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HEARING
ON
NATIONAL DEFENSE AUTHORIZATION ACT
FOR FISCAL YEAR 2019
AND
OVERSIGHT OF PREVIOUSLY AUTHORIZED
PROGRAMS
BEFORE THE
COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
ONE HUNDRED FIFTEENTH CONGRESS
SECOND SESSION
SUBCOMMITTEE ON READINESS HEARING
ON
MARINE CORPS READINESS POSTURE

HEARING HELD
MARCH 6, 2018



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MARINE CORPS READINESS POSTURE

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON READINESS,
Washington, DC, Tuesday, March 6, 2018.

The subcommittee met, pursuant to call, at 4:35 p.m., in room 2212, Rayburn House Office Building, Hon. Joe Wilson (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. JOE WILSON, A REPRESENTATIVE FROM SOUTH CAROLINA, CHAIRMAN, SUBCOMMITTEE ON READINESS

Mr. WILSON. Ladies and gentlemen, good afternoon. This subcommittee will come to order.

I am grateful to welcome each of you to this hearing of the House Armed Services Committee, Readiness Subcommittee, on the state of the Marine Corps readiness. Today, the subcommittee will hear from Marine Corps senior leaders regarding the Marine Corps fiscal year 2019 budget request and current state of Marine Corps readiness.

Specifically, we want to explore the shortfalls, gaps, and critical challenges facing the Marine Corps readiness recovery plan and recognize the progress achieved thus far, and we want to gain a keen understanding of how the fiscal year 2019 budget request enables critical warfighting capabilities and life-cycle sustainment. Ultimately, how does this budget request support the Marine Corps mission and those men and women who wear the uniform and are in harm's way?

Overall, the fiscal year 2019 budget and Overseas Contingency Operations budget request for operation and maintenance include \$8.2 billion for the Marine Corps Active and Reserve Components. However, this is approximately \$216 million below the amount authorized in fiscal year 2018 NDAA [National Defense Authorization Act].

While we recognize these amounts do not include Marine aviation, which is included in the Navy's budget request, Marine aviation is also roughly flatlined for fiscal year 2019. This is somewhat troubling considering the fact that we hear readiness is the Commandant's priority and know the Marine Corps is struggling to improve aviation readiness, train toward full-spectrum capabilities, and increase capacity necessary to defeat the threats identified in the National Defense Strategy.

Thirteen months ago, General Glenn Walters, Assistant Commandant of the Marine Corps, testified as follows: quote, "Current readiness shortfalls require additional operation and maintenance

resources, and we have exhausted our internal options. Additional resources would facilitate exercises and training and correct repair parts shortfalls, while specifically addressing aviation specific operations and maintenance funding,” end of quote.

If there is still work to be done, we want to assist with your continued readiness recovery in areas such as amphibious operations, the aviation element, and the ground combat element in order to ensure you remain the Nation’s expeditionary force in readiness. What are the impacts of your service’s budget decisions on training, modernization, operations, and maintenance?

It is our responsibility as members of this subcommittee to understand the readiness situation and how the budget request assists the Marine Corps in correcting deficiencies and restoring the capabilities this Nation needs. I look forward to hearing your thoughts and talking about concrete ways in which the committee can help.

President Ronald Reagan frequently used the phrase, “peace through strength.” I agree with President Reagan, and I believe we must maintain a high state of readiness across our armed services in order to achieve that goal.

Recognizing that your service routinely has 30,000-plus Marines deployed in 60 or more countries, it is imperative that Marines remain ready to deter and defeat the full spectrum of nonstate and end-state threats as described in the recently released National Defense Strategy.

Needless to say, we have a lot of ground to cover, and I look forward to hearing from our witnesses today on the varying aspects of Marine Corps readiness.

Before I introduce the witnesses, I am very grateful to turn to Ranking Member Madeleine Bordallo, the distinguished lady from Guam, for opening comments she would like to make.

[The prepared statement of Mr. Wilson can be found in the Appendix on page 25.]

STATEMENT OF HON. MADELEINE Z. BORDALLO, A DELEGATE FROM GUAM, RANKING MEMBER, SUBCOMMITTEE ON READINESS

Ms. BORDALLO. Thank you very much, Mr. Chairman. And thank you to our witnesses for being here today.

Gentlemen, the U.S. Marine Corps holds a special place in my heart and the hearts of the people of Guam. This year, we will be celebrating the 74th anniversary of our island’s liberation from the Japanese during World War II by the Marines. The sacrifices of 1,190 young men lost during the battle are not lost on us.

So today, the Readiness Subcommittee is meeting to examine the details of the Marine Corps fiscal year 2019 budget request, and I look forward to hearing from you, the senior Marine Corps leaders, on the current readiness of the Marine Corps Active and Reserve Components, the threat and the operational challenges that you face, your plans for addressing these challenges, and how you will manage your budget to overcome these challenges. Specifically, I hope to better understand how the fiscal year 2019 budget request will improve the readiness of the Marine Corps.

As we begin to review the budget request, I am concerned about whether this budget appropriately balances near-term readiness recovery through the operation and maintenance accounts with long-term readiness through procurement and modernization.

In terms of operations and maintenance spending, the fiscal year 2019 request is \$214 million below the fiscal year 2018 NDAA levels, and seeks only 80 percent of the depot maintenance requirement and resources and only 95 percent of the aviation spare parts requirement.

So, gentlemen, we have heard about the readiness challenges that the Marine Corps is facing through various committee hearings and briefings over the past year. We have heard about the negative impact of continuing resolutions, as well as the shortfalls that exist in spare parts, reduced training hours, and critical personnel shortages.

In light of the budget deal that was reached earlier this year, I am concerned that the fiscal year 2019 budget request fails to properly resource the accounts that help address these shortfalls and enable near-term readiness recovery.

As I mentioned at the outset, the Marine Corps readiness is of special interest to Guam. We want to support your efforts to rebuild readiness and recovery from the budget uncertainty caused by sequestration and continuing resolutions. We hope that today's hearing helps provide more details on the Marine Corps near-term and long-term readiness recovery plans as we begin our work on the fiscal year 2019 NDAA.

So, again, I welcome you all, and I look forward to the 5,000 Marines that are slated to come to Guam.

And I yield back.

Mr. WILSON. Thank you, Congresswoman Bordallo. And we know those Marines will be greeted warmly by the resident Member of Congress.

I am pleased to recognize our witnesses today. I want to thank them for taking time to be with us. We have Lieutenant General Brian Beaudreault, the Deputy Commandant for Plans, Policies, and Operations, U.S. Marine Corps; Lieutenant General Rex C. McMillian, Commander, Marine Forces Reserve, and Commander, Marine Forces North; and Lieutenant General Michael G. Dana, the Deputy Commandant, Installations and Logistics, U.S. Marine Corps.

Before I begin, I would like to remind the witnesses that we have your full statement for the record and that you summarize your comments for 5 minutes or less. And we are very fortunate that Mr. Drew Warren is going to be maintaining the time for all of us. And so we shall begin.

General Beaudreault, thank you so much, and we look forward to hearing your opening statement.

STATEMENT OF LTGEN BRIAN D. BEAUDREULT, USMC, DEPUTY COMMANDANT, PLANS, POLICIES, AND OPERATIONS, U.S. MARINE CORPS

General BEAUDREULT. Chairman Wilson, Ranking Member Bordallo, and distinguished members of the subcommittee, it is a privilege and honor to be here today, along with our Marine Corps

Deputy Commandant for Installations and Logistics, as well as our Commander of the Marine Forces, both Reserve and for the component for Northern Command.

It is a real privilege to be able to talk about a total force readiness overview today. This afternoon, there is over 184,000 Active Component, and over 3,000 Reserve Component Marines serving on Active Duty. Over 100,000 of those Marines are in the operating forces, of which one-third of those are routinely operating with allies and partners in 50 to 60 countries on a given day, exclusive of our embassy Marines who are safeguarding 177 diplomatic facilities in 148 countries.

The Marine Corps remains the Nation's expeditionary force in readiness. As described in the National Defense Strategy, we are an inside force that is operating within the contact and blunt layers, creating time and space for our national leaders. We are forward deployed and forward based, integrated with the Navy to project combat-credible forces who are assuring allies, maintaining open sea lines of communication, deterring aggression, and providing discrete capabilities that enable our partners to counter violent extremists.

At home, the Navy and Marine Corps team is poised to respond to crisis, as evidenced by our recent response providing disaster relief in Texas, the Virgin Islands, and Puerto Rico. In addition to supporting current operations, we are developing a more lethal and resilient force that will be manned, trained, and equipped to fight and win against a peer adversary, while retaining capability to operate across the range of military operations.

China and Russia are building their capacities and capabilities at rapid rates; rates which require Congress to provide steady and predictable funding in order for the joint force to retain qualitative technological overmatch in a broader military advantage over any competitor.

I thank the Congress for the Bipartisan Budget Act that lifted the BCA [Budget Control Act] caps. Assuming a budget will pass following the 23 March expiration of the current continuing resolution, the Marine Corps will be adequately funded to pursue our three priorities: modernization, readiness, and manpower.

Modernization is the foundation of our future readiness, and the most critical programs include investments in information warfare, long-range precision fires, command and control capabilities, increased lethality for our infantry formations, enhanced maneuver, protected mobility, and ground-based air defense.

In addition to USMC [United States Marine Corps] programs, it is essential that Congress continue to fully fund shipbuilding plans to achieve 38 amphibious [amphib] warships, of which 30 must be continuously available. Thirty operationally available amphibians allow us to train for the high-end warfare and have the capability to deny an adversary from attaining their immediate objectives. Modernized connectors are also critical to moving and sustaining these combat-credible formations.

Our top priority for readiness is to meet our milestones in support of our aviation recovery plan. We will steadily increase the number of Ready Basic Aircraft, sustain the improvement in flight hours per aircrew per month, which we saw a 14 percent improve-

ment during fiscal year 2017, and we will meet a T-20 readiness standard by fiscal year 2020 for our squadrons.

The most important asset to our Corps, to the Nation, and to our readiness is the individual Marine. As we grow the Marine Corps by another 1,400 Marines, we will enhance cyber information operations, special operations, and intelligence. We must ensure steady and consistent funding to ensure we retain the highest quality, most technically skilled Marines. We appreciate the support of Congress to maintain competitive compensation and benefits and high quality of life for our family members.

The Marine Corps is committed to ensuring the professional development of our Marines, their education, their career development, in addition to their preparedness for the harshest combat through the most realistic training.

Thank you, Mr. Chairman, and I look forward to the committee's questions.

[The prepared statement of General Beaudreault can be found in the Appendix on page 27.]

Mr. WILSON. Thank you very much, General Beaudreault.

We now proceed to Lieutenant General McMillian. Please proceed with your opening statement.

STATEMENT OF LTGEN REX C. McMILLIAN, USMC, COMMANDER, MARINE FORCES RESERVE, AND COMMANDER, MARINE FORCES NORTH, U.S. MARINE CORPS

General McMILLIAN. Chairman Wilson, Ranking Member Bordallo, and distinguished members of the committee, thank you for the opportunity to appear before you today to testify on behalf of the Commandant of the Marine Corps about the state of readiness of your Marine Corps Reserve. I am honored to be here today alongside Lieutenant General Beaudreault and Lieutenant General Dana. Also with me today is my force Sergeant Major, Scott D. Grade.

I have been at the helm of the Marine Forces Reserve for 2½ years, and I am pleased to inform you that your Marine Corps Reserve is thriving. Morale remains high, as evidenced by Reserve Component end strength climbing to 99 percent of our total requirement, a reenlistment rate increasing over 25 percent over the past 3 years, all while the demand for Reserve support to combatant commander requirements continues to rise.

The responsibility that we carry in Marine Forces Reserve is to be able to respond tonight and on a moment's notice with fully manned, fully trained, fully equipped, and superbly led compatible units that can instantly and seamlessly plug and play into Active Component formations. We have to expertly move, shoot, and communicate across the battlefield. It is our number one priority.

The critical capabilities provided by Marine Forces Reserve to the total force increases the lethality of the Corps and contributes to the competitive advantage maintained over our adversaries.

Today, your Marine Forces Reserve continues to augment and reinforce the Active Component as America's force in readiness by being forward-deployed and forward-engaged, while maintaining forces to support major contingency operations. At any given time, Marine Forces Reserve stands ready to provide a brigade-sized ele-

ment of Reserve Marines and sailors, fully trained for combat operations to support the Active Component in order to form a total force "fight tonight" capability based on established timelines in support of a crisis or contingency response. The remainder of our force remains poised to augment and reinforce given appropriate amounts of pre-deployment training based on their wartime mission assignments.

I would like to leave this distinguished body with two thoughts on how continued support from Congress can result in a more lethal Reserve force capable of seamlessly integrating into the total force, postured to prevent conflict, yet ready to prevail in the next fight.

Number one, Reserve Marines have 38 training days per year, and every scheduled event, from a rifle range to an administrative inspection, to vehicle maintenance, to a medical/dental stand-down, is preparation for combat. Missed training opportunities are often unrecoverable in terms of personnel, material, and training readiness, while morale and retention of the force, along with our gracious families and supporting employers, suffers.

During the shutdown on January 20, two of three training days were lost. Some units had multiday or weeklong exercises which were canceled or cut short. Ultimately, almost 8,000 personnel across 62 units had their drill weekend canceled or reduced resulting in lost training opportunities.

