got a lot of old buildings down there that we think we need to replace if we're going to continue to be able to survive what's likely to be continued storms in the future.

Senator TILLIS. Secretary Spencer, I appreciate, also, your prompt action after a committee where I was a little bit animated on housing, a month or so ago, and want to continue to work with the—with all of DOD on what I think are unacceptable housing

conditions. I've gone down to Fort Bragg. I'm going to be visiting Camp Lejeune, going to spend some time. And you've got to separate the storm damage from some of the problems that existed before that. We'll have to sort that out. But, do you also—and, Admiral Richardson, do you share the Commandant's view that this military construction recovery down at Camp Lejeune is a top priority?

Secretary SPENCER. Yes.

Senator TILLIS. Thank you all.

Last thing I'll leave you with—I left it with Secretary Wilson in the hearing last week—is that—I understand the funding request. I tend to support what your priorities are, and hope to provide the funding. I think that you need to look ahead and game out what the likelihood is of getting that funding, versus something less than that, and, you know, worst case, a sequester, and need to communicate, in very specific terms, what your Department will have to do to react to that, not here in the Committee, but there needs to be a very clearly delineated list of everything that shifts to the right as a result of Congress's failure to give you all the resources that I think you need and you deserve.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Tillis.

Senator King.

Senator KING. Thank you, Mr. Chair.

Gentlemen, I'd like to start my questioning with a plea. We've had testimony from the SOUTHCOM commanders, over the last 2 or 3 years, that we have intelligence about drug shipments coming to the United States by sea. Of the 100 percent that we have intelligence on, we're only able to interdict 25 percent because of lack of maritime assets. Since this hearing started, 12 Americans have died of overdoses. Our country is under attack. People are dying. People are dying in my State, one a day. Please, see if you can find a way to allocate LCS or other maritime assets to work with the Coast Guard to interdict those drug shipments. It is inexcusable that we know of a drug shipment and can't do anything about it because of a lack of maritime assets. If you want to respond, Mr. Secretary, I'd be delighted, but, basically, this is a heartfelt request to try to use—to do something that's within our power to do.

Secretary SPENCER. Senator, could not agree more. The CNO and I have been talking, along with Admiral Faller, down in SOUTHCOM, exactly about this. This is a mission that fits the LCS, and I think, this coming quarter or so, you'll see our response in that regard.

Senator KING. Thank you. I'd deeply appreciate that, and I'll look forward to continue to work with you on that.

To just a somewhat lighter question, a major change is—you're talking, now, about a large surface combatant. You're in the early stages. Can we assume that that's going to follow a similar path of the new frigate program of existing hulls, working with partners, and that kind of approach to this project?

Admiral?

Admiral RICHARDSON. If I could, just—the short answer is yes, we're going to try and really shorten the acquisition cycle, and we

do so by leveraging more advanced and mature technologies, hull forms all the way up to combat system sensors, weapons—

Senator KING. Good.

Admiral RICHARDSON. And then we take more rapid, shorter acquisition steps, if you will, to follow that Moore's Law curve, or that exponential curve, a little bit more closely, with smaller steps.

Senator KING. Appreciate it. Thank you.

And I should have, at the beginning—I've had some exchanges with naval officers here over the last month or so about the accidents with the McCain and the Fitzgerald. I've sought data. I've met with you at the Pentagon. I want to express my appreciation for the forward-leaning approach that you've taken, the data you have supplied. That doesn't mean I'm always going to be happy. So, keep at it. I want to see the data, on a quarterly basis, specific, ship-by-ship, in terms of training levels and all of the issues that were identified in the reviews of those two crashes. I think it's very important. But—trust, but verify, I guess is what I'm saying. And I intend to continue to verify. And I—but, I do appreciate what the Navy has done and the responsiveness that you've shown.

Secretary Spencer, last year we talked about the audit, what you expected to find. You said you saw 4 to 7 years, I think, as a ramp-up to get to a clean audit. Now that we've had a year, any modification of your estimate? And are you satisfied with the process, thus far?

Secretary SPENCER. Senator, no update on the date. I will say that we've come in a year. I'm not kicking it out one more year, keeping 4-to-7 being a constant. We learned a tremendous amount, and we are underway right now, remediating the findings from the audit itself. But, the remediation is only one of the steps we're taking. It's what we're learning from the remediation. As an example, in the way that we monitor our real estate, in the way that we keep tabs on armaments. We're finding many different ways to improve the way we do it. Best practices from both other services, other forms of government, and outside the—

Senator KING. So, your conclusion is that the audit has certainly performed a useful function.

Secretary SPENCER. Its ROI [return on investment] is a multiple, sir.

Senator KING. That's excellent. I appreciate that and look forward to future progress.

One, just, short comment at the end. You had an exchange—I believe it was with Senator Rounds—about the cyberthreat. I deal with cyber in two other committees, and one of the things that's come out in recent hearings is the threat via subs, that the major contractors are pretty secure and strong, and our adversaries are now going through a little six-person engineering firm that supplies one screw to a major contractor, and that's how they get into the system. I commend to you that as a risk factor that I think needs real attention. I also commend to you the Red Team approach to get their attention.

Secretary SPENCER. Senator, you've hit the nail on the head, and that came out in the review that we just had, our cybersecurity review. But, I'd like to turn around and say hat's off to you and Congressman Gallagher for setting up the Solarium. We look forward

to seeing what's going to come out of your organization in that regard. There is not enough time and there's not enough resources to be put against this issue right now. We've got to get the gray matter starting it, and then we're going to start effecting the remediation.

Senator KING. We had our first meeting yesterday. We're on our way.

Thank you, Mr. Chair—Secretary.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator King.

Senator Reed has returned. We're under—a vote is underway. I'm going to go vote, come back. We're going to work through it.

Senator Hawley.

Senator HAWLEY. Thank you very much, Mr. Chairman.

Thank you, gentlemen, for being here. Thank you, as always, for your exemplary service.

I have heard much praise for your work, as reflected in this budget in a lot of areas, but particularly in an area I want to ask you about, in the investments in unmanned, undersea, and surface platforms. I want to ask you about an unmanned aerial system, the MQ-25 Stingray. I understand this is the first of its kind unmanned aerial system that will serve as a refueling station for other carrier-based aircraft. And many proud Missourians are working on this program in St. Louis. Of course, they have my firm support.

Secretary Spencer, can you update the Committee on the Stingray's progress and when you expect it to enter service?

Secretary SPENCER. I'm going to defer to the CNO, here, on exacts. This is a fast-track acquisition, and it's a large-platform fast-track acquisition. We are tremendously impressed with what we've heard coming out of St. Louis on the different manufacturing style that they're going to use on the MQ-25, which is—without going into the weeds, is going to actually speed time dramatically for our receipt of this.