I cannot afford to lose 1 day, 1 hour, or 1 minute of training for our Nation's most precious assets: our young volunteer men and women who make up your Marine Corps Reserve. Therefore, I cannot overemphasize how a lapse of appropriations negatively impacts readiness across the Reserve force. And I ask for your support through timely authorization and appropriations, which will further strengthen our readiness and ensure we remain ready to fight and win when called upon to do so.

And number two, the Marine Corps Reserve benefits from the annual National Guard and Reserve equipment appropriation. However, an increase from 1 percent of this \$750 million appropriation would further assist us in the procurement of critical shortfall items and modernization of equipment and systems as defined by law.

I appreciate the opportunity to be here today, and look forward to your questions.

[The prepared statement of General McMillian can be found in the Appendix on page 36.]

Mr. WILSON. Thank you very much, General McMillian.

And we now proceed to Lieutenant General Dana, and we welcome your remarks.

STATEMENT OF LTGEN MICHAEL G. DANA, USMC, DEPUTY COMMANDANT, INSTALLATIONS AND LOGISTICS, U.S. MARINE CORPS

General DANA. Sir, ma'am, members, I am going talk to you verbally with my opening comments. I want you to know that I am neighbors with the Commandant. He owns two old cars. He has got a 1985 Ford Mustang, 5-liter, 1987 Chevy Camaro, and he is a really good mechanic, and he is laser-focused on logistics.

The reason I bring that up is when the Commandant travels around the Marine Corps, he is a put-the-green-coveralls-on, get-underneath-the-vehicle, check-the-vehicle kind of leader. So what that means as his neighbor is it is uncomfortable for me, because he knows a lot about logistics and, again, he is laser-focused on it.

So what we have done in the logistics field is, also, my Commandant is very interested in innovation. So we are talking about logistics innovation. And when I have had these discussions with the Commandant, what he has talked about, is if you look at logistics readiness, it is people, processes, and resources. We have got really good people, thanks to you. We have got the resources, thanks to you. But the processes, there is always room for improvement.

So in terms of process improvement, what we did the other day is we culminated a 9-month planning event where we brought together 99 Marines; 20 and 25 civilian Marines; 20–25 professors, academics, and students from University of California San Diego, and we had a hybrid logistics symposium.

And what hybrid logistics is, is looking at the future battlefield, not wishing away logistics requirements, because we have a lot of big heavy stuff—tanks, artillery, AAVs [Assault Amphibious Vehicles], LAVs [Light Armored Vehicles]—need a lot of maintenance. But then we are looking to future capabilities on the battlefield. Unmanned platforms, additive manufacturing, sense and respond logistics, and merging the two.

So when we brought these Marines together, and I want to emphasize, these were young Marines. These were second lieutenants, captains and majors, corporals, sergeants, staff sergeants, who had looked at this problem in lift and distribution, supply and maintenance, and in a separate venue, medical, for over 9 months. And these young men and women from every walk of life had the opportunity to sit with the Commandant last Thursday for 5 hours. And they asked hard questions, and he asked hard questions. And what we were able to do with that event is look at readiness in the future and how we can make it better through process improvement. Either through ground equipment management, through equipment life-cycle programs that were put into place. All these things were discussed.

So the bottom line to this for the committee is we have got really good people looking at that future threat environment through a logistics lens making sure we are ready for the future.

I look forward to your questions.

[The prepared statement of General Dana can be found in the Appendix on page 49.]

Mr. WILSON. And thank you very much, General Dana.

And beginning right now, we are going to be strictly on 5 minutes, beginning with me, Drew.

And so even if it is from the beginning, I want to thank you for your service. And as I indicated earlier, I am so grateful for my family having a Marine heritage with my late father-in-law receiving the Navy Cross at Okinawa. But I am really grateful that my second son is an orthopedic surgeon at Beaufort Naval Hospital. And so, obviously, 98 percent of his clientele and patients are from

Parris Island and Marine Corps Air Station. And so I am just really humbled to be in your presence.

And this is a question for either Lieutenant General Beaudreault or Lieutenant General Dana. A primary concern has been and will continue to be the sustainment of the U.S. industrial base. It is for this reason that I have been particularly concerned about the Marine Corps announcement in August, on August 11, 2017, to order a sole-source contract up to 50,814 M27 infantry automatic rifles from Heckler & Koch, a German company.

Do you believe that it is the best option to not compete on contract that could be as many as 50,814 rifles? Do you believe the U.S. defense industrial base could support such a request? And then finally, do you believe that issuing a sole-source contract for such a large number of rifles from an internationally based company poses any logistical readiness challenge in meeting the demand for not only rifles but supplementary parts?

General BEAUDREAULT. Mr. Chairman, thank you for the question. Relative to the M27 rifle in question, we currently have fielded 6,500 of those weapons. That weapon was fielded in 2008 through an open competition before the contract was awarded. Our plan is to outfit our infantry Marines with that M27. And the quantity is—on our request for proposal that went to industry was for 15—1-5—15,000 additional, versus the 50,000 as stated.

It would cost probably \$5.8 to perhaps I have seen a figure as high as \$24 million to go through a recompetition for that weapon. There is no additional requirements. It is the purchase as is. And it is simply an increase in quantity of a weapon.

And we also have a GAO [Government Accountability Office] report. GAO has looked at the data, looked at the request, and found everything to be within the legal parameters to pursue the sole-source contract, which at this time, we are in the last stages of setting a price with the vendor.

Do I think the industrial base could support those types of quantities? Absolutely. But what we would experience by reopening a competition would be perhaps not being able to recover the additional money that would go into that competitive, that shoot-off for that rifle over the course and probably a 2-year delay in fielding that weapon to the rest of the infantry, which is common to the rest of the force now that we hope to achieve.

So, sir, I am going to let General Dana provide any follow-on.

General DANA. Yes, sir. Not addressing your specific question, but you did talk about the industrial base. Just one thing I would like to bring to the committee's attention, as you look at our weapon systems, our heavy junk, AAVs, I was 9 years old when that platform was introduced. LAVs, I was a freshman in college. So we have these capabilities that are getting old, and the industrial base's ability to provide parts—because you can give us money, and we appreciate that money, we always do—but to get the parts, it is a long lead time.

Mr. WILSON. And with the 6,500 in service now, apparently that has not been a—the utilization has been proper?

General BEAUDREAULT. Yes, sir. What we have found, that rifle was also, you know, internal to the Marine Corps. We looked at some other options, and the M27 outperformed some of the other

weapons that we are also considering. So it is a great weapon. It gets great reviews from Marines, and we were very eager to try to get it fielded as rapidly as we could.

Mr. WILSON. And then a final question for General Dana. Does the Marine Corps have any specific ground equipment readiness challenges?

General DANA. Sir, I would say with our legacy platforms, if you look at our tanks, AAV, LAVs, and artillery, those consume about 50 percent of our depot maintenance budget. And the biggest problem we are having, sir, is getting the parts, and we have long lead times for the parts. Now, there are some things that we need to cure internally on that in terms of process to get those parts faster from different providers, but, again, the industrial base has some issues.

And what I would say is my senior enlisted advisor back here, Master Gunner Bowman, is a tank mechanic. And one workaround that we have, and I talked about additive manufacturing, is we are actually starting to produce some parts. And we have got to work through the legal piece and with the providers, but we brought—just real quick, because we always have training aids for the Marine Corps. We have a—this is a tank impeller. And just real quick, staff sergeant, west coast, young lady, was really upset that she couldn't get the tanks fixed. So what does she do? She takes like a coding class, learns how to design this on a polymer plastic printer. Then she brings it out to a place out in town that produces AM 3D [additive manufacturing three-dimensional] printing metal, prints this part, installs the part at a significant cost savings. So we really believe this is the future.

Mr. WILSON. Well, congratulations on that. And we do count on the enterprising nature of Marines to be that creative. And with barcode, too, the parts should be delivered instantly. So thank you very much.

And, Congresswoman Bordallo.

Ms. BORDALLO. Thank you, Mr. Chairman.

General Dana, as I said in my opening statement, depot maintenance funding appears to be relatively flat between the 2018 NDAA and the 2019 request.

According to budget briefings the committee has received, the 2019 request only supports 80 percent of the depot maintenance requirement. The Marine Corps has consistently identified personnel and spare parts as primary limiting factors to increase depot and maintenance throughout, which in turn has affected operational availability ratings.

So with that in mind, how will the 2019 budget request support increased depot and maintenance throughout in order to increase operational availability rates and readiness levels?

General DANA. Yes, ma'am. Our ask, our bottom-line ask, would be to have \$320 million per year for the depot. What does that provide us? It allows us to maintain a 2,080-person workforce, which is about 1,300 civilian Marines, and the rest are contract. But that allows us to keep that workforce. And it also allows us to keep the readiness rates at about—right now, we are high 80s, low 90s, in terms of readiness. But more money does equate to more readiness. It does in the long run.

But what we owe you, ma'am, just real quick, is we are very, very focused on ensuring that we get the right equipment into the depot. So what we are doing is a program called conditions-based maintenance. Because in the past, you just put gear through cyclically based on several factors, but it wasn't always the condition, believe it or not. Now, we are going to the condition of the vehicle to feed that depot cycle.

Ms. BORDALLO. All right. I have a question now for General Beaudreault—is that right—Beaudreault?

Despite the relatively little change in the Marine Corps O&M [operation and maintenance] request, the budget request does place an emphasis on procurement and modernization accounts. Now, can you please explain how the Marine Corps is balancing the service's near-term readiness needs when only you are buying new equipment and weapon systems? How will this budget request move the needle on the Marine Corps near-term readiness levels?

General BEAUDREAULT. I think it is twofold, ma'am. I think there is—under some of the near-term, it is survivability upgrade programs. It is enhancements to current legacy systems that simply have to be replaced as we bridge to technology that is being pursued for the future. Even the equipment we have today may not be completely relevant 20 years from now. So we are very keenly aware of that.

So the money that is in the RDT&E [research, development, test, and evaluation] and in our research development processes are looking at future vehicles, such as the future amphibious reconnaissance vehicle, what capabilities does that need to bring. In the meantime, we have to ensure the survivability of the current equipment, so we are going through some upgrades and modernization.

There is some near-term requirements for command and control, information warfare, things that are not only relevant for the future, but they are relevant today. So in some cases, the future is now.

So we think we have it about right in terms of the additional people. I have mentioned the 1,400 and where they are going, 400 to special operations unit. The other 1,000 is not to really grow the Marine Corps; it is to round out some capability. Information warfare, intelligence, UAS [unmanned aerial system] operators, military information support, operations companies, things that we don't have today, but we will build here over the next few years.

Longer term, the number one readiness driver long term is to fulfill our aviation procurement plan. It is sustainable funding to keep the F-35 program on track. It is to get the 53-Kilo [CH-53K] on pace to make sure that we can reach fiscal year 2019 initial operating capability as we want to field that aircraft. So if we can replace our legacy airframes with modern airplanes, that is going to be a huge boost to us.

As General Dana mentioned, the readiness of the ground community is actually quite good. We have two-thirds being ready by fiscal year 2022. The ground community is moving quite well in that regard in meeting the objective readiness rates we like to see. The aviation community, we are still moving forward on.

So I think that is where that money is going to go. Modernization for airframes. New procurement is some ground equipment, partic-

ularly to make our infantry formations more lethal, long-range precision fires, rocket artillery, Group 5 UAS that can perform intelligence, surveillance, reconnaissance as well as strike.

So that is now. That is with a sense of urgency to field that kind of capability today.

Ms. BORDALLO. All right. Thank you, General.

Are we having a second round, Mr. Chairman?

Mr. WILSON. Yes.

Ms. BORDALLO. All right. I just have one more question. Thank you, and I yield back.

Mr. WILSON. Thank you, Congresswoman Bordallo.

We now proceed to Congressman Austin Scott of Georgia.

Mr. SCOTT. Thank you, Mr. Chairman.

Gentlemen, thank you for being here. I want to share my concerns as well to what Chairman Wilson mentioned at the start of, which is the sole-sourcing of the contract and a rifle that certainly the U.S. industrial base has the capability to manufacture. There are a tremendous number of U.S. manufacturers that make just as good a rifle as H&K, which H&K is also a good company. And I know that the U.S. industrial base could use the business. They have been hurt by this sequester just as you have been hurt by the sequester.

And, General, one of the things that might help us is you said that it would cost between \$5.8 and \$24 million and 2 years to simply rebid that procurement. Why?

General BEAUDREAULT. I think, sir, we would basically be starting over. And I am only using the data that is provided to me by Marine Corps Systems Command who oversees the procurement and new capability. We can come back with additional information—

Mr. SCOTT. That is fair enough.

General BEAUDREAULT [continuing]. On detailing the costs that are broken down within that \$5.8 million to some higher number, if you—we will take that for the record and be sure to provide a response to you, sir.

[The information referred to can be found in the Appendix on page 57.]

Mr. SCOTT. Absolutely. And thank you for that. And it is very frustrating to us on the committee to see the delay in getting the equipment to the soldiers, not just in the Marine Corps, but in the other branches as well. And then when we see the price that we end up paying per unit, if we factor it out, versus what, in some cases, could be bought—this rifle can't be bought off the shelf, but some of the things can. A night optic scope can be bought off the shelf. And what we end up seeing the final cost being versus what would be reasonable.

So you have got a 2-year budget. I wish it was longer. I am glad it is—at the same time, I am glad that we have a 2018 and a 2019 budget number for you to work under. I would caution you just as I have cautioned the other leaders of the military, that that is a 2-year number, not a 3-year number or a 4-year number, and there is no guarantee with what follows in 2020 and 2021. So getting the procurements done as soon as possible and as efficiently as possible I think is certainly in everybody's best interest.

But, General Dana, the Marine Corps Logistics Base in Albany, obviously extremely important to us. You have got two depots in the country. Could you speak through the importance to maintaining a depot on the east coast and the west coast from an operational standpoint of the Corps and our country?

General DANA. Yes, sir. Both those depots give us great flexibility and depth in terms of being able to fix and repair equipment. To give you an example would be—and, sir, we really appreciate the help with the money, the \$88 million for LOGCOM [Logistics Command], for the rebuild after the LOGCOM was hit by the tornado. So that showed that once we had a little bit of degraded capability in Albany, we were able to push some of that work out to the west coast and do it at Barstow. That is an example of where you need that resiliency. And that work can't be done elsewhere.

Also appreciate about \$160 million in the future for the equipment that was damaged during the tornado. I want you to know, as we look at the equipment and the facilities, we are looking at modernizing. What I mean by that, is the MILCON [military construction], \$43 million for the new warehouse, 200,000 square feet, climate controlled. It will be able to do a better job of preserving the equipment that we have there. But we really appreciate the money for Albany. Thank you.

Mr. SCOTT. Any suggestions as we go forward, as we go through the 2018 budget cycle, the rest of the 2018 budget cycle? One of our concerns is that we are effectively halfway through the budget year. Suggestions on what things we can bring forward in the most efficient manner or areas where flexibility could be potentially written into the law so that we are not forcing you to spend inefficiently?

General DANA. Yes, sir. Because the challenge we are having now—and, again, we appreciate the money, but if you don't have the appropriation to go with it. For instance, right now at Albany, 2,212 pieces of equipment we have not been able to induct. So that is shoot, move, communicate equipment that we can't induct because we are going on previous funding levels. If we had this year's funding levels and we had the money, we could put that gear in for maintenance. And that is just going to get worse the longer we go.

Mr. SCOTT. Gentlemen, thank you for your service. And I know that you share the frustrations as well as we do with the cost of the procurement and the timeliness of it, and so look forward to finding ways to remove that bureaucracy from getting the soldiers the equipment they need in a timely and efficient manner.

Thank you. I yield.

Mr. WILSON. And thank you very much, Congressman Scott.

We now proceed to Congressman Joe Courtney of Connecticut.

Mr. COURTNEY. Thank you, Mr. Chairman. And thank you to the witnesses.

General Beaudreault, you mentioned the F-35s program, which I guess yesterday was a bit of a milestone day where there was delivery of some F-35Bs to a Marine expeditionary unit on the [USS] *Wasp*, which obviously was welcome news for the folks out there.

General BEAUDREAULT. Yes, sir. The 31st MEU out there in the Western Pacific is the first Marine expeditionary unit to actually

go on what we are calling the spring patrol with the newest capability, soon to be followed by the 13th MEU also out through the Western Pacific into the Central Command region.

Mr. COURTNEY. Great. So, you know, we have obviously been watching some of the issues that the GAO raised about, you know, whether or not the F-35 supply system and part system and maintenance system is really going to hopefully keep these planes in the air. And, you know, I am just sort of wondering, you know, now that you are a proud owner of some of those platforms, you know, whether or not that is something that, you know, the Marines are focused on in terms of, again, not making sure that this isn't going to be sort of a bust or a disappointment.

General BEAUDREAULT. I think General Rudder, our Deputy Commandant for Aviation, sir, has done everything he can to lean forward into the type of spares that would need to be put aboard and our—folks from our C4I [command, control, communications, and computers, and intelligence], Marines that are working in our C4I department, looking at the connectivity of that airframe into the ship, the forces ashore, and how it fits into the networked fire-control architecture that the Navy may have.

So we have got a ways to go a little bit in some areas on the C2 [command and control] that goes with the platform. But in terms of the readiness to maintain that aircraft aboard the ship, I think we are in pretty good shape to include a spare engine.

Mr. COURTNEY. Good. Thank you. You know, we obviously want to hear more about that as, you know, things unfold out there.

So the fiscal year 2019 unfunded requirements list that was submitted by the Marine Corps is focused, it appears, almost exclusively on military construction and infrastructure. Congratulations, General.

General DANA. The Commandant is my neighbor.

Mr. COURTNEY. Yeah. But, you know, I mean, the question sort of that I have is just well—I mean, no offense, but, I mean, there are other issues that, you know, you also I think have to balance. And just are you comfortable that, you know, in terms of, you know, personnel, refurbishing equipment, vehicles, and aircrafts, you know, those assets are not going to get crowded out by those priorities?

General DANA. I think two things, sir, before I turn it over to General Beaudreault. So what the Commandant stressed to us is you have to be good stewards of the taxpayer dollar. So in our internal processes for our equipment and all the maintenance, before we ask for more money, we need to make sure that we can show you that we have the right processes in place.

Also, with the MILCON that we got, there were eight projects, \$236 million; we have an \$11 billion MILCON shortfall. So as the Commandant looked at the portfolio, that portfolio has taken the most risk over the past 10 years. So that was the decision to go with that unfunded priority list.

Mr. COURTNEY. Right.

General BEAUDREAULT. Thank you. Sir, I would just add on to the very tail end of that, that some of that MILCON has gone to putting up hangars for F-35s and MV-22s. So it is completely understandable why we would be short in that area.

In terms of the other accounts for operations and maintenance, I think we are funded fine for 2018 and 2019. It is not so much a matter of the money; it is a matter of the time to train in many cases. We are on a 1:2 deployment-to-dwell. In order to build the kinds of comprehensive readiness just simply requires additional time. And so we are looking for ways to, you know, as the chairman works through the risk-to-mission, risk-to-force, and how we are going to set the globe, may indicate some recovery that we might be able to have in terms of time to train. Again, with the focus on the primary threats addressed in the National Defense Strategy of countries to keep our eye on.

So again, I think the accounts are funded well. And we are not anticipating any shortfalls in terms of our ability to train and modernize and retain high-quality people.

Mr. COURTNEY. Thank you. I mean, those are very good explanations and helps us understand it better. So thank you for your testimony.

With that, I yield back.

Mr. WILSON. And thank you, Congressman Courtney.

Now we proceed to Congressman Mike Gallagher of Wisconsin.

Mr. GALLAGHER. Thank you, Mr. Chairman. Gentlemen, thank you for joining us today.

Obviously, we have had recently the release of the National Security Strategy, the corresponding National Defense Strategy that talks a lot about the return of great power competition. For the last 17 years, the Marine Corps, in particular, has been engaged in less-than-great-power competition, irregular warfare, counterinsurgency, things like that.

How do the Marine Corps operating concepts complement the new national strategic guidance, and in what ways might they need to be updated to be able to deter and potentially defeat near-peer adversaries? Just a small question.

General BEAUDREAULT. Sure. I will take that. I think by nature of having the Marine Corps as your expeditionary force in readiness, we are going to be forward deployed. We are already operating inside the adversaries', potential adversaries', A2/AD, anti-access/area denial windows.

We will buy time and space for national decision makers to determine, you know, some of what the outcomes may be. We will be forward to blunt, to make sure the adversaries did not attain their immediate objectives. We are working very hard with the Navy.

So if we just take the Pacific, for instance, we are working very closely with PAC [Pacific] Fleet, with Marine Forces Pacific, with PACOM [Pacific Command], in terms of bringing the kind of capability in the information domain where we are going to need to have supremacy, which is going to enable and underpin everything else we are trying to do in that theater. A lot of initiatives going on at very heightened classified levels, down to, you know, just working blue-green interoperability.

There is a series of workshops being undertaken by our Deputy Commandant for Combat Development and Integration with the Navy, symposiums that are happening out at SPAWAR [Space and Naval Warfare Systems Command] LANT [Atlantic] and SPAWAR PAC [Pacific] that is looking at the ISR [intelligence, surveillance,

and reconnaissance] challenges, the command and control challenges—

Mr. GALLAGHER. Sure.

General BEAUDREAULT [continuing]. Which will then lead into prototyping the capabilities.

So once the wargaming is done, once these workshops are done, they will bring industry together, look at how we can prototype to get after any gaps that might be discovered, and then work those into our fiscal year 2020 experimental plans to enhance our capabilities.

So I think it is very much a naval-Marine Corps integrated op [operation] when we look to the future. And I think we are on the right path.

Mr. GALLAGHER. And Lieutenant General Dana mentioned sort of a creative exercise to think about the battlefield of the future and what that means from a logistical standpoint.

I would actually like to ask General McMillian, from a Reserve perspective, are there perhaps creative opportunities to leverage some of the cyber expertise or some of the creative day jobs our reservists have in support of that future battlefield?

General McMILLIAN. Yes, sir. And thank you for the question. We have found out canvassing Reserves out across the country that there is a vast amount of interest in operating in the cyber domain. Reserves that have done their time in the Marine Corps in a particular MOS [military occupational specialty], got out, went to school, went into that IT [information technology] high-tech world, and are now working in industry are very interested in coming back and joining a cyber unit, as long as—and here is the caveat—that it is attached to an operational unit. They are not so interested in sitting in a command and control center, you know, at the hub of government and watching threats come in. They want to be out on the pointy end of the spear, so to speak.

So with that, we are standing up, in the process of standing up a cyber defense company on the east coast made up entirely of Reserves. We will go into IOC [initial operational capability] later on in the fall of this year. And we are also planning on standing up a cyber defense company on the west coast, same thing. But all of those Marines are out in the civilian world working in the civilian sector and we hope to leverage their civilian skill sets.

Mr. GALLAGHER. That is great. I have one more question, but it will probably go over, so I will reserve for the second round. But appreciate it. Thank you, gentlemen, for what you do. Some days I miss the Marine Corps. I don't miss the haircut, though.

Mr. WILSON. Thank you, Congressman. We appreciate so much Congressman Gallagher with his Marine heritage, so thank you for your service in so many different ways.

And we now proceed to Congressman Salud Carbajal of California.

Mr. CARBAJAL. Thank you, Mr. Chair.

I was noticing your pistol awards there, and I notice that Lieutenant General Dana is needing a little bit more field time. So I was hoping you other two generals could take him out a little bit so we could get to that expert award.

Generals, I really appreciated the time that you spent with me in my office in advance of this hearing. I wanted to ask you guys a question regarding aviation. Aviation readiness remains a priority for the Marine Corps as the services face a strike fighter shortfall due to delays in the Joint Strike Fighter program.

According to the Marine Corps, the key to the future readiness of the Marine aviation is transition from legacy assets, F/A-18s and AV-8Bs, to the Joint Strike Fighter F-35B. What mitigation strategies, if any, does the Marine Corps have in the event that the F-35 squadron transitions take longer than the expected 2 years or F-35 squadrons continue to experience technical delays?

General BEAUDREAULT. Well, sir, number one, we need to increase the depot level throughput of where the F-18s are currently. And I think there is also an effort to go out and, as the Navy buys F-35C, to take additional Navy assets. We are looking actually around the globe of low-hour F/A-18s that may have to be brought into the inventory if we found ourselves in that situation. And there are some other countries who are modernizing their aviation elements as well, which may provide opportunity, if we had to do that.

So we have eyes wide open in that eventuality and it would basically be out acquiring other low-hour aircraft.

Mr. CARBAJAL. Anyone else?

General McMILLIAN. Sir, let me just weigh in on that for 1 minute. I think we are on a—we have reached the bottom of the bathtub and that we are on the upswing, particularly with the F-18 and its readiness. If you were to ask me a year ago, in my Reserve world, I have one F-18 squadron in Dallas-Fort Worth. I would have told you we had three up airplanes that were ready to deploy. All of that was due to readiness and slowness that was coming out—of aircraft coming out of the depot. This year, I have seven up airplanes ready to deploy. And I expect to have a full complement of 12 deployable combat aircraft by midsummer, the end of the summer. So I think we are climbing up out of that hole, sir.

Mr. CARBAJAL. Thank you.

Just a couple more questions, perhaps more to Lieutenant General Dana. Is energy efficiency a part of the Marine Corps discussion when it comes to enhancing readiness and modernization? And two, what steps are being taken to protect installations from the impact of climate change such as sea level rise?

General DANA. Sir, on the energy, the priority for the Commandant is first energy resiliency and then energy efficiency. In the past 6 months in my current position, I have been to east coast, west coast, overseas. And I would say Albany, Georgia, is really the gold standard for energy use in terms of the thermal heating that we are using there. Camp Lejeune used to be on coal, moving to gas. And by the way, \$186 million in energy resiliency packages across the Marine Corps. Overseas, Iwakuni, very resilient. I could go through every base, but I would say the one area we do not have the resiliency that we need is Camp Pendleton.

And you talked about global warming. If you look at the heat in southern California, when I was there as a lieutenant, you didn't need AC [air conditioning]. Now if you go to Stuart Mesa housing

at Camp Pendleton, the families need AC, but the electrical grid needs a \$40 million upgrade to get there, and we are working that internally to get the funding.

So energy resilient, we are all on track, with exception of Camp Pendleton. Efficiency, you know, due to the last administration and this administration, we moved ahead really well.

In terms of what the ACMC [Assistant Commandant of the Marine Corps] talked about with Parris Island down in South Carolina, I was there a month ago, at 0940 in the morning, at high tide. And the road that connects the airfield side of the base with the main side of the base, the water was about 2 inches below the roadway. So we are going to commission a study to look at the 30- to 50-year look for Parris Island and other coastal bases—Cherry Point is another one, because Cherry Point is also at a low altitude—to see the impact of global warming, rising sea levels, and what would we need to do to make those bases more resilient.