CNO?

Admiral RICHARDSON. Sir, first, let me tell—talk to the military benefit of this tanker—unmanned tanker, which will be able to stay in flight for so much longer that a manned tanker would be. And then, it liberates five F-18 strike fighter aircraft to do strike fighter missions instead of tanking missions. So, military utility couldn't be stronger.

As well, the approach to acquisition, as the Secretary said, has been unique, in that we partnered with industry very, very early on to define the requirements appropriately, going back to Senator King's discussion regarding technical maturity, so that we can get this out into the fleet as quickly as possible. And so, for a sophisticated aircraft program, we let the contract for this program in 2018, and we expect this to be on deck in 2024, 6 years, which is pretty good, by recent metrics.

Senator HAWLEY. Yeah, that's outstanding. Thank you.

Admiral, can I just ask you about the—how the Stingray's deployment will change how air carrier—or carrier air wings operate? I think you started to gesture towards that just now, but we'd—if you would say some more about this.

Admiral RICHARDSON. Well, it'll extend the range of the Strike Fighter Air Wing, right, because we'll be able to go out—tank those aircraft, and allow them to go out to do their mission even further. But, I'll tell you what, sir. This is just the beginning for unmanned for us with the Air Wing. I think that one of the most exciting parts of this will be to integrate unmanned with the aircraft carrier crew, in terms of launching and recovery, and then, of course, integrating it with the other manned parts of the Air Wing. Lots of lessons learned as we continue to advanced unmanned aircraft.

Senator HAWLEY. Yeah. Thank you very much.

Let me just shift to a broader set of questions in the Indo-Pacific theater. The NDS focuses our attention on the fait accompli scenarios. Of course, in the Pacific, arguably, the decisive theater from the NDS standpoint, when it comes to a fait accompli scenario involving Taiwan, which is one that is featured prominently, much the focus of our attention and planning, how are we doing with our current capabilities on our capacity to prevent a fait accompli scenario in that specific instance?

Go ahead, Admiral.

Admiral RICHARDSON. Sir, I'll just echo Admiral Davidson's thoughts. He's the Indo-Pacific commander primarily responsible for making sure that we are ready, in all respects across the entire Joint Force and the interagency, for that contingency.

Senator HAWLEY. Do you feel that we are making progress, here, from the Navy's point of view, with the capacities, the capabilities that are required—I mean, are we making progress, here, in getting to where we need to be to prevent a fait accompli?

Admiral RICHARDSON. Sir, I think that one of the major strategic messages of the budget submission that we're discussing today is that it looks exactly at that problem. If you integrate across the size of the force, the capability of the force, and the readiness of the force, it's focused on our pacing threat, which is the Indo-Pacific.

Senator HAWLEY. Can you tell me, there have been—there's been some discussion, of course, about aircraft carriers today. But, from a broader point of view, can you tell me how you see the carriers contributing to our toughest fights in that theater, with China? I mean, what is it—as we think about their major investments, obviously—

Admiral RICHARDSON. Right.

Senator HAWLEY.—what is that, strategically, the carrier—how does the carrier contribute—how will it contribute in that theater, in the decisive theater, to that fight with China?

Admiral RICHARDSON. Right. There's been a lot of discussion about aircraft carriers and their role in the future. So, I appreciate the question. Once, again, going back to our budget, the acquisition of another *Ford*-class aircraft carrier, and the purchase of two of them at the same time, capturing a \$4 billion savings, but is a firm a statement as we can make that aircraft carriers are a lethal, survivable part of that future. With respect to the theater that you just described, in a very high-end fight, the carrier is the most survivable airfield in the theater, able to move 700 miles a day and really confound any kind of a targeting problem.

Beyond that, sir, it gets very classified, very quickly, but suffice it to say that a competently run aircraft carrier, using distributed maritime operations concepts, can inflict a tremendous amount of damage against an enemy in that theater.

Senator HAWLEY. Okay, I'll look forward to an opportunity to take that up further with you in a classified setting. I do think you allude to the very significant investment that these carriers require, and I think it's incumbent upon us to make sure that it's an investment that meets our strategic priorities.

Thank you, Mr. Chairman.

Senator REED [presiding]. Thank you.

On behalf of Chairman Inhofe, Senator Kaine.

Senator Kaine. Thank you, Mr. Chair.

And thanks, to all the witnesses.

I especially just want to offer my congratulations, Admiral Richardson, General Neller, for your wonderful service. You guys each have Virginia ties. Admiral Richardson, a Petersburg native.

General Neller, congratulations on the UVA [University of VA] Cavaliers. That was an exciting evening. There are four Senators who have degrees from the University of Virginia. Neither of the Virginia Senators had either the talent or judgment to be in that number. It's King, Whitehouse, Capito, and Cornyn. But, it was exciting. But, again, I just want to offer my thanks.

I have two questions that are sort of a followup, not to repeat other questions that have been asked about the refueling of the Truman. I associate myself with others' questions on these. But, one of the references was to this future-force study that's being done. And I want to ask two questions about it.

The first one is a broad one. Do you think we're going to see other surprises when that is done—ship classes that are being considered for early retirement, or other things like that? What would you let us know that we ought to be watching for as that study is being done?

Admiral RICHARDSON. So, I'll tell you that, one, as we've talked about many times, the security environment has only become more complex. And so, we would see that the Force Structure Assessment would address that increasing demand signal for maritime security. I think that the next 25, 50 years, easy, are going to put a lot of responsibilities on maritime security, and the U.S. Navy in particular.

There are, additionally, new technologies. And so, we'll have to see where those new technologies take us. I'm of a mind that we need to move into that new technology space on an evidenced-based approach. We can't just take a leap of faith when our Nation's security is—you know, with the stakes that we're claiming. And so, we'll look for a lot of experimentation and evidence on which to base those decisions.

And then there are those sorts of enduring qualities of payload volume and energy, and those things will allow a platform from which that innovation can take place. And so, certainly, as soon as we get any kind of inklings, I would say that that would be the area that we're moving. If there are places where legacy types of approaches fail to yield a return on investment, then we'll be informing you of those, as well.



Senator KAINE. Thank you. We've had a number of classified briefs about both the Navy and Marine Corps' operating concepts as we talk about future needs. And one concern I always have is whether both the Navy and the Marine Corps' operating concepts are being represented in any future analysis of shipbuilding, aircraft procurement, force structure. Will both the Navy and the Marine Corps be signing off on the next iteration of Force Structure Assessment, shipbuilding plan, aircraft procurement strategy?

Admiral RICHARDSON. Sir, the Commandant and I share just about everything. And so, something of this impact, we would absolutely habitually share them and address every concern that they would have.