Mr. CARBAJAL. Thank you very much.

Mr. Chair, I yield back.

Mr. WILSON. Thank you very much.

And we will proceed now to a second round. A question I have for General Beaudreaux, what are the Marine Corps plans to enhance lethality?

General BEAUDREAUX. Sir, I think there is a number of different programs. Let me start with the infantry. It is the fielding of the M27, it is the procurement of ammunition that gets us out to some extended ranges. It is bringing a second rocket battalion into our artillery. It is the pursuit of unmanned aerial systems that have an ability to see and shoot. It is the fielding of the F-35s. It is the information warfare enablers that will add lethality. It is the command and control systems down to the individual Marine level to communicate with F-35s that will further add lethality into small unit formation.

So there is a number from our air—from our aviation element through our ground combat element, all with an eye towards moving out in a direction that our Secretary told us to, which is to make a more resilient lethal force.

Mr. WILSON. And has there been any development on unmanned ground vehicles?

General DANA. Sir, there has. I mean, the Army has done some great work here. We are partnering with them in terms of, you know, follow vehicles, follow trailers. But in the unmanned family, we are looking at air, surface, subsurface, means to move from point A to point B. For instance, Johns Hopkins has a device called the CRACUNS [Corrosion Resistant Aerial Covert Unmanned Nautical System], which is an underwater quadcopter that can sit on a littoral floor. You leave it there for awhile with a small load, then activate it and move forward. You have probably seen it in the Super Bowl and other events. You know, you have hundreds and hundreds of drones. This is great pennies on the dollar for an investment to give unmanned capabilities instead of a human that is even better.

The other thing we have that we are working on, sir, is what they call AACUS [Autonomous Aerial Cargo/Utility System], which is pilot in a box, which can be put on a K-MAX [Kaman K-MAX

helicopter] or some other type of legacy helo platform. No human being can do terrain flying, and you could fly that from point A to point B to deliver supplies. So numerous things that we are looking at, sir.

Mr. WILSON. Well, we are really pleased on behalf of our country the different options you are looking into.

And, Congresswoman Bordallo.

Ms. BORDALLO. Thank you very much, Mr. Chairman.

This will be just kind of a wrap-up. And maybe we have been talking about it, but I don't have a clear picture of it. So to any of you that want to jump in, can you tell this committee that you will be outfitting planes and other equipment that has been inoperable for years—because I visited many of the bases—because of a lack of parts and you will be using these funds for these needs or will you just continue to buy new equipment?

I just feel that, you know, maybe some of them are beyond operable or being used. But I just want to know what percentage of the budget you would be using to repair some of this equipment that has been sitting there for a long, long time because of—and not just the Marine Corps, but each branch of the service has the same problem.

So again, how does a flat O&M request help in this area?

General DANA. Yes, ma'am. Earlier, I mentioned on our depot, you know, about 320, and now I am going to move it, if it is okay, to 350, \$350 million a year to help with that depot-level maintenance. For secondary repairables and our I/O [intermediate/organizational] maintenance, we are spending about \$245 million. What the Commandant is really pressuring us to do is we have got 18,000 HMMWVs [High Mobility Multi-Wheeled Vehicles], 8,000 MTVRs [Medium Tactical Vehicle Replacements], 2,500 LVSs [Logistics Vehicle Systems] in the inventory, and what we are looking to do, ma'am, is to rightsize that inventory.

And when we come up with that blended fleet for ground mobility, which will be a mix of JLTV [Joint Light Tactical Vehicle], new platform; recapped [recapitalized] HMMWVs, lower number; and LVSs rebuilt, we are going to be smaller, but the readiness will be even higher. So we are going to need that money at some point, but we just want to make sure we do our due diligence first.

Ms. BORDALLO. Thank you. Anybody else?

General BEAUDREAULT. No. I just say there is a parallel, ma'am, on the aviation side as well, and that is the whole nature of our backlog at the depots in trying to get high-hour airframes through the inspection process and get those back to the airworthy fixed-wing aircraft.

Ms. BORDALLO. Thank you.

General DANA. I'm sorry, ma'am, I forgot to mention one thing, if I could. I'm sorry, Rex.

In our reset for our equipment coming out of the fight in Afghanistan and Iraq, we spent \$3.65 billion. Seventy-one percent of the equipment—shoot, move, and communicate—went back to the Marines, but we divested of 21 percent. So 21 percent we looked at the equipment. As you pointed out, it looked terrible, it was not ready or couldn't be refurbished in a cost-effective manner, so we got rid of it. Just so you know that we are working that process.

Sorry, Rex.

Ms. BORDALLO. Thank you.

And thank you, Mr. Chairman, because that was really something I wanted to know, and you made it very clear. I thank you very much, and I yield back.

Mr. WILSON. And thank you, Congresswoman Bordallo.

We now conclude with Congressman Mike Gallagher.

Mr. GALLAGHER. I have maybe a bizarre question. We talk about readiness often in terms of things, you know, ships, weapons, you know, whatever piece of equipment, and less about physical and mental readiness.

I mean, it seems like with the changes to the PFT [Physical Fitness Test]—the CFT [Combat Fitness Test] hasn't undergone any changes recently, but the PFT standards, correct me if I am wrong, PFT standards have gone up on all three domains, correct? Which I think is a great move.

I just would be interested in what inspired that move. And correspondingly, why was the Combat Endurance Test at IOC [Infantry Officer Course] dropped? Because that seems to move in the opposite direction of the overall fitness test throughout the entire Marine Corps, if—

General DANA. If I could start with the IOC.

Mr. GALLAGHER. Yeah.

General DANA. What we found is that the standards that were implemented at IOC were done by a local commander, you know, based on his experience, but were breaking people. And I spent—I don't have as much infantry time as General Beaudreault, but I spent 3 years in an infantry battalion, and you have got a lot of time, same—is we are putting 150, 160 pounds on Marines and breaking them at a very young age. So as you look at a realistic combat environment on the load that we want to put on a Marine, it is not going to be that kind of weight. So why would we test to that level of weight if that is not how we are going to actually implement and put force—

Mr. GALLAGHER. Sure. Can I just follow up on it? Was it not true that attrition was actually not that high due to the Combat Endurance Test? I just don't know the data. You would know the data better than I.

General DANA. We will get to the data, but the attrition—because I am on the Commandant's task force for Marines United. I am the deputy to the Assistant Commandant on that. And we really looked at those numbers, and we were breaking people.

Mr. GALLAGHER. Okay.

General DANA. And the attrition rate was very high, which had some downstream effects on our amount of infantry officers that we were bringing into the fleet.

Mr. GALLAGHER. Sure.

General BEAUDREAULT. And I think the only thing I can add to that, sir, is that I am not sure that that test in and of itself was the standalone metric on whether someone had the potential to be an infantry officer in the Marine Corps. So it just became another indicator, vice the indicator on whether they were going to succeed or not as an infantry officer.

Mr. GALLAGHER. Sure. I appreciate that. I would welcome—if it is not publicly available, I'm sure I could do my own research, but whatever you can share with me, I am interested in. Thank you.

[The information referred to can be found in the Appendix on page 58.]

Mr. WILSON. Thank you very much, Congressman Gallagher.

And I thank each of you for being here today. Your service is so much appreciated by the American people.

And there being no further questions, we are adjourned.

[Whereupon, at 5:33 p.m., the subcommittee was adjourned.]

A P P E N D I X

MARCH 6, 2018

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 6, 2018

Statement of the Honorable Joe Wilson
Chairman, Readiness Subcommittee
“Marine Corps Readiness Posture”
March 6, 2018

Good afternoon. The subcommittee will come to order. I welcome each of you for this hearing of the House Armed Services Committee, Readiness Subcommittee, on “The State of Marine Corps Readiness”.

Today the subcommittee will hear from Marine Corps senior leaders regarding the Marine Corps’ fiscal year 2019 budget request and current state of Marine Corps readiness – specifically we want to explore the shortfalls, gaps, and critical challenges facing the Marine Corps’ readiness recovery plan and recognize the progress achieved thus far, and we want to gain a keen understanding of how the FY19 budget request enables critical war fighting capabilities and life-cycle sustainment. Ultimately, how does this budget request support the Marine Corps mission and those men and women who wear the uniform and are in harm’s way.

Overall, the FY2019 base and Overseas Contingency Operations budget request for Operation and Maintenance includes \$8.2 billion for Marine Corps active and reserve components, however; this is approximately \$214 million below the amount authorized in the FY2018 NDAA. While we recognize these amounts do not include Marine aviation, which is included in the Navy’s budget request, Marine aviation is also roughly flat-lined for FY 2019. This is somewhat troubling considering the fact that we hear “Readiness” is the Commandant’s priority and know the Marine Corps is struggling to improve aviation readiness, train towards full-spectrum capabilities, and increase capacity necessary to defeat the threats identified in the National Defense Strategy.

Thirteen months ago, General Glenn Walters, Assistant Commandant of the Marine Corps, testified as follows: “Current readiness shortfalls require additional operation and maintenance resources, and we have exhausted our internal options. Additional resources would facilitate exercises and training and correct repair parts shortfalls, while specifically addressing aviation specific operations and maintenance funding”. If there is still work to be done, we want to assist with your continued readiness recovery in areas such as; amphibious operations, the aviation element, and the ground combat element in order to ensure you remain the Nation’s expeditionary force in readiness. What are the impacts of your services’ budget decisions on training, modernization, operations, and maintenance? It is our responsibility as members of this subcommittee to understand the readiness situation and how the budget request assists the Marine Corps in correcting deficiencies and restoring the capabilities this nation needs.

I look forward to hearing your thoughts and talking about concrete ways in which this committee can help.

President Ronald Reagan frequently used the phrase, "Peace Through Strength". I agree with President Reagan and believe we must maintain a high state of readiness across our armed services in order to achieve that goal.

Recognizing that your service routinely has 30,000 plus Marines deployed in 60 or more countries it is imperative that Marines remain ready to deter and defeat the full spectrum of non-state and state threats as described in the recently released National Defense Strategy.

Needless to say, we have a lot of ground to cover and I look forward to hearing from our witnesses today on varying aspects of Marine Corps readiness.

Before I introduce the witnesses, I turn to Ranking Member Bordallo, the distinguished gentlelady from Guam, for opening comments she would like to make.

**STATEMENT
OF
LIEUTENANT GENERAL BRIAN BEAUDREAULT
UNITED STATES MARINE CORPS
DEPUTY COMMANDANT PLANS, POLICIES, AND OPERATIONS
BEFORE THE
HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON READINESS
ON
MARINE CORPS READINESS
6 MARCH 2018**

Introduction

Chairman Wilson, Ranking Member Bordallo, and distinguished members of the House Subcommittee on Readiness, I thank you for the continued support of the United States Marine Corps. I appreciate the opportunity to present the readiness of our total force along with our Deputy Commandant for Installations and Logistics and the Commander of our reserve forces. The 82nd and 114th Congress stated that the Marine Corps must be the most ready when the nation is least ready, providing a balanced force in readiness for a naval campaign. The Marine Corps, partnered with the Navy, continues to fulfill that mandate as the Nation's expeditionary-force in-readiness.

After years of prioritizing readiness to meet recurring requirements largely centered on countering violent extremist organizations, our strategy now defines readiness as our ability to compete, deter, and win against nation state threats. We will measure readiness by whether we possess the required capability and capacity to defeat threats as outlined in the National Defense Strategy (NDS). The Marine Corps Operating Concept published in September 2016 is fully consistent with the recently published NDS where our forward deployed units, routinely integrated with the Navy, operate within the contact and blunt layers to assure our partners, deter our adversaries, and ensure unimpeded access to the global commons. As part of the blunt layer, forward-stationed forces delay, disrupt, and deny regional hegemons' objectives. Marines and Sailors who constitute the surge layer at their home stations are prepared to rapidly aggregate and project power as part of a larger war-winning joint force.

The Marine Corps operating forces continue to maintain a high deployment tempo. In the past year, Marine Air Ground Task Forces (MAGTFs) provided support to Iraqi forces and Syrian Democratic Forces enabling our partners to defeat the Islamic State in Iraq and Syria. Our Marines continue to train, advise, assist, and build military capacity with key partners around the globe. Land and sea-based Marines provided immediate disaster response in the aftermath of four hurricanes. III Marine Expeditionary Force (MEF), our vanguard in the Pacific, stands ready to defend our allies on the Korean peninsula against North Korea aggression.

The Marine Corps continues to adapt our organization, training, equipment, and posture to meet the challenges of inter-state and near peer competition. The NDS also directs us to modernize our capabilities to achieve increased lethality and resilience. Current operations and global combatant command requirements continue to stress our legacy systems and impact our ability to build comprehensive readiness.

Modernization

Modernization is a vital component of our readiness – our ability to deter and defeat technologically sophisticated state actors. Previous decrements to our modernization accounts deferred future capabilities and infrastructure improvements which prolonged our reliance on legacy systems that lack the required capabilities for the future. Over time, legacy systems cost more to repair and sustain. Prioritizing modernization, particularly where we can leverage joint buys, will reduce average unit procurement costs and achieve efficiencies for the Department. Our major investment areas include information warfare, long range precision fires, air defense, command and control, and protected mobility/enhanced maneuver.

Our modernization programs are designed to achieve overmatch in capabilities against our most technologically advanced competitor while ensuring a competitive advantage is maintained across the range of military operations. The overall theme for PB19, *Modernizing for the Future Force*, focuses on three key budget priorities – *modernization, readiness, and manpower* – directly aligning with the Secretary of Defense’s guidance to improve warfighting readiness, achieve program balance, and increase lethality. Our capability investment strategy, Marine Corps Force 2025, modernizes the force toward implementing the Marine Corps Operating Concept. We are in the process of building a more lethal, maneuverable, and resilient force that retains the ability to operate and project power within and across all domains. The Marine Corps remains committed to building the most ready force our Nation can afford, allocating \$40.4 billion to our ground and aviation baseline budget, and an additional \$3.1 billion in Overseas Contingency Operations funding as part of the PB19 submission – a 7% increase over last year’s

submission. Additionally, we plan to resource our infrastructure reset, Asia-Pacific rebalance, new structure, materiel, munitions, maintenance and training requirements that together generate the required capability and capacity.

The Corps will also invest in advanced simulation training systems, particularly for ground units. The Marine Corps has focused its immersive training efforts on improving the infantry squad leader's ability to make tactically, morally, and ethically sound decisions under simulated combat conditions. Currently there are three Infantry Immersive Trainers, one located with each MEF. Thanks to the Congress, in FY19 construction will begin for a new Immersive Training facility for Camp Lejeune, North Carolina.

During 2017, Secretary Mattis chartered a close combat strategic portfolio review to improve small unit combat lethality and resiliency. The Secretary of Defense's review resulted in the establishment of a Close Combat Lethality Task Force that will yield significant material and non-material improvements for ground combat formations. The first phase of the effort resulted in \$550 million for the Marine Corps over a multi-year period. These funds are being applied to fielding the M3A1, Multi-Role Anti-Armor Anti-Personnel Weapon System or "Carl Gustaf." Current plans will enable fielding of 1,073 systems across Marine Corps infantry at an accelerated rate. Additionally, we will field an enhanced thermal imager for our ground combat units during FY20. We will leverage the work and resources of the Lethality Task Force in combination with our Marine Corps Warfighting Lab and Combat Development Directorate to increase the lethality of all of our ground combat formations, to include; artillery, reconnaissance, light armored reconnaissance, and combat engineer units.

Information Domain: Transforming C2 Capabilities

The current and next generation Marine Corps must maintain access, freedom of maneuver, and the ability to project power in all domains. We must enable and protect our ability to command and control (C2) widely distributed units. We will transform MAGTF C2 capabilities through a network that is secure and horizontally and vertically integrated with the joint force

and coalition partners. Our Common Aviation Command & Control System (CAC2S) enhances the MAGTF with the required capabilities to command, control and coordinate air operations integrated with the joint force from platforms afloat or ashore. The Ground/Air Task Oriented Radar (G/ATOR) will replace five legacy systems with one expeditionary radar, providing the MAGTF an unmatched ability to maintain situational understanding of the battlespace. As warfare evolves into a battle of signatures and detection, improvements such as these are vital to maximize our Marines' protection and effectiveness.

Amphibious, Maritime, Expeditionary Capability & Capacity

We appreciate Congress' commitment to building a 38-ship amphibious force and providing the requisite maintenance funding to ensure 30 ships are operationally available. Resilient and lethal amphibious platforms provide the strategic mobility, logistical support, operational reach, and forcible entry capability required to deter and defeat our Nation's adversaries. Our amphibious capability is integral to achieving our diplomatic, economic, and military objectives around the globe. Amphibious forces do not require host nation permissions to establish a combat credible presence or to influence the local dynamic. Amphibious ships with modern connectors remain paramount to our readiness, responsiveness, and execution of the NDS. To augment amphibious capacity, we employ alternative maritime platforms to provide additional seabasing options. These ships can add capacity to Amphibious Ready Groups/Marine Expeditionary Units (ARG/MEU) particularly in response to lower end contingencies. Supporting the Navy's 30-year shipbuilding plan, providing adequate funding for maintenance, and technological improvements to our L-class ships will further enable the Nation to maintain credible combat capability inside the anti-access/area denial defenses of our adversaries.

Aviation Modernization and Readiness

During FY17, Congress funded critical aviation shortfalls. Most notably, there was a 14 percent increase in average flight hours per crew per month over FY16. This investment produced direct, quantifiable readiness gains. However, continuing resolutions (CRs) impact aviation readiness by inhibiting our ability to execute a year-long funding strategy, specifically

investments in spares and repair parts. Without consistent and predictable appropriations, costs are driven higher as we are unable to put contracts in place with primary suppliers or are forced to purchase parts below the optimal quantities. Through predictable budgets and on-time appropriations, we can achieve our comprehensive aviation recovery plan.

CRs have resulted in shallow acquisition ramps for the F-35B/C and CH-53K which has required us to continue sustaining and operating legacy aircraft that are rapidly approaching the end of their service lives. The single most effective way to meet our NDS responsibilities, improve overall readiness, and gain the competitive advantage required for combat against state threats is through the modernization of our aviation platforms.

Last year, our first operational F-35 squadron relocated to Iwakuni, Japan, enhanced our warfighting capabilities, demonstrated commitment to our allies in the Western Pacific, and improved overall tactical aircraft readiness. Next month we will deploy the first F-35B detachment with a MEU. The CH-53K Heavy Lift Replacement remains critical to maintain and improve the battlefield mobility our amphibious force requires; consistent funding will ensure complete fielding by FY28. The CH-53K will nearly triple the lift capacity of the CH-53E. During FY17 Congress also funded a counter-unmanned aircraft systems capability which is currently supporting our forward deployed forces; however, more work and more investment is required. The Marine Corps is grateful for the continued support to sustain our acquisition objectives that will widen our competitive advantage.

Ground Modernization and Readiness

Thanks to Congressional support, our ground equipment readiness continues to improve. Our depot level maintenance facilities at Albany and Barstow remain an essential component to our ground equipment readiness strategy. FY17 appropriations were used to address intermediate and organizational maintenance challenges, increase availability of secondary repairable parts, improve the readiness of our engineer, communications, ordnance, and motor transportation units, and also funded critical munitions shortfalls.

Despite the noted readiness improvements, our most important legacy capabilities continue to age as modernization efforts fail to keep pace with our requirements. The current CRs may potentially delay the contract award of the production option for Amphibious Combat Vehicle (ACV) 1.1, currently scheduled for June 2018. Such delays directly impact the Marine Corps' ability to divest of legacy Amphibious Assault Vehicles and invest in the lethality and mobility upgrades of the ACV. To modernize our ground combat element and ensure success against increasingly capable 21st Century threats, we need to accelerate investments in our ground systems and critical munitions.

Installation Infrastructure

Our bases and stations are strategic and operational power projection platforms from which our blunt and surge layer forces deploy, fight, and win. In past years, we took risk in our installation portfolio to support near-term operational readiness.

As outlined in the NDS, our installations must prove resilient against current and emerging threats. We must selectively harden our installations to mitigate the risk to force. Additional investment is required for the modernization of training ranges to replicate future threats and exercise the technology that is enabling the 5th Generation MAGTF. Marine Corps Air-Ground Combat Center, Twentynine Palms, California, is uniquely capable of accommodating a full-scale, live-fire Marine Expeditionary Brigade exercise. The center's expansion, made possible with significant congressional support, has enhanced the Marine Corps' ability to expand training for high end combined arms operations. However, the Marine Corps is still negotiating issues with the airspace above the expanded lands, which continues to limit the use of aviation and other select supporting arms. Your continued support is crucial to the modernization of our training infrastructure.

High Quality People

Our most valuable asset is the high quality people who play the essential role in maintaining Marine Corps' readiness. Incentives are essential to the active and reserve components for

recruiting and retaining the most talented personnel within the necessary rank structure and military occupational specialties. While we expect to meet our retention goals this FY, we are faced with a competitive civilian job market particularly for Marines with highly transferable skills such as those trained in cyber operations and aviation maintenance. Special incentive pays are a critical component in achieving our retention goals. To offer such incentives, we need predictable funding in order to most effectively manage our personnel.

Conclusion

On behalf of Marines, Sailors, civil servants, and our families, I thank you for the opportunity to address Marine Corps readiness. With your continued support, the United States Marine Corps will continue to be forward deployed, ready, and responsive across the range of military operations to attain our national security objectives.

Lieutenant General Brian D. Beaudreault
Deputy Commandant for Plans, Policies, and Operations

Lieutenant General Beaudreault was commissioned in May 1983 upon graduation from the University of Massachusetts, Amherst and was designated as an infantry officer upon completion of training.

His operational assignments include: Platoon Commander and Company Executive Officer, 1st Bn, 3rd Marines, Kaneohe Bay, HI; Assistant Operations Officer, Logistics Officer, Maritime Special Purpose Force Commander and G Company Commander, Battalion Landing Team 2/9, 15th Marine Expeditionary Unit (SOC), Camp Pendleton, CA (Operation RESTORE HOPE, Somalia); Inspector-Instructor, 3rd Battalion, 23rd Marines, Memphis, TN; Operations Officer, 31st MEU (SOC), Okinawa, Japan (Operation Stabilise, East Timor); Regimental Executive Officer, 1st Marine Regiment, Camp Pendleton, CA; Commanding Officer, Battalion Landing Team 1/1, 13th MEU (SOC)/ Expeditionary Strike Group One (Operation Iraqi Freedom); Commanding Officer, 15th MEU(SOC), Camp Pendleton, CA (Operation Iraqi Freedom); Deputy Commander, Marine Forces Central Command/Commander MARCENT (Forward), Manama, Bahrain; Commanded Task Force South in support of flood relief in Sindh Province, Pakistan; and Commanding General, 2nd Marine Division.

His Supporting Establishment assignments include service as Guard Officer, Marine Corps Security Force Company, Naval Station Roosevelt Roads, Puerto Rico and Director, Expeditionary Warfare School, Quantico, VA.

LtGen Beaudreault completed joint duty assignments as Ground Plans Officer (CCJ3-PP), Operations Directorate, US Central Command, MacDill AFB, FL; Deputy Director, Future Joint Force Development, Joint Staff (J7) and Deputy Director, Joint Training, Joint Staff (J7), Suffolk, VA; and most recently served as Director of Operations and Cyber (J3), U.S. Africa Command.

His professional military education includes the following: The Basic School; Amphibious Warfare School; US Army Command and General Staff College; Armed Forces Staff College; Naval War College (MA with Highest Distinction, National Security and Strategic Studies); Higher Command and Staff Course, UK Defence Academy; and CAPSTONE, National Defense University.

**STATEMENT
OF
LIEUTENANT GENERAL REX C. McMILLIAN
UNITED STATES MARINE CORPS RESERVE
BEFORE THE
HOUSE ARMED SERVICES SUBCOMMITTEE ON READINESS
ON
MARINE CORPS READINESS
6 MARCH 2018**

Introduction

Chairman Wilson, Ranking Member Bordallo and distinguished members of the House Armed Services Subcommittee on Readiness, it is my privilege to appear before you today to provide an overview on the current state of readiness within the Marine Corps Reserve.

As the Assistant Commandant of the Marine Corps testified, fiscal instability, resulting from persistent Continuing Resolutions and looming and actual government shutdowns, produce the most significant risk to our readiness. Reserve Marines have 38 training days per year (24 inactive duty days and 14 annual training days). Missed training opportunities are often unrecoverable in terms of personnel, material, and training readiness, while morale and retention of the force suffers. During the orderly shutdown on January 20, 2018, two to three training days were lost. Some units had multi-day or week-long exercises which were cancelled or cut short. Ultimately, 7,793 personnel across 62 units (20 percent of Marine Forces Reserve) had their readiness impacted due to their drill weekend being cancelled or reduced, resulting in lost training opportunities.

Although these lost opportunities negatively impact the Reserve Component's ability to serve side-by-side with their Active Component counterparts, your Marine Corps Reserve has been fully engaged across the globe over the past 16+ years of combat operations – serving as an essential shock absorber and force multiplier. Our focus remains on maintaining the ability to provide manned, trained, equipped, and well-led forces capable of augmenting, reinforcing, and supporting the Active Component. With the continued support of Congress, it will further strengthen our readiness and ensure we remain ready to fight and win across the range of military operations and in all warfighting domains.

A Total Force

The United States Marine Corps remains the Nation's forward deployed, agile, Expeditionary Force in Readiness. As the Commandant of the Marine Corps previously stated, we are one Marine Corps – a Total Force Marine Corps. For approximately eight percent of the Department of Defense (DoD) budget, your Corps provides the American people with an exceptionally capable, extremely affordable, immediately responsive, and lethal national security force. As an integral part of the Total Force, the Marine Corps Reserve plays a key role in providing that national security force.

The critical capabilities provided by the Marine Corps Reserve to the Total Force increases the lethality of the Corps and contributes to the competitive advantage maintained over our adversaries. Over the past year, the Marine Corps Reserve supported combatant commanders by providing forces focused on combat operations, crisis prevention, crisis response, and theater security cooperation. Global deployments, along with participation in Service, Joint, and multinational exercises, develop the depth of experience of the Reserve Force, ensuring the Marine Corps Reserve is relevant, ready, and responsive to meet combatant commanders' requirements for highly trained general-purpose forces.

The demand for the Marine Corps' unique capabilities has increased, requiring more Reserve Component activations of units and ad hoc formations to produce enabling capabilities across the range of military operations. Your Marine Corps Reserve will continue to deploy and integrate with the Active Component to meet combatant commander high-priority requirements through the use of existing mobilization authorities. In 2018, it is anticipated that Marine Forces Reserve will support the combatant commanders by mobilizing in excess of 2,500 Reservists and

providing almost 12,000 Marines for a multitude of theater-specific exercises and security cooperation events. These operations and exercises greatly increase the Reserve Component's readiness, which enhances interoperability with the Active Component, Joint Forces, and our allies.