Senator KAINE. General Neller, anything you want to add on that?

General NELLER. On the previous comment you made, Senator, I think, you know, amphibious capabilities have a—an image in people's mind that we're going to storm the beach. That's just one thing that they do, and, quite frankly, 97 percent of the stuff they do every day is to do the second line of effort in the National Defense Strategy, which is maintain alliances and build partnerships, and also create presence out in the contact zone. We do need to look at the capability of those platforms to make sure they're more increasingly survivable and increasingly networked. Those are things that—the CNO and I sit on a Navy/Marine Corps Board. Our staffs bring us these issues. We try to stay as linked as we can through naval integration and make sure that the programmatics are in line with where we think we need to go. And I think you're going to see—in training and experimentations, just like we did at Pacific Blitz, you're going to see more and more U.S. Marine, U.S. Navy operations, where the two commanders are together. In fact, at that operation, probably the most unique thing is, they took their staffs and put them together as one staff. So, you had a blue-green staff, and so—to try to get rid of any of the seams or areas where there wasn't complete interoperability between the two forces. And I think it worked out well.

Senator KAINE. Great. Thank you.

Admiral?

Admiral RICHARDSON. Sir, if I could come back just very quickly, with respect to the shipbuilding program that was discussed earlier, the enduring need for 38 amphib ships, our current shipbuilding plan gets us to 36 by fiscal year 2024, the 5 years.

Senator KAINE. Right.

Admiral RICHARDSON. With this incremental funding authority that we've been discussing, we might be able to accelerate and get even closer to 37. And so, we're paying a great deal of attention to meeting that requirement.

Senator KAINE. Excellent.

Mr. Chair, thank you. Appreciate it.

Senator REED. Thank you.

On behalf of Chairman Inhofe, Senator Gillibrand, please.

Senator GILLIBRAND. Thank you.

Admiral Richardson, statements from both the President and the Secretary of State seem to call into question this administration's commitment to defend our NATO allies. At the same time, we're

building a new, low-yield nuclear missile so that we can more easily threaten nuclear war against Russia in order to protect the very allies that it is clear to me this administration does not care about. So, what do you think would make NATO feel safer? Having the United States build a new nuclear weapon that dangerously lowers the threshold for nuclear war, or have the United States commit to defending our allies, which has successfully kept the peace in Europe for almost 70 years?

Admiral RICHARDSON. Senator, if—ma'am, I'm sorry—if I could answer that, I would say both—

Senator GILLIBRAND. Yeah.

Admiral RICHARDSON.—that the Nuclear Posture Review makes clear that we would enhance our deterrent effect, including extending that to our allies with the development of these low-yield nuclear weapons, and that would also help defend our NATO allies.

Senator GILLIBRAND. I understand it's the Department of Defense's position that the low-yield nuclear weapons program is focused on deterrence. But, does not it also make it more possible that it could be used?

Admiral RICHARDSON. Ma'am, I think that the logic would be that, if there's an asymmetry in the nuclear arsenal, if you will, if our opponents have options that they could use that we have no real deterrent symmetric approach, that this imbalance is, in fact, the thing that might lower the threshold to use. And so, that is the theory behind advocating for these new capabilities.

Senator GILLIBRAND. Secretary Spencer, we continue to see significant cyberattacks on the defense industrial base. More specifically, reports continue to show China's interest and success in the illicit collection of critical maritime technology and information through both defense contractors and universities directly supporting Navy research and development. I'm alarmed by the persistent vulnerability. What can happen if China continues to collect maritime information and technology at this rate?

Secretary SPENCER. It's disastrous, Senator.

Senator GILLIBRAND. What concrete steps has the Navy taken to mitigate and counter these threats?

Secretary SPENCER. That was the reason, Senator, for setting up the Cybersecurity Review, which was just delivered to me 3 weeks ago, and we're now rolling out the plan.

Senator GILLIBRAND. And how is the Navy collaborating with the intelligence community, academia, and industry to improve the defense of Navy-affiliated contractors and universities?

Secretary SPENCER. That is actually in the plan, Senator, which—I'm more than happy to brief you and/or this Committee at any time. That is the key. It's not simply one avenue. It's the whole universe of players.

Senator GILLIBRAND. Can you expand a little bit on potential fixes that can help the Navy more effectively protect maritime information?

Secretary SPENCER. CNO will weigh in, here, for a second.

Admiral RICHARDSON. Ma'am, if I could, just to support the Secretary, a lot of this has to do with just ensuring that our contractual arrangements with academia, industry, includes measures to secure their, you know, cyberspace, if you will, right? And so, a lot

of this is making sure that there's increasing accountability by prime contractors for their subcontractors' performance. As Senator King illuminated, a lot of that vulnerability comes through the subs. Strengthening the security and oversight by making sure that data is encrypted, both at rest on those servers and in transit, dual-factor authentication. Some of this is pretty low-hanging fruit—

Secretary SPENCER. Web.

Admiral RICHARDSON.—and well-known things. But, ensuring that they are contractually required, and that there is a response mechanism and allowance for oversight there, are some of the measures we've already taken.

Senator GILLIBRAND. Thank you, Admiral. And will you please submit that report to the Committee, and to me particularly, so I can read it? Thank you.

Admiral RICHARDSON. Most definitely, Senator.

[The information referred to follows:]

Admiral RICHARDSON. On May 28, 2019, a copy of the Secretary of the Navy's Cybersecurity Readiness Review of March 2019 was delivered to your office. The classified addendum has been provided to the Committee and can be accessed via the Security Manager.

Senator GILLIBRAND. Thank you.

General Neller, for a variety of reasons, including current civilian-sector employment numbers, the military's having a tough time meeting its own recruiting goals. We've heard, too, about the portion of young Americans who do not meet medical fitness and education standards to join the Armed Forces, shrinking the pool of potential recruits. At the same time, the President's proposed budget would slash money from domestic agencies that directly address these challenges, programs to support childhood nutrition, public education, healthcare for low-income families, and others. Do you agree it's possible for cuts to domestic spending to further limit the number of Americans qualified for military service?

General NELLER. Senator, I'd have to speculate on that, but you know as well as I do that less than 30 percent of the American youth that are qualified—are qualified to join our military. Now, you take the propensity of those in that 30 percent, and you get a smaller number. That said, I can only speak for the Marine Corps. The Marine Corps has been successful in making our recruiting goals and maintaining our quality of those applicants to become marines, since 2006. Our recruiters work very, very hard, and it's not easy to do. But, clearly, anything that we can do within the Nation to increase the health, the educational level of our youth, of our citizenry, would make it easier and better for us to find more and more people that were qualified to serve in the military.

Senator GILLIBRAND. We had hearings—just to close the loop, Mr. Chairman—in the Ag Committee specifically on this issue, because obesity just continues to rise. And so, the importance of Food Stamps became obvious, because if you are a family on Food Stamps and you cut your nutrition amount, the last week of every month, they can't get fresh fruits and vegetables at an affordable price, so they eat high-carb, high-fat foods that tend to be very expensive. And the actual consequence of hunger is obesity.

Thank you, Mr. Chairman.

And thank you for—all for your service.

Chairman INHOFE [presiding]. Thank you, Senator.

And thank all three witnesses. It's been good. I think we've accomplished a lot, a lot of interest. And we thank you for your time and your effort and your service.

[Whereupon, at 11:33 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR MIKE ROUNDS

##### ATTACK SUBMARINE MAINTENANCE

1. Senator ROUNDS. Secretary Spencer and Admiral Richardson, at the Seapower Hearing in November, I asked a series of questions about submarine maintenance, but received no answers then nor when my staff followed up with your staff. I asked about subs in dry dock and the queue—and the wait to get into the queue—but the bottom line is that the Navy has a tremendous submarine maintenance throughput problem. As a result, you have “out-sourced” three and they are over a year late for completion, with approximately \$400 million in cost overruns. Consequently, a fourth—the *Boise*—will be delayed another year, which means it probably won't come out of maintenance until fiscal year 2022—6 to 7 years since its last deployment. With only half of the INDOPACOM submarine requirement for attack submarines being met and submarines retiring faster than they can be built through the 2020s, I view this as an extremely grave matter. What has the Navy planned to address this situation—and what help do you need from Congress to solve it?

Secretary SPENCER and Admiral RICHARDSON. Thank you for the questions Senator and for your continued interest in our attack submarines. In our public yards, overall performance on aircraft carrier (CVN) and submarine maintenance is improving, with the days of maintenance delay and the amount of work carried over from year-to-year dropping each of the past three years from historic highs in 2016. For example, with the recent early delivery of USS *Nimitz* (CVN 68) from Puget Sound Naval Shipyard (PSNS) we have now delivered eight of nine CVN maintenance availabilities on time including the last seven in a row at PSNS. In addition, four of nine current attack submarine availabilities in the Naval Shipyards are tracking to on-time delivery. One contributing factor for our success includes growing the organic workforce at the four Naval Shipyards to a total of 36,100. To account for the less-experienced workforce (i.e., 56 percent of the production workforce has less than five years of experience), the Naval Shipyards implemented new training approaches. These approaches included streamlining training curriculums, adding/improving learning centers to accelerate proficiency development through modern training techniques such as virtual reality trainers, and increasing the amount of hands-on learning. Additional contributing factors include setting more realistic and achievable resource/overtime strategies, increasing the discipline and fidelity of our planning processes, and improving our learning centers and sharing of lessons learned across shipyards. Despite these recent successes, the Navy shares your concern for submarine maintenance throughput. We continue working through Naval Shipyard availabilities with already-incurred maintenance delays, little margin to accommodate new work, and avoidable performance issues. Current challenges include: USS *Jefferson City* (Pearl Harbor)—283 days late—projected completion date 12/1/19 USS *Springfield* (Portsmouth)—217 days late—projected completion date 7/22/19 USS *New Hampshire* (Portsmouth)—164 days late—projected completion date 7/15/19 USS *New Mexico* (Portsmouth)—92 days late—projected completion date 11/1/19 USS *Virginia* (Portsmouth)—59 days late—projected completion date 3/3/21 Further, as you note the two qualified private shipyards are challenged to execute attack submarine maintenance on time and on budget. The Navy has taken several actions to improve the situation. These actions include partnering with Huntington Ingalls Industries and Electric Boat to learn from these challenges and share lessons learned; driving USS *Helena's* (SSN 725) availability to completion by providing more direct government oversight; and conducting a bottom-up review of the USS *Boise* (SSN 764) work package. The *Boise* work package needs reassessment given the significant growth experienced on USS *Montpelier* (SSN 765), *Helena*, and USS *Columbus* (SSN 762) as well as the anticipated growth due to the extended idle time. Going forward, the Navy expects improved performance across all of our public shipyard availabilities based on the actions described above, use of improved

and predictive data analytics, and implementation of the Navy Shipyard Infrastructure Optimization Plan (SIOP). In February 2018, the Navy delivered the SIOP to Congress. Since then, we have been executing the groundwork needed to redesign our Naval Shipyards to improve productivity by upgrading and repairing dry-docks, replacing obsolete capital equipment, and improving workflow within the shipyards. This summer we will receive the first digital twin of a shipyard that will serve as the springboard to evaluating what we can change to improve workflow and productivity. Finally, you asked what help Congress could provide. To start, the Navy has identified additional funding required for submarine maintenance in the Chief of Naval Operations Unfunded Priorities List (UPL) submitted with the President's fiscal year 2020 budget. This funding supports three attack submarine maintenance availabilities; *Boise*, USS *Hartford* (SSN 768), and *Columbus*. As the Navy completes the *Boise* work package reassessment, there is a reasonable likelihood that the initial budget estimate was too low. The Navy will keep Congress informed if/how the *Boise* reassessment affects the UPL topline. Additionally, passing the fiscal year 2020 budget on time, coupled with Congress' continued support for the SIOP and the Navy's efforts to balance the workload between public and private sector will help to improve the situation. An on-time budget is very beneficial as a delay in funding could affect not only maintenance availabilities, but also a number of SIOP efforts planned for next year.

---

QUESTIONS SUBMITTED BY SENATOR JEANNE SHAHEEN

INDUSTRIAL BASE

2. Senator SHAHEEN. Secretary Spencer, the recently released annual report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels states that "over the last 60 years, 14 defense-related new construction shipyards have closed, 3 have left the defense industry and one new shipyard has opened." Can you elaborate on the efforts the Navy is taking on to rebuild this industrial base? What is the timeline for these efforts? What help does the Navy need to increase the industrial supplier base?

Secretary SPENCER. The Navy's current and future approach recognizes the importance of maintaining stability within the industrial and supplier base. Historical boom and bust cycles of Navy ship construction contributed to the 14 shipyard closures over the last 60 years. The Navy is working to preserve our current shipbuilding capacity through stable shipbuilding procurement profiles that will foster a healthy and stable industrial base and will allow for additional growth as required. The current shipbuilders are sufficient to meet the Navy's demand. The Navy is focused on understanding the capacity and capability shortfalls at the lower levels of the supply chain. Consistent annual funding in the shipbuilding account is foundational to sustaining predictable workload and capacity. Long-term contracting arrangements, such as Multi Year Procurements, Block Buys, and serial production support the industrial and supplier base, as exemplified in *Virginia*, DDG-51, LCS, CVN, and AOs. The Navy is partnering with industry to define and establish workable requirements and is working with Congress to sustain predictable profiles. These supportive relationships will continue to promote efficiency through capital improvement and expansion, research and development, and sustainment of a world-class workforce. We appreciate the congressional support for industrial base initiatives. Funds appropriated in fiscal year 2018, \$225 million for *Virginia*-class, and in fiscal year 2019, \$225 million for *Columbia*-class, will further strengthen the industrial base.