Predictability

Our Force Generation Model provides a level of predictability for force planners and our Reserve Marines, while maintaining the "train as we fight" philosophy. The Model provides our Reservists, their families, and their employers the ability to plan for upcoming duty requirements five years and beyond. This enhances personnel readiness by empowering service members to achieve the critical balance between family, civilian careers, and service to our Nation while enabling informed employers to plan for and manage the temporary absence of valued employees.

We ensure units and personnel are ready to meet any challenge by employing a Force Generation Model that rotates Marine Reserve units through a five-year Training and Readiness Plan. At any given time, the Force Generation Model enables the Reserves to provide combat ready units and detachments based on major contingency operation plans and the Corps' Force Management Plan. This ready bench includes Air Naval Gunfire Liaison Companies, Civil Affairs Groups, large-scale logistical augmentation, four infantry battalions, artillery and aviation capabilities, as well other critical enablers. In total, more than 4,000 Reserve Marines and Sailors are prepared to augment and reinforce Active Component forces rapidly in support of a contingency response or as part of a theater security cooperation mission.

Personnel

Marines, Sailors, and our civilian Marines are the foundation of all that we do. The resources we dedicate to sustaining and developing this foundation directly contribute to the

success of our institution. The vast majority of the Marine Corps Selected Reserve's authorized end strength of 38,500 fall under Marine Forces Reserve. Embedded with these Marines are 1,800 Active and Reserve component Sailors who serve critical roles in the operational, medical, dental, and spiritual readiness of our Reserve Force. In addition to the Marines and Sailors of the Selected Reserve, Marine Forces Reserve administratively controls approximately 65,000 Marines who serve in the Individual Ready Reserve (IRR). Marine Forces Reserve continues to monitor the mobilization viability of these IRR Marines who have fulfilled their active service commitment and returned to civilian life.

Recruiting and retaining high quality Marines remains essential to the Marine Corps' reputation as the Nation's Force in Readiness. Marine Forces Reserve enjoys high affiliation and retention rates enhanced through various incentive programs aimed at meeting authorized end strength and retaining our most talented Marines. Your support to these critical programs has helped maintain our overall personnel end strength to 99 percent of the total requirement, with a grade and Military Occupational Specialty match rate of 85 percent. This high rate of personnel readiness is not only reflective of the health of the force, but directly contributes to our overall operational readiness. Your continued support for incentives that promote service in our Reserve Force will ensure our ability to recruit and retain the very best service members.

Equipment

Reserve Component units remain highly interoperable with their Active Component counterparts due to the Marine Corps' Total Force approach to equipment fielding and management. Active and Reserve Component Forces are manned, trained and equipped to the same standards, facilitating the seamless employment of Reserve Component Forces to meet combatant commander requirements. Marine Forces Reserve mission essential equipment

readiness levels are sufficient and capable of supporting all home station training requirements, as well as current operational deployments, with the exception of several select aviation units.

In the Reserve Component, personnel resources to identify and conduct maintenance are limited to the small full-time support staffs at each Reserve Training Center. These staffs are augmented by Reserve Marines during the monthly drill and two week annual training periods. Focusing these limited resources on the combat essential readiness reportable items constrains routine preventative and corrective maintenance on the remainder of equipment. Recent modernizations, coupled with the increase in equipment density and complexity, have compounded this challenge.

For many years, Marine Forces Reserve has mitigated risk to maintenance readiness in two ways. First, by continually refining the Training Allowance, which is the portion of the unit's full Table of Equipment kept on-hand at the Reserve Training Center. Our goal is to balance the minimum amount of equipment necessary to effectively conduct training with the amount of equipment that can reasonably be maintained within the personnel and fiscal resource constraints. Second, by leveraging Overseas Contingency Operations (OCO) dollars to pay for mobile maintenance support teams from Marine Corps Logistics Command to travel to Reserve Training Centers and augment the limited organic maintenance capacity. However, as the demand for Reserve Component Forces has significantly increased – from 126 exercises, missions, and operations in Fiscal Year (FY) 2017 to 149 scheduled for FY 2018 – we anticipate increased usage, and subsequent wear and tear on both our military and individual combat equipment sets. Consequently, our maintenance requirements, demand for secondary repairables, and replenishment of gear have out-paced previous forecasts. Congressional support for our amended FY 2018 Operations and Maintenance, Marine Corps Reserve budget request, to include OCO, is

paramount to our continued success in maintaining high equipment readiness.

The top procurement priority of the Marine Corps Reserve is the KC-130J Super Hercules. The Active Component has fully fielded the KC-130J Super Hercules. However, the remaining 17 of 24 Reserve Component KC-130J aircraft are not scheduled to be fully fielded until 2026. This extended fielding timeline forces the Reserve Component to simultaneously operate the KC-130J and the legacy KC-130T aircraft over the next eight years. These two aircraft have vastly different logistics, maintenance, and aircrew requirements, resulting in an increased outlay of resources to maintain the readiness of the Reserve Component KC-130 Squadrons.

Training

Marine Forces Reserve participates in the service-level Integrated Training Exercise (ITX) aboard Marine Corps Air-Ground Combat Center, Twentynine Palms, California. This exercise consists of two battalions conducting live-fire and maneuver exercises, featuring Reserve Component Forces from the Marine Air-Ground Task Force elements. This is one of the few opportunities that the ground, aviation, and logistics combat elements, under the command of a regimental headquarters, are able to come together and coordinate all warfighting actions to operate as a Marine Air-Ground Task Force under live fire and maneuver conditions. The ITX is constantly updated to challenge our Reserve Force with the most realistic training possible and our units participate based on future activation potential per the Marine Forces Reserve FYs 2018-2022 Training and Readiness Plan. ITX participation improves combat readiness, efficiency in Total Force integration, and enables more rapid activation response times at the battalion and squadron level.

Marine Forces Reserve maximizes participation in continental United States-based training

events. In FY 2017, Reserve Component Marines and Sailors participated in Exercise Northern Strike, a joint, combined-arms, live-fire exercise emphasizing close air support, joint fire support, and coordinated maneuver with fires. The exercise also provides highly sought after amphibious training that is executed aboard Camp Grayling, Michigan, at the Joint Maneuver Training Center. Exercise Northern Strike provides an opportunity for Reserve Marines to train alongside Army and Michigan Air National Guard forces, as well as Canadian forces, and has become an integral part of the Reserve Component training continuum. These types of exercises ensure our Marines maintain the highest levels of proficiency and readiness to integrate with the Active Component to support the requirements of the combatant commanders.

In order to preserve fiscal and materiel resources and test the limits of expected operations, we also maximize training efficiencies by optimizing the use of training simulators to enhance readiness wherever possible. Additionally, with Reserve units only having 38 training days per FY to train to mission essential tasks and also ensure all Service mandated annual training requirements are satisfied, it is essential for the Marine Corps Reserve to capitalize on non-traditional training methods such as online training. Expanding our use of simulators and online training will preserve valuable training time and also enable units to make the most of that limited training time during drill weekends.

Facilities

Marine Forces Reserve occupies facilities in 47 states, the District of Columbia, and the Commonwealth of Puerto Rico. These facilities include 27 owned and 133 tenant Reserve Training Centers, three family housing sites, one permanent barracks, three emergency troop housing barracks, and one General Officer Quarters. Although some sites are located on major

DoD installations, most are situated within civilian communities, ranging from neighborhoods to industrial and commercial districts. We continue to improve the maintenance and security of our facilities to ensure the safety of our Marines and Sailors and provide an effective training and mobilization platform to support the readiness of the Force.

Sixty-six percent of the facilities budget supports the sustainment and maintenance of existing infrastructure and operating cost of providing day-to-day facilities support. However, those operating costs steadily increase with the age of the buildings. We have improved the overall readiness of our facilities inventory through our Facilities Sustainment, Restoration and Modernization (FSRM) support program and maximized the impact of our budget through divestiture and demolition of excess footprint.

There has been a focused and ongoing effort to improve overall force protection at all of our sites by working with our service partners and the National Guard for joint occupied facilities. Numerous protection assessments and security engineering reports have been conducted at our facilities to assist and develop designs to mitigate protection concerns, specifically physical security. These assessments have identified physical security shortfalls and served to prioritize security enhancements to ensure our sites and Marines are secure in the facilities where they work and drill. Although we have leveraged additional funding and the risks are mitigated by the tactics, techniques, and procedures that each individual unit employs, these emergent force protection requirements have placed added strain on our budget.

The Marine Corps' Military Construction, Naval Reserve (MCNR) program focuses on providing construction for new and enduring capabilities, as well as recapitalization of our aging existing facilities. The construction provided by the annual authorization of MCNR funding is an important factor in advancing our facilities support mission as we optimize our force laydown

throughout the nation.

The combined effects of our FSRM and MCNR programs have steadily reduced the number of inadequate or substandard Reserve Training Centers and enabled better support to the Force. Continued funding for our facilities program is essential for us to improve the overall physical infrastructure that reinforces the mission readiness of our units, divest of failing infrastructure, and modernize capabilities.

Health Services and Behavioral Health

Marine leaders have a moral obligation to ensure the health and wellness of the Nation's Marine Corps Reservists, Sailors under our charge, and their families. We strive to improve medical readiness through a robust Reserve Health Readiness Program within Marine Forces Reserve and an accurate monitoring, identification, and notification of the unit-level actions necessary to attain readiness goals. Our Health Services priority is to ensure the DoD goal of 85 percent Total Force Medically Ready. During FY 2017, Marine Forces Reserve met that goal with individual medical and dental readiness rates of 85.4 percent and 90.7 percent, respectively. Additionally, our Health Services personnel participate in Force Readiness Assistance & Assessment Program unit inspections and audits which provide oversight at unit level and the ability to monitor policy adherence and readiness.

Further, we market all of our behavioral health initiatives and programs through our Marine Forces Reserve portal website and during key Marine Corps forums throughout the year. These programs include Suicide Prevention, Post-Deployment Health Reassessment, Operational Stress Control and Readiness, Yellow Ribbon Reintegration, and Drug Demand Reduction. Your continued support of our behavioral health programs is greatly appreciated.

Sexual Assault Prevention & Response

Sexual assault is a complex problem that is often interrelated with other readiness challenges, behavioral health issues, and destructive behaviors. Marine Forces Reserve remains focused on executing solutions to address the continuum of destructive behaviors, with the goal of eradicating sexual assault within our ranks. To accomplish this goal, Marine Forces Reserve has expanded the Sexual Assault Prevention and Response Program to seven full-time employees who provide supportive services across the geographically-dispersed force and are capable of supporting service members and adult family members at all 160 sites.

Our prevention strategy is holistic and integrated with other programs that support the prevention effort, such as the Equal Opportunity, Family Readiness, Spiritual Readiness Initiatives, and Behavioral Health Programs. We emphasize setting the example of discipline and respect at all levels of command by encouraging a positive, retaliation-free, command climate. Marine Forces Reserve is committed to eradicating sexual assault while responding with the highest quality of supportive services and advocacy to those who need it.

Conclusion

Despite the challenges facing us in today's strategic environment, the Marine Corps remains our Nation's crisis response force and will continue to be most ready when our Nation is least ready. When our Nation calls, the American people expect quick, decisive action from Marines – both the Active and Reserve Components. As part of the Marine Corps Total Force, the Marine Corps Reserve must remain manned, trained, and equipped to provide lethal forces to the Active Component to respond across the operational spectrum from disaster relief to full scale combat operations. Despite today's unstable operating environment being further complicated by fiscal uncertainty, it is essential for us to remain engaged in current operations, maintain our warfighting

readiness, and reset our equipment – while also taking the necessary strides to modernize the force.

With your continued unwavering support, we will make pragmatic decisions on how to best balance our available resources between current commitments and future readiness requirements.

Semper Fidelis!

Lieutenant General Rex C. McMillian
Commander, Marine Forces Reserve; and Commander, Marine Forces North

Lieutenant General Rex C. McMillian assumed the duties of Commander, U.S. Marine Corps Forces Reserve and Marine Forces Northern Command on 12 September 2015. A native of Norfolk, Virginia, he graduated from the University of Southern California and was commissioned in 1980 via the Platoon Leaders Class program.

As a Lieutenant, he trained with VT-21 in Kingsville, Texas and remained as a flight instructor flying the TA-4J. In 1983, he reported to Marine Fighter Attack Training Squadron 101 for transition training in the F-4S. In 1986, Captain McMillian transitioned to the F-18 at Strike Fighter Squadron 106, Naval Air Station Cecil Field, Florida, and flew the Hornet with VMFA-531 in El Toro, California.

In April 1989, Captain McMillian transferred to the Marine Corps Reserve and joined Marine Fighter Attack Squadron 134. As a Major, he served as the Operations Officer and Executive Officer of Marine Fighter Attack Squadron 134 in Miramar, California.

Lieutenant Colonel McMillian served as the Assistant Air Operations Officer, 1st Marine Expeditionary Force Augmentation Command Element / I Marine Expeditionary Force at Camp Pendleton, California. In January 2000, he assumed command of Marine Fighter Attack Squadron 134 in Miramar, California and relinquished command in January 2002.

While a Colonel, in 2003 he was mobilized and reported to 3rd Marine Aircraft Wing as the Chief of Staff for both overseas and stateside duties in support of Operation Iraqi Freedom. In June 2005, he was demobilized and transferred to MAG 46 in order to serve as the Deputy Commander.