3. Senator SHAHEEN. Secretary Spencer, the President's Fiscal Year 2020 Budget update to report to Congress on Submarine Depot Maintenance released in March 2019 stated that "Lack of material availability ... has contributed to an increased reliance on cannibalization of material from operational platforms in support of maintenance schedules. In a typical *Virginia*-class depot maintenance availability, over 100 items are acquired through this cannibalization process. This is unplanned work that adds to the maintenance requirements and generates a rolling requirement for the follow-on availability." The report goes on to mention a material forecasting tool to be developed and deployed at all public shipyards that will enable earlier identification of material, to provide early procurement options and reduce risk of unavailable material. This tool partially addresses the problem by providing early procurement options—however, this does not address the supplier base; what else is the Navy doing to address limited availability of *Virginia*-class submarine parts?

Secretary SPENCER. In addition to material forecasting, the in-service Strategic and Attack Submarine Program Office is evaluating opportunities to leverage material management efforts implemented by new construction programs for improving original equipment manufacturer material support to follow-on submarine planned maintenance availabilities. This evaluation is in an early stage but can potentially result in better notification to industry of planned material purchases and address material shortfalls for submarines in repair.

---

QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

VIRGINIA-CLASS SUBMARINES

4. Senator BLUMENTHAL. Secretary Spencer, as you know, we have only a few years until our excess submarine production capacity is primarily devoted to *Columbia*-class. Do you agree that it is important to seize this window of opportunity to boost our fast-attack Submarine inventory by adding a third submarine in fiscal year 2020?

Secretary SPENCER. Yes, attack submarines are critical to the National Defense Strategy, and adding a third submarine in fiscal year 2020 helps in achieving the 66 submarine requirement sooner. Adding a third submarine in this fiscal year also demonstrates our commitment to the industrial base, to expand production, and better balances the total shipbuilding procurement funding over the next five years as the Navy begins to build *Columbia*-class submarines.

5. Senator BLUMENTHAL. Secretary Spencer, does adding this additional submarine help reduce the risk of an upcoming fast-attack submarine capability gap as *Los Angeles*-class submarines reach retirement?

Secretary SPENCER. Yes, it does. The Navy is relying on a steady state production of at least two attack submarines (SSNs) per year with *Virginia*-class submarines (VCS) being delivered within contractual requirements to reach the force structure requirement of 66 SSNs. The addition of a third VCS in fiscal year (FY) 2020 takes advantage of the available labor resources in the industrial base prior to the start of *Columbia*-class construction in fiscal year 2021 and gets us to our inventory requirement of 66 attack submarines sooner.

6. Senator BLUMENTHAL. Admiral Richardson, I was encouraged by your statement in written testimony that all force structure analyses agree we must build a bigger Navy. Is the 3rd *Virginia*-class submarine in this year's budget a result of the Navy taking action on this consensus?

Admiral RICHARDSON. Yes, the National Defense Strategy (NDS) and the Navy Strategy provide the overarching high-level requirements for all our shipbuilding budget decisions to build the Navy the Nation Needs, the Navy's enduring plan for building and sustaining a lethal, resilient force through balanced investments across readiness, capability, and capacity. Attack submarines are critical enablers of the NDS and represent one of the Nation's most lethal asymmetric advantages. Numerically, attack submarines remain the furthest from the inventory objective. Adding a third submarine in fiscal year 2020 shows our commitment to the industrial base to expand production, better balances the total shipbuilding procurement funding over the next five years as the Navy also begins to build *Columbia*-class submarines, and gets us to our inventory requirement of 66 attack submarines sooner.

7. Senator BLUMENTHAL. Secretary Spencer, Do you believe that industrial base workforce development initiatives are important to meet the increased demand for submarines over the coming years?

Secretary SPENCER. Yes, it is vitally important to develop and maintain the submarine workforce to meet the demands for the *Virginia*-class and the *Columbia*-class partners. The Navy is collaborating with our industry partners to ensure we meet the needs of the programs.

CH-53

8. Senator BLUMENTHAL. Secretary Spencer, given your urgent need for this aircraft—and the known reality that the industrial base does not react well to declines in production ramps for new programs—would you support 2 additional CH-53K's this year to maintain a consistent annual production rate?

Secretary SPENCER. Thank you for your interest. I support the President's Budget of six aircraft in fiscal year 2020. This budget provides the best balance of delivering

needed capability to the Marine Corps while ensuring we have an achievable production profile.

9. Senator BLUMENTHAL. General Neller, is there any heavy lift helicopter that has the capabilities of the CH-53K King Stallion? Are you confident that this program will deliver the capabilities the Marine Corps needs for the heavy lift mission?

General NELLER. The CH-53K King Stallion will be capable of delivering the vertical Battalion Landing Team (BLT) at a range of 110NM from ship to objective. This 110NM metric has been established as the optimal range of our modern aviation platforms, such as the MV-22, the UH-1Y and the AH-1Z. Today's legacy CH-53E is limited in its ability to perform at this range. The enhancement in lift and range delivered by the CH-53K fully leverages the capability of the Aviation Combat Element (ACE) and thereby the entire Marine Air-Ground Task Force (MAGTF).

10. Senator BLUMENTHAL. General Neller, I understand that the King Stallion has roughly 3 times the lift capability of the legacy CH-53E's. How will this game-changing upgrade transform the Marine Corps' operational capability on the battlefield?

General NELLER. The CH-53K King Stallion will be capable of delivering the vertical Battalion Landing Team (BLT) at a range of 110NM from ship to objective. This 110NM metric has been established as the optimal range of our modern aviation platforms, such as the MV-22, the UH-1Y and the AH-1Z. Today's legacy CH-53E is limited in its ability to perform at this range. The enhancement in lift and range delivered by the CH-53K fully leverages the capability of the Aviation Combat Element (ACE) and thereby the entire Marine Air-Ground Task Force (MAGTF).

#### CLIMATE CHANGE

11. Senator BLUMENTHAL. Secretary Spencer, I am concerned that top U.S. military officials have stated publicly that climate change is a significant security threat, but that President Trump's White House continues to challenge the scientific consensus that human activity is the primary driver of climate change. Are you concerned that the Trump Administration is undermining the military's efforts to address and respond to the threats of climate change?

Secretary SPENCER. The Department of Navy has always considered a wide-range of risks, including climate change, and has a proven record of planning and preparing for such threats.

12. Senator BLUMENTHAL. Secretary Spencer, recently, Pentagon spokesman Johnny Michael said in an email that the Pentagon will "focus on ensuring it remains ready and able to adapt to a wide variety of threats—regardless of the source." How is the Navy planning to address the impact of climate change in its worldwide missions?

Secretary SPENCER. Naval missions under the authority of the geographic combatant commands consider risk assessment and mitigation, diversity, connectivity, reserves, and adequate redundancy in all plans and operations. In support of Arctic operations, the Office of Naval Research, Arctic and Global Prediction Program, is working to extend the capability to predict environmental conditions and disruptive weather events to several weeks and months in advance. The ability to provide useful forecasts of the operational environment, such as the location of the sea ice edge, the characteristics and evolution of sea ice, and the wind and wave conditions will be critical to reduce operational risk in the Arctic. The Department of the Navy launches its worldwide missions from installations, where resiliency is addressed through the integration of weather and climate considerations into existing plans and processes, using partnerships with other federal agencies, state governments, local governments, non-governmental organizations, and local communities to increase preparedness.

13. Senator BLUMENTHAL. Secretary Spencer, does the Navy's budget request this year adequately request resources to ensure climate resilience? Do you require additional resources to effectively combat the effects of climate change?

Secretary SPENCER. Climate and environmental resilience efforts span all levels and lines of effort, and are not framed as a separate program. Resources for assessing and responding to climate impacts are provided within existing Department of the Navy missions, funds, and capabilities.

14. Senator BLUMENTHAL. Secretary Spencer, as you are aware, climate change is a "threat multiplier" that inflames global political instability and exacerbates

floods, food shortages, and droughts—all of which exacerbate humanitarian crises and increase the likelihood of armed conflict. How will Navy strategy evolve to incorporate these realities as the impacts of climate change become more severe?

Secretary SPENCER. Climate and environmental resilience efforts span all levels and lines of effort, and are not framed as a separate program. Resources for assessing and responding to climate impacts are provided within existing Department of the Navy (DON) missions, funds, and capabilities and subsumed under existing risk management processes consistent with the 2018 National Defense Strategy priorities to build a more lethal force, strengthen alliances and attract new partners, and reform the Department's processes. To achieve these goals, DON must be able to adapt current and future operations to address the impacts of a variety of threats and conditions, including those from weather and natural events. To that end, DON factors in the effects of the environment into its mission planning and execution to build resilience.

#### TROOP DEPLOYMENTS TO THE SOUTHERN BORDER

15. Senator BLUMENTHAL. General Neller, has Acting Secretary Shanahan provided the assistance you requested to repair structures compromised by Hurricane Florence?

General NELLER. The Marine Corps currently faces unfunded requirements of \$778 million to fully recover from Hurricanes Florence and Michael. We have worked closely with the Department of the Navy, Secretary of Defense and Congressional committees to successfully identify funding solutions that address approximately \$3 billion of the damages. The Marine Corps will continue working with the key stakeholders to identify additional solutions that address the remaining unfunded need.

16. Senator BLUMENTHAL. General Neller, is it fair to say that the troop deployments to the border are coming at the expense of Marine Corps training or necessary hurricane repairs at Camp Lejeune?

General NELLER. In order to maintain overall readiness, Marine Corps units require a combination of training exercises and actual operations. The troop deployments to the border have contributed a critical portion of this equation, and in some respects have enhanced the readiness of the participating units by allowing them to perform their core missions under real-world conditions. Even with the troop deployments to the border, the Marine Corps has not been forced to cancel any training exercises. The Commandant personally checked the readiness of every unit on the border, and with one exception, the deployment had no impact on their readiness.

17. Senator BLUMENTHAL. General Neller, are you concerned that these troop deployments will continue indefinitely? If that is the case, can you estimate the impact on readiness if the border deployments become the status quo?

General NELLER. No, although South West Border (SWB) operations have impacted some of the units providing support to the border, in the aggregate, the readiness impacts have been manageable. The Service has been able to mitigate readiness impacts through unit and personnel rotations. If the requirements to support the mission continue into the foreseeable future, the Marine Corps will continue to mitigate impacts to readiness through similar measures. To date, the SWB mission has not significantly impacted our ability to meet our global commitments.

#### FUTURE MARINE CORPS MISSION

18. Senator BLUMENTHAL. General Neller, is the Marine Corps committed to MARSOC longterm?

General NELLER. MARSOC is a highly valued capability by both the Marine Corps and U.S. Special Operations Command. Our investment in MARSOC, as with all of our supporting capabilities, is limited by the need to sustain the readiness of our statutorily mandated Marine Air Ground Task Forces, commensurate with modernizing those MAGTFs for future conflicts and relative to timely appropriated funding.

19. Senator BLUMENTHAL. General Neller, some recently have shared the view that the Marine Corps needs to focus on coastal operations in the Indo-Pacific region? What role can MARSOC play in supporting this mission?

General NELLER. MARSOC is already playing a significant role in the Indo-Pacific region, specifically in the Philippines, while enabling the partner force to exert their sovereignty. These forces are supported by capabilities provided from MARFORPAC and III MEF in a greater joint force effort there. We see the daily access and place-



ment MARSOC, and SOF writ large, have in the region as a forces in “contact,” as greatly assisting in pre-conflict competition short of armed conflict shaping operations. These forces contribute to the intelligence picture, cultural understanding, partner force integration, and bring other specialized skills that can support the Marine Corps mission in this region. We are also working closely with MARSOC as we work through concepts like Expeditionary Advance Base Operations, Littoral Operations in a Contested Environment, and Joint Forcible Entry Operations. SOF, MARSOC in particular, can help prepare these environments now, hoping to mitigate conflict, but preparing for larger operations if that becomes necessary.

20. Senator BLUMENTHAL. General Neller, what strategic advantage does MARSOC provide to the geographic combatant commanders that we would be lost if the Raiders (MARSOC) were disbanded?