Upon selection to Brigadier General, he served as Deputy Commanding General of Marine Corps Forces Pacific, Honolulu, Hawaii. From 2009 to 2010, Brigadier General McMillian assumed the duties as the Deputy Commanding General, I Marine Expeditionary Force at Camp Pendleton.

Major General McMillian served as the Commanding General, 4th Marine Aircraft Wing from July 2010 to August 2012. Following command, he served as the Director, Reserve Affairs Division, Headquarters, U.S. Marine Corps until May 2013.

Prior to his current assignment, he served as the Senior Advisor to the Commander for Reserve Affairs, assigned to North American Aerospace Defense Command and United States Northern Command. His secondary responsibility was a Threat Assessor for NORAD and NORTHCOM.

Prior to his return to active military service, Lieutenant General McMillian was a Captain for Delta Air Lines in his civilian employment. He has been a career airline pilot since 1989.

STATEMENT
OF
LIEUTENANT GENERAL MICHAEL DANA
DEPUTY COMMANDANT, INSTALLATIONS AND LOGISTICS
BEFORE THE
HOUSE ARMED SERVICES SUBCOMMITTEE ON READINESS
ON
MARINE CORPS READINESS
6 MARCH 2018

Introduction

Chairman Wilson, Ranking Member Bordallo and distinguished members of the House Armed Services Subcommittee on Readiness, I appreciate the opportunity to testify on the current state of Marine Corps Readiness. Further, I thank the Congress for your support.

As the Assistant Commandant of the Marine Corps testified, fiscal instability, resulting from persistent Continuing Resolutions (CRs) and looming and actual government shutdowns, produce the most significant risk to our readiness. We are concerned that CRs are shrinking our industrial base, negatively affecting the lines that produce our spare parts and the new modern capabilities we require.

The Marine Corps' Installation and Logistics team is focused on ensuring the necessary installations, logistics, and ground equipment readiness is available to ensure the Marine Corps remains capable of "Making Marines and Winning our Nation's Battles". In support of Marine Corps operations, our bases and stations are collectively the "launching pad" that produces and deploys ready, trained forces. Further, our enterprise ground equipment management efforts provide an end-to-end, total life cycle process to account for and maintain-sustain our gear.

Installation Condition and Risk

Our installations support Marine Forces, Marines, Sailors, and their families and serve as the premier MAGTF training, sustainment, and deployment platforms. In terms of total Marine Corps Force serviced on our installations, there are over 180K Marines, 176K Dependents, 29K Civilians, and 140K Retirees. The support ranges from 23K housing units, 600 barracks, 56 fitness centers, 43 child development centers, 5,284 miles of road, 146 hangars, 58 runways and 15K buildings. Due to historic funding challenges, of the 30K facilities in the Marine Corps, 17% or 5,100 facilities are in poor or failing condition, yet still in use and maintained with limited resources.

The state of facilities is the single most important investment to support training, operations, and quality of life. Previously, underfunding of new construction requirements through the Military Construction program (MILCON) limited our ability to field new capabilities and limited the ability of our installations to serve as training and power projection platforms. We ask for your continued support to fund new construction requirements that directly impact readiness and quality of life. Similarly, we have seen our Facility Sustainment, Restoration, and

Modernization (FSRM) backlog grow to \$9B. We ask for your continued support to maintain, restore and modernize our facilities through the FSRM program.

As a result of these past resource challenges, we developed the Commandant-signed Infrastructure Reset Strategy to optimize and modernize our bases and stations. The intent of the Commandant's Infrastructure Reset Strategy is to provide Marine Corps installations that are data-driven power projection platforms, capable of adapting ready training venues to the evolving operating environment, while maintaining a high quality of life for our Marines and their families, all at an economically sustainable rate. We will maximize critical capabilities, minimize total life cycle cost, and better enable operating force readiness. Congressional support and continued funding of the Infrastructure Reset strategy will improve the operational readiness of the Marine Corps.

Ground Equipment Readiness

Our current ground equipment readiness continues to experience relatively high availability and serviceability rates. Due to the tremendous support of Congress, we have reset 99% of our ground equipment with 71% returned to the Operating Forces and strategic equipment programs. We project completion of reset in 2019. While this is a significant accomplishment, the previous fiscal environment prevented us from reconstituting and modernizing the force. The prioritization of current readiness came at the expense of equipment modernization.

Our most important ground legacy capabilities continue to age as modernization efforts fail to keep pace with our requirements. Further, the high op-tempo of the last 16 years of operations has strained our equipment set and has caused accelerated aging. Adequate maintenance funding has been stretched to maintain readiness. We have extended the service life of older platforms such as the Light Armored Vehicle (LAV) and Amphibious Assault Vehicle (AAV) well beyond expected lifecycle dates. Our AAVs are now more than four decades old. Additionally, the average age of LAV's within our inventory is 26 years. Fortunately, resourcing of depot and field level maintenance has kept pace with requirements over the last decade with both baseline and OCO funding. Consistent long-term funding will enable the necessary modernization investment and readiness funding to ensure our ground equipment is maintained in an optimal state of readiness.

Our Depot Production Plants at Albany and Barstow are an essential component to our ground equipment readiness strategy and have been instrumental in maintaining the readiness of our equipment. The Depot executes this capability by funding to 80 percent of the active and reserve level of the OSD requirement. To offset this deficiency, we have instituted a refined approach whereby the service identifies depot candidates using a conditions based methodology as well as advanced manufacturing concepts. As we look to the future, our ground equipment management efforts will align USMC material requirements with available resources. The Marine Corps has a plan to regain and sustain unit readiness; and with your continued support, we can achieve our readiness requirements.

Installation and Logistics Innovation

While we are focused on readiness for today, we are innovating to increase readiness in the future. The Marine Corps has a rich heritage of innovation spanning two world wars, Korea, Vietnam, Desert Storm, and OEF/OIF. Today our Marine Corps Warfighting Lab, Next Generation Logistics (NexLog), and Installation-Works (I-Works) organizations are at the cutting edge of military innovation. Our young Marines are at the forefront of this effort.

Our Marines are the world's military leaders in the realms of 3D printing tactical level unmanned aerial vehicles and using Additive Manufacturing (AM) to produce time and mission critical components. AM also provides Marines the ability to design and locally produce limited technical solutions to local tactical challenges within the timeframe required to address pressing battlefield needs. We have over (70) 3D printers throughout the Marine Corps, and we are fostering innovation through the establishment of "maker spaces" in the operating forces and supporting establishment. We are experimenting with a robust portfolio of unmanned aerial and surface platforms to increase lift and distribution capacity in order to meet the requirements of the modern battlefield. We are also aggressively exploring logistics information technology modernization efforts by focusing on leveraging the cloud environment to enable the assimilation of artificial intelligence. Artificial intelligence will accelerate a transition to a more anticipatory logistics posture based on real-time holistic awareness of equipment condition and supply status.

Additionally, we are innovating to achieve the next generation of installations. Tomorrow's Marine Corps installations will look much different than those in existence today. We are moving towards "smart cities" and advanced transportation technologies to reduce operating costs. We are modernizing how and where we train and the systems to support. Further, we are

advancing our protection capabilities and increasing our resiliency. We are creating an atmosphere of innovation to enhance our power projection capability and build a foundation for emerging technologies such as smart buildings, better traffic patterns, and more efficient service delivery. These improved processes, combined with integrated master planning will create installations which increase our overall training, readiness, and deployment capability.

Conclusion

On behalf of all of our Marines, Sailors - many deployed and in harm's way today - and their families and the civilians that support their service, we thank the Congress and this subcommittee for the opportunity to discuss the key readiness challenges your Marine Corps faces. A predictable and sustained budget that provides the means for our Corps to balance the demands of institutional readiness remains the essential requirement for the Marine Corps to meet its obligations as the Nation's ready force, now and into the future.

We have a comprehensive ground equipment readiness strategy and continued investment in our facilities will positively impact readiness, while reducing costly repairs and restoration costs in the future. With the support of the 115th Congress, we will move forward with our plan and vision to ensure your Marine Corps is organized, manned, trained and equipped to protect our fellow Americans, assure our allies, and deter and, when necessary, defeat our adversaries.

Lieutenant General Michael G. Dana
Deputy Commandant for Installations and Logistics

Lieutenant General Dana was promoted to his current rank and assumed the duties of the Deputy Commandant for Installations and Logistics in September 2015.

A native of New York, he graduated from Union College in Schenectady, New York and was commissioned a Second Lieutenant in June of 1982.

Lieutenant General Dana was assigned to 2nd Tank Battalion deploying with Battalion Landing Team 1/8 to the Mediterranean. He was assigned as the Combat Cargo Officer aboard USS DULUTH (LPD-6) and deployed to the Western Pacific with Battalion Landing Team 1/9.

Lieutenant General Dana served as the Logistics Officer for Battalion Landing Team 3/1 and as a Company Commander and Operations Officer with 1st Landing Support Battalion (Desert Storm/Operation Restore Hope). He served with the Standing Joint Task Force at Camp Lejeune, as an ISAF Plans Officer in the Former Republic of Yugoslavia, and as the II MEF G-4 Operations Officer. After a tour with MAWTS-1, Lieutenant General Dana commanded MWSS-371.

He was assigned to III MEF, serving as the G-7/3D MEB Chief of Staff, III MEF Deputy G-3, and OIC of the MARCENT Coordination Element at Camp Arifjan, Kuwait. Lieutenant General Dana commanded MWSSG-37, including a deployment to Iraq.

As a general officer he served as the Commanding General, 2d Marine Logistics Group, including a deployment to Afghanistan and as the Assistant Deputy Commandant for Logistics (LP), and most recently as the J-5 Plans Officer with PACOM.

Joint assignments include service with EUCOM, NORTHCOM and PACOM. Lieutenant General Dana is a graduate of Amphibious Warfare School, Marine Corps Command and Staff College, School of Advanced Warfighting and the Naval War College.

**WITNESS RESPONSES TO QUESTIONS ASKED DURING
THE HEARING**

MARCH 6, 2018

RESPONSE TO QUESTION SUBMITTED BY MR. SCOTT

General BEAUDREAU. In March 2008, the Marine Corps held a production capability competition consisting of seven offerors: five from the United States, one from Germany, and one from Belgium. The Marine Corps received and evaluated ten proposals and thirty Infantry Automatic Rifle (IAR) (known as the M27) product samples. After evaluations, the Marine Corps awarded multiple contracts to Colt (US), Fabrique Nationale Herstal (Belgium), and Heckler & Koch (Germany). After a second round of evaluations, the Marine Corps selected Heckler & Koch (H&K) for the initial production contract. During this contract, H&K delivered 6.5K rifles between 2008 and 2012 at a cost of approximately \$18M for the rifles and associated parts and equipment. For the competition and associated activities, the Marine Corps spent approximately an additional \$9M, for a total acquisition cost of approximately \$27M.

On February 10, 2017, the Marine Corps publically released a Request for Information (RFI) to determine industry's ability to supply every infantry squad member with the IAR. The RFI sought price estimates from industry for IAR equivalent rifles and ancillary components. H&K, Fabrique Nationale Herstal, and Colt (the original 2008 competitors), as well as five other American companies, responded.

On careful consideration and analysis of the time delay and monetary costs that would result from awarding to a new source, the Marine Corps made the decision to proceed with a sole source procurement from the original production source. Based on previous acquisitions and the historical data from the IAR program, if the Marine Corps were to seek a source other than H&K, we estimate a delay of at least four years to deliver the M27. Awarding to H&K will allow the Marine Corps to begin fielding this year, as we pursue the critical objective of increasing lethality of the Marine Air Ground Task Force Ground Combat Element, per the Marine Corps Operating Concept, our vision for Force 2025, and most recently, the challenges delineated in the National Defense Strategy. Given this situation, we assess that a several-year delay, which can be prevented by awarding to H&K, is unacceptable, as we seek pathways to more rapidly equip the next generation Marine Corps.

Further, based on the responses to our February 2017 RFI, the Marine Corps also determined that, due to repeated system testing and associated factors, awarding to a new source, even if commercially available, would result in substantial cost duplications that are unlikely recoverable through competition due to costs from duplicating key source selection tests and repurchasing 6,500 rifles.

The low-end estimate (\$5,792,483.00) assumes duplicating evaluation testing, operational testing, magazine and ammunition compatibility testing, program support, new equipment training and fielding, and repurchasing spare parts and gages, and calibration services. It assumes that a competition results in awarding to H&K, and a total field of four competitors, which is an unrealistic number, given that seven vendors responded to the RFI. The following table is a breakdown of the low-end estimate:

Category	Est. Cost
First Round Evaluation Testing	\$429,140
Test Article Weapons (10 each from 4 vendors)	\$136,070
Second Round Evaluation Testing	\$1,009,185
OT Test Article Weapons (24 each)	\$67,522
OT	\$1,850,095
Other Testing (Ammunition and Magazine Compatibility)	\$714,440

Category	Est. Cost
Spare Parts and Gages	\$582,396
Calibration Costs	\$91,348
Program Support	\$492,738
New Equipment Training/Fielding	\$419,549
TOTAL	\$5,792,483

The mid-range estimate (\$23,801,290.00) assumes the same duplication measures as the low estimate, but includes repurchasing 6,500 IARs. The high estimate (\$24,486,557.00) assumes the same duplication measures as the mid-range estimate, but includes costs associated with purchasing and testing new prototypes. These cost estimates reflect historical costs and contain no inflation adjustments.

The Request for Proposal was released on January 25, 2018 for a quantity of up to 15,000 rifles. The budget exhibit per the President's Budget FY19 provides for the first year procurement of 6,567 rifles. [See page 11.]