General NELLER. MARSOC remains a priority effort for the Marine Corps. The command has played a critical role for both the Marine Corps and SOCOM. MARSOC is an organization that has come extremely far, in a relatively short amount of time, regarding the evolution of its warfighting capabilities. From battlefield small unit tactics, techniques, and procedures, to the exploration of more effective equipment for unmanned aerial systems, precision strike capabilities, advanced communications, small arms capabilities, and intelligence integration at the lowest levels, MARSOC consistently provides forces that possess unity of effort driven largely by a coherent picture of the battlespace. As one would expect because it has a foot in both camps, MARSOC is a critical enabler of the relationship between the Marine Corps and SOCOM and has helped bridge capability development efforts between our two organizations. MARSOC plays a significant role in migrating capability between SOF and the general purpose forces. Raiders have consistently demonstrated an adaptability in the face of changing or ambiguous situations; their ability to leverage emerging technologies and integrate them has created opportunities for the larger Service as well. Operationally, I would defer to SOCOM and the geographic combatant commands to answer with details on this issue, but would note that Raiders fill approximately 10 percent of their assigned missions. From a man, train and equip perspective, MARSOC forward deployed forces bring an organic and fully integrated capability for operations and all-source intelligence fusion at the lowest levels that allows a comprehensive and holistic approach to problem solving in all environments to effectively conduct the whole spectrum of special operations. These capabilities are extremely effective operating against both VEO networks, as well as near peer competitors. These capabilities can be tailored based on the anticipated missions, but the force can be rapidly altered and specifically organized and trained as situations and mission sets evolve. Inherent in all MARSOC deployable formations are an ability to conduct unilateral special operations that feature special insertion capabilities, precision direct action operations, special reconnaissance, and counterterrorism missions; but are also well-adept and prefer to work through partner nation forces, other governmental agencies, and the larger joint force in counter-insurgency and foreign internal defense conducting advise, assist, accompany and enable missions in order to build resilient partners in key areas around the globe. Bringing with them their base culture as marines, Raiders find a way to be highly successful and effective in what are often ambiguous environments. Demand for their integrated capabilities and expertise in these strategic impact operations continues to increase. From an operational perspective, Raiders have invariably gravitated toward the highest priority campaign activities within INDO PACOM, CENTCOM, and AFRICOM - the three regions comprising MARSOC's current regional orientation. Efforts in these three regions have helped shape and support larger Joint Force efforts and advance Service-level opportunities for integration and interoperability in support of both the Counter VEO mission as well as contributing to great power competition. One of the best examples of MARSOC's collaboration with the Service along the lines of Interoperability, Integration, and Interdependence have been its ongoing efforts in the Philippines, where Raiders working for SOCPAC are heavily augmented by MARFORPAC marines to support the Armed Forces of the Philippines in the defense of their sovereignty. We can address further specific operational details of MARSOC's current missions via classified medium if desired.

21. Senator BLUMENTHAL. General Neller, how do you see MARSOC's role in great power competition and the National Defense Strategy?

General NELLER. MARSOC Proposed Answer: Understanding that SOF is not designed to go toe-to-toe with large Armies, there are many ways MARSOC can support, before and during, potential conflict with near peer competitors. Just recognizing that we are in constant competition, albeit short of open warfare, with cer-

tain countries, makes us realize that there are many areas we could be shaping now, with our partners and the rest of our own government that can have a tremendous effect. Similar to the greater Marine Corps role in the context of the NDS, MARSOC is a “contact force.” As such, we will be among the first forces to influence the initial stages in this of this competition, whether it goes to open conflict or not. MARSOC forward deployed forces bring an organic and fully integrated capability for operations and all-source intelligence fusion at the lowest levels that allows a comprehensive and holistic approach to problem solving in all environments to effectively conduct the whole spectrum of special operations. These capabilities are extremely effective operating against both VEO networks, as well as near peer competitors. These capabilities can be tailored based on the anticipated missions, but the force can be rapidly altered and specifically organized and trained as situations and mission sets evolve. In the future, MARSOC will continue to develop into a more versatile force that brings highly adaptable, intelligent, and cognitively gifted individuals to any mission set with seamlessly integrated capabilities to rapidly understand and impact the surrounding system. Leveraging small size as a strength, MARSOC can give a high degree of flexibility to the SOCOM Commander for the employment against specific mission sets, including in the great power competition cited in the NDS. 1. MARSOC, along with the greater SOF enterprise, bridges the gap between covert capabilities from the interagency and the larger conventional forces. 2. MARSOC enables a deep understanding of the operational environment across the interconnected network of transregional threats at all levels of warfare against global, regional, and local competitors. 3. Raiders are specifically educated and trained to work with indigenous partners. The history of great power competition during World War II and the Cold war indicate that SOF is strategically useful in leveraging these local partners to strengthen the effort to deter, counter, and defeat malign influence. 4. MARSOC, and SOF writ large, provides specialized unilateral capabilities not easily replicable by conventional or other agencies to deter, counter, and defeat global or regional powers. 5. MARSOC provide a creative and adaptable perspective and culture to the joint force to understand and resolve complex, dynamic, and uncertain challenges.

22. Senator BLUMENTHAL. General Neller, you recently stated that much of what your service does will not be against a near-peer adversary. Can you explain what you mean by this, and expound on what you see the Marine Corps’ operational role in the next 10–20 years?

General NELLER. The Marine Corps will continue to adhere to the strategic guidance of the National Defense Strategy, National Military Strategy, and Defense Planning Guidance and will orient to the pacing threats presented by China and Russia. The Corps will not, however, ignore the various roles and responsibilities espoused by title 10 and will continue to be America’s force-in-readiness that is able to respond to crises, inside and outside the scope of great power competition, when the rest of the country is least ready to do so. In 10–20 years, the Marine Corps will be modernized against the pacing threats and further integrated with the Navy and the other services to compete in the full spectrum of conflict.

#### QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

##### REFUELING THE USS *HARRY S. TRUMAN*

23. Senator MANCHIN. Secretary Spencer and Admiral Richardson, I’ve seen estimates from the Department of the Navy that refueling the *Truman* will cost between three and four billion dollars. It has been suggested that if Congress were to add that money on top of the requested budget that the navy could continue to operate the *Truman*. But recently I’ve seen estimates of the rest of the overhaul on the *Truman* taking \$6.5 billion. With the combined operating costs of around \$1 billion per year this puts the additional cost of operating the *Truman* for the second half of its life at over \$30 billion. I’m assuming that these cost not been factored into the long term plans of the Navy due to the plan to retire the *Truman*. So, if Congress were to authorize and appropriate the \$3–4 billion and push the Navy to refuel and continue to operate the *Truman*, what does this do to your long term procurement plans and force structure decisions?

Secretary SPENCER and Admiral RICHARDSON. The Navy is implementing the President’s recent decision to restore the Refueling and Complex Overhaul (RCOH) for USS *Harry S. Truman* (CVN 75), and is updating our long-term procurement plans and force structure accordingly. With the President’s restoral decision, the Navy is reviewing the required CVN 75 RCOH and airwing funding profile.

## COLUMBIA-CLASS SUBMARINE COST ESTIMATES

24. Senator MANCHIN. Secretary Spencer, on 8 April, 2019, the Government Accountability Office (GAO) released a report on the *Columbia*-class ballistic missile submarine program detailing how it believes the Navy has significantly underestimated the costs of the *Columbia* program. Specifically GAO highlighted a questionable assumption of labor hours required for construction as well as no allowance for cost overruns, which are expected and typically planned for. GAO assesses that these and other errors could lead to billions more needing to be invested in the program. Can you address the concerns raised by this report and detail how the Navy is either mitigating the concerns of GAO or updating the budget accordingly?

Secretary SPENCER. The Department of the Navy does not agree with GAO's assessment. Labor hours required to construct the submarines and allowance for cost overruns were considered by the Navy's Cost Review Board on September 7, 2016. Neither factor was considered overly optimistic or unreliable during this assessment. Navy does concur with GAO's three recommendations to do the following:

- Incorporate current cost and program data and an updated cost risk analysis in its planned update of the *Columbia*-class lead submarine cost estimate.
- Develop a realistic and well documented estimate of savings from use of authorities associated with the Fund and incorporate the savings associated with the lead submarine into the *Columbia* lead submarine cost estimate.
- Update the lead submarine cost estimate and cost risk analysis prior to requesting funds for lead submarine construction. The Navy continues to actively manage all *Columbia* program cost, schedule, and performance goals including engineering and integration risks and routinely briefs Navy / DOD leadership, and Congress to ensure risks are transparent and fully understood.

## VIRGINIA AND COLUMBIA-CLASS SUBMARINE CONSTRUCTION TIMELINE

25. Senator MANCHIN. Secretary Spencer, the fiscal year 2020 budget adds another *Virginia*-class submarine, and subsequently alters the production timeline for the *Virginia*-class. Specifically, I am noticing the addition of a third submarine in 2020. This third *Virginia*-class, according to the justification books, will be constructed in 2023, meaning three *Virginia*-class submarines will be being built that year. That is the year before the Navy's second *Columbia*-class submarine buy. This, coupled with troubling news reports of a *Virginia* program that is 4–7 months behind schedule have me concerned that any small slips in the *Virginia*-class submarine program will have more significant second and third order effects in delaying the much needed *Columbia*-class submarines. How is the Navy addressing this shift in the current dynamic schedule environment to ensure that both programs stay on track despite utilizing many of the same facilities and suppliers?

Secretary SPENCER. The Navy continues to work closely with the nuclear shipbuilding industrial base to simultaneously support the *Columbia*-class submarine (CLB) program, and *Virginia*-class submarines (VCS). The focus remains on ensuring the nuclear shipbuilding enterprise's facilities, resources, and supplier base are right-sized through the Integrated Enterprise Plan (IEP) efforts to ensure a stable production cadence for both CLB and VCS submarines and on time deliveries to the Fleet. Additionally, the CLB program is utilizing additional authorities to execute advance construction to efficiently manage transition to submarine production lines for two classes. In preparation for CLB and VCS, the shipbuilders have invested and will increase their facilities to accommodate both programs. In April 2018, the Navy investigated options for increasing VCS production to three per year during the CLB gap years in response to the Department's 2016 Force Structure Assessment requirement for 66 attack submarines. The assessment determined the earliest viable option to increase VCS production to three per year is in fiscal year (FY) 2022, and only by providing advance procurement funding three years in advance to allow for an efficient ramp up at both the shipbuilders and their suppliers. For the third VCS built in any year without a CLB build, manufacturing of critical long lead time material (LLTM) is required three years in advance of the third submarine construction start to support normal construction spans. Therefore, adding the third submarine in FY 2020 enables purchase of LLTM to support a fiscal year 2023 construction start. Through the addition of a third VCS submarine to the budget in fiscal year 2020, the Navy is sending a predictable signal of forecasted workload, allowing the shipbuilders and supplier base to prepare and invest for the increased production of submarines highlighted in the FYDP. The third ship would start fabrication of LLTM and critical shipyard manufactured components in fiscal year 2020 and the entire module production cadence would be incorporated over a three-year period to support the added ship entering the module sequence cadence in fiscal year 2023. This strategy and an additional year of LLTM ordering will enable the

industrial base to better prepare for the increased workload and continue improvements in capacity, resources and quality.

#### DEFENSE INDUSTRIAL BASE

26. Senator MANCHIN. Secretary Spencer, recent fluctuations in *Virginia*-class submarine timelines as well as aircraft carrier refurbishment and upgrades have raised concerns of consistency from these valuable defense industrial base partners. Is the Navy considering the defense industrial base and their need for consistency and forecasting when adjusting or making changes to your programs?

Secretary SPENCER. The Navy continues to work closely with the industrial base. Congress has been supportive of the Navy's Integrated Enterprise Plan across the nuclear industrial base, particularly with components that are common across the submarines and aircraft carriers with advance procurement and economic order quantity funds. This allows investment in those suppliers to meet the demand signal. This strategy is not only critical for today's shipbuilding operations, but also the Fiscal Year Defense Program (FYDP) which adds the *Columbia*-class on top of attack submarine and aircraft carrier production. The Navy's objective is to ensure the industrial base is ready to support this capacity increase, not only to produce more, but to sustain what is in the fleet. The Navy believes that if the industrial base is provided with a clear demand signal, they will invest in the planned increased production of submarines and aircraft carriers highlighted in the FYDP. By adding a third *Virginia*-class submarine along with other Navy shipbuilding to the budget in fiscal year 2020, the Navy is sending a predictable signal of forecasted workload, allowing vendors to prepare and level load their workforce.

#### CYBERSECURITY READINESS REVIEW

27. Senator MANCHIN. Secretary Spencer, thank you for the comprehensive look at Navy Cybersecurity Readiness and the accompanying report. The report made a number of excellent observations and recommendations. What is the current plan of attack and timeline for the Navy to address these recommendations for significantly improving the cybersecurity readiness of the service and the defense industrial base?

Secretary SPENCER. The Department of the Navy (DON) is fully committed to addressing the issues raised in the Navy Cybersecurity Readiness Review (CRR). The DON is working in parallel across the five areas highlighted in the CRR (Culture, People, Structure, Process, and Resources), assigning a priority and accountable organization for each of the recommendations. The DON is working to strengthen the existing partnership between the DON and the defense industrial base to mitigate evolving cyber threats, increase communications, establish processes to improve information sharing of threat data and cybersecurity best practices, and encourage efforts to anticipate and develop protective measures. I am looking forward to finalizing the business plan for the creation and operation of the DON Cyber Special Assistant to SECNAV.