RESPONSE TO QUESTION SUBMITTED BY MR. GALLAGHER

General DANA. The Combat Endurance Test (CET) does not exist in the T&R Manual and was originally introduced as a tool to measure the retention of knowledge, skills, and fitness obtained at the BOC.

In November 2017, the Commandant of the Marine Corps (CMC) approved modifications to the IOC POI so as to reflect operational demands and to meet infantry officer production goals. He further guided that formally established T&R standards were not to change; emphasizing that the quality of instruction was not to be degraded.

The Combat Endurance Test (CET) reverting to a leadership assessment tool, as it was prior to 2012. First conducted in 1994, the CET served as an initial assessment tool. From 1994 to 2012, CET failures were permitted to continue training. From 2012 to 2017, the CET was modified to a pass/fail event and required for entry into the IOC POI. This change reflected operational demands during the 202K end strength surge. In November 2017, the CMC approved the removal of the CET's pass/fail requirement, thus reverting it back to a leadership assessment tool as originally intended.

The number of tactical movements (hikes) conducted by IOC students has not changed. Students still perform nine movements. Performance on each of these hikes still inform a student's overall evaluation.

However, the graduation requirement concerning hikes has been modified from passing five of the first six hikes, to now passing the first three hikes. The modification was made to more closely tie the hike graduation requirements to formal Training and Readiness standards.

Modifications were also made to the Weapons Platoon (125 pounds) and Weapons Company (150 pounds) hikes. These movements are not tied to T&R standards, but are used to move students to live fire ranges in which the weapons systems are employed. These hikes were previously conducted as administrative forced marches in which each student carries the full load in single files marching down the side of the road. Both movements are now conducted as tactical displacements where one section sets the weapons system up to notionally cover the movement of another section as it tactically bounds forward to better replicate the weapons employment in the operating forces. Each Marine is now also partnered with one other Marine to trade off carrying of the extra weapon components to better replicate the manner in which the weapons are carried in the operating forces. [See page 20.]

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MARCH 6, 2018

QUESTIONS SUBMITTED BY MRS. MURPHY

Mrs. MURPHY. I represent a district in central Florida that is home to Team Orlando, the premier hub for modeling, simulation, and training for all the services, and home to the Marine Corps' Training Systems Command or TRASYS.

I was encouraged to find strong support for simulation technology and immersive training systems in your written testimony. I want to ask all of you—how would you describe the value of advanced simulation training systems, and where would you want to make additional investments in simulation and training technology in the future?

Also, it seems that increased investment in the advanced simulation training systems may also require upgrades and enhancements to your force-on-force training systems to provide more realistic training. Would you find increased funding useful to modernize the Wireless Training Network and acquire additional I-TESS II Man-worn Detection Systems to provide instrumentation and simulation capabilities for battalion-level training at Twentynine Palms?

General BEAUDREAU, General McMILLIAN, and General DANA. Advanced simulation training systems have been extremely valuable in the training of our Marines, and we envision increased use of simulators and simulations as we prepare for future conflict.

Advanced simulation training systems allow Marines to overcome numerous challenges and limitations to training such as safety and environmental restrictions, resource and time constraints, and the inability to physically train in the unique environments to which they may be deployed.

Use of advanced simulation training systems also allows for detailed observation of Marines while performing a task, and facilitates productive after-action reviews and documentation of task performance. The ability to review and remediate performance, and to document proficiency is crucial in determining whether a task has been performed to standard so that we can ensure Marines are properly trained on mission essential tasks.

The use of advanced simulation training systems also allows for mastery of basic skills prior to live fire execution with multiple "sets & reps" resulting in more effective and efficient use of limited and costly ammunition, and the availability of aircraft sorties. Additionally, advanced simulation training systems allows Marines to execute potentially hazardous missions such as "danger close" supporting arms missions with simulated artillery and close air support with no risk to safety.

We would seek additional investments in a wide range of advanced simulation and training technologies as we modernize our force and prepare for future conflict.

As the Nation's forward deployed expeditionary force in readiness, tasked to be "most ready, when the Nation is least ready," our mission, and the training it requires is unique among the armed forces.

While our current training systems were adequate for past conflicts, the 21st Century battlefield will be more dynamic and lethal than in the past. Multi-domain battle with next-generation weapons and advanced technology fielded by near-peer enemies will challenge every aspect of our warfighting capability. As we modernize our doctrine, organization, and equipment we must also see to the preparation of our Marines for the rigors of the modern battlefield. Advanced synthetic simulation training systems will afford us the ability to replicate the complex and dynamic nature of the modern battlefield to a high degree of fidelity, exposing our Marines and leaders to the full gamut of threats, environments, and challenges they must overcome in future battle. The systems and technologies required to provide this vital training capability will require significant, programmed, and sustained investment over time in order to be successful. The combat training and readiness of the individual Marine are top among the Corps' priorities, and these are the systems required to accomplish the task.

In the near term, PMC funding for training devices and simulators for our current inventory of equipment (e.g., the Amphibious Assault Vehicle (AAV), Light Armored Vehicle (LAV), small arms and crew served weapons, and other systems) is required in order to support ongoing training for units preparing to deploy in the near future. Many of these systems are nearing their life expectancy, but we must refresh hard-

ware and software in order to maintain the ability to train Marines. Some of these systems are used as gateways to live fire training events, meaning the simulators and simulations are used to ensure target acquisition and firing skills are sufficient to ensure safety and reduce the cost of live fire training. Our current training systems were designed as stand-alone systems due to the fact that at the time the technology was not mature enough to support our networking requirements. Capability refresh is needed in order to provide LVC-TE interoperability between current and future systems to increase the capability for our units to train to standard in accordance with our maneuver warfare doctrine.

Future requirements further necessitate our ability to link training systems in order to overcome many of the obstacles to training previously mentioned. To address these training challenges the Marine Corps has developed the Marine Corps Synthetic Training Environment (MCSTE) concept, and is executing a disciplined, planned approach for acquiring an enterprise live, virtual, constructive training capability. In October 2017 we began a Material Solution Analysis as the first step in building an LVC-TE Program of Record. We are teaming with the Johns Hopkins University Applied Physics Lab in order to conduct an Alternative of Analysis (AOA) to determine the best approach for a developing an acquisition strategy to ensure that future advanced training systems are integrated and interoperable as an enterprise System of Systems. Additionally, we are partnering with the U.S. Army's Synthetic Training Environment Cross Functional Team to enable "Best of Breed" opportunities with each of our ongoing tactical demonstrations. The resulting LVC-TE will provide a persistent, easy to use, and affordable distributed training capability that will enable our warfighters to fight and win in the future.

Would you find increased funding useful to modernize the Wireless Training Network and acquire additional I-TESS II Man-worn detection systems to provide instrumentation and simulation capabilities for battalion-level training at Twentynine Palms?

General BEAUDREAULT, General MCMILLIAN, and General DANA. Yes, increased funding would allow us to pursue our MCSTE capabilities at an accelerated pace. Conceptually the MCSTE would encompass the entirety of our live, virtual, and constructive training capabilities from live fire ranges and training areas, to fully immersive training environments, and synthetic training environments such as simulators and simulations that could be seamlessly connected over secure wireless networks.

In order to support the MCSTE concept the Marine Corps has identified the need to implement a wireless training network that would cover the boundaries of all of our training ranges. The wireless training network needs to support distributed training simulations and exercises, and be able to provide position location and identification, range control and safety constraints, provide exercise control, replicate both friendly and enemy command and control systems, as well as cyber and information warfare capabilities, and provide for high fidelity after action reviews. The wireless training network also needs to be able to connect distributed forces participating in an exercise from geographically distant locations. The wireless training network also needs to provide Marines with the ability to access and retrieve range information, map data, planning products, doctrinal publications, training and education materials on approved devices.

Our current Force on Force Training Systems (FOFTS) program includes the Instrumented Tactical Engagement Simulation System (ITESS). While ITESS-II meets our near term requirements, we are upgrading our Force on Force training capabilities through the procurement of ITESS-III which will provide the next generation of infantry force on force training capability. Instrumentation of combat vehicles will be provided by the Combat Vehicle-Tactical Engagement Simulation System (CV-TESS). The Special Effects Small Arms Marking Systems (SESAMS), which is a "paintball-like" capability, provides a more intense force on force experience for close quarters combat training. Additionally, the Marine Corps will field a new augmented reality fire support training capability known as the "Mobile Fire Support Trainer" (MFST).

While we are being adequately funded for the requisite sets of ITESS, additional funding would support our further research into the range-extended wireless network to support our robust training requirements, as well as updating and integrating our FOFTS to provide all of the simulation capabilities we seek, with AAR capabilities into a comprehensive training system.

Mrs. MURPHY. Lieutenant General Beaudreault, the Marine Operation Concept states that the Marine Corps must "develop electronic warfare fires via a wide variety of MAGTF ground and air platforms." The creation of electronic warfare companies within the MEF information group encouraged me, but I am concerned about the lack of equipment necessary to make these units combat effective.

Whereas our adversaries Russia and China have extensive, long-range, and very capable air and ground-based jammers designed to target broad swaths of the electromagnetic spectrum and are actively integrating this electronic warfare capability into their maneuver units, the Marine Corps has only the CESAS II (Communication Emitter Sensing and Attacking System), a small vehicle-mounted communications jammer with limited range.

What is the Marine Corps doing to bridge this capabilities gap and give our Marines the capabilities they need to succeed on the modern battlefield against a peer or near peer adversary?

General BEAUDREAULT. The Marine Corps' effort to close technology gaps and improve operational capability has been ongoing for several years now. Jamming capability is but one part of the broader MAGTF Electronic Warfare (EW) modernization effort. We are well postured to take advantage of EW technological developments and are rapidly increasing capacity (personnel and materiel) in this area. The MAGTF EW effort seeks an integrated system of distributed, platform-agnostic EW capabilities, both manned and unmanned. These assets will be fully networked and collaborative, and will provide the MAGTF the ability to achieve electromagnetic spectrum (EMS) superiority. MAGTF EW will unite air, ground, and space-based technologies to ensure collaborative, efficient, and effective operations in the electromagnetic operating environment (EMOE).

Specific to ground-based jamming, the Marine Corps currently employs the Communication Emitter Sensing and Attacking System Two (CESAS II) as its sole, persistent, vehicle-based, ground mobile Electronic Attack asset. This system provides the commander the ability to detect, deny, and disrupt threat communications. CESAS II is supplemented by the Radio Reconnaissance Equipment Man-Packable Electronic Attack System (RREMPEAS), Modi (which provides on-the-move counter-UAS capability), Counter Radio-Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW) Vehicle Receiver/Jammer (CVRJ) (providing vehicle-based Counter RCIED) capabilities, and Thor III, providing man-packable C-RCIED capabilities. We are in the process of purchasing 800 Modi II systems to replace our aging Thor III systems.

As Marines typically fight within the Marine air-ground task force construct, it's necessary to mention the Intrepid Tiger Two (IT-II) family of systems. IT-II provides airborne electronic warfare support and electronic attack from a variety of aircraft including AV-8B Harriers and UH-1Y Venoms. Plans are underway to integrate current and future EW technology into additional Marine Corps aircraft.

For the future, we are initiating a new MAGTF Ground EW Family of Systems program that will enable a wider variety of advanced mission sets comprising Attack, Support, and Protect (ASP), to include directed energy weapons. This program will be the cornerstone of Marine Corps ground EW, supporting units down to the Squad level, enabling electromagnetic spectrum (EMS) superiority in the future operating environment. It will provide electronic attack (EA) against Command and Control systems, communication networks, radar, and adversary Position, Navigation, and Timing (PNT) in addition to supporting Electro-Magnetic Cyber Attack and Military Information Support Operations. ASP will provide an umbrella of protection: C-RCIED; counter-unmanned aircraft system; counter command, control, communications, computers, intelligence, surveillance, and reconnaissance/targeting; and counter-proximity munitions in addition to electronic awareness, indications & warning, and emitter homing for kinetic and non-kinetic targeting. This new start initiative will replace legacy CREW systems.

Lastly, in support of these programmatic efforts, we are currently conducting a MAGTF EW working group. This effort will ensure that capability developers (requirements and resource sponsors) and Marine Corps Systems Command are sufficiently informed by Marine Corps Operating Force representatives, and the Intelligence and Science & Technology communities to ensure that investments will adequately address current, emerging, and future threats.

We would be happy to follow up with you and your staff in a classified setting for a more thorough discussion on the details of the MAGTF EW effort to include ground, aviation, and space-based technologies.

Mrs. MURPHY. Lieutenant General Beaudreault, the National Defense Strategy places an emphasis on "[r]ecruiting, developing, and retaining a high-quality work force," a point with which I thoroughly agree and one that was echoed in your written testimony. However, in 2015, two authors published a paper showing a "statistically significant and quantitatively meaningful decline in the intelligence of Marine Officers from 1980 to 2014." What has the Marine Corps done since then and what is it doing now to ensure the officers it commissions are of the highest quality?

General BEAUDREAULT. The Marine Corps Recruiting Command maintains and upholds the challenging standards of officer recruitment through a number of proc-

esses that ensure only the highest quality of character and intellect are commissioned as a Marine Officer. Over the past five years, the quality indicators have remained well above the minimum standards regarding intelligence, physical fitness, and academic potential. The process to become an officer is, and will continue to be, an arduous and difficult endeavor that requires an interested candidate to pass a medical qualification, complete a thorough application, be selected by a board of Marine Officers, and successfully complete a summer at Officer Candidate School, one of the most challenging entry level schools in the military. Also, there are service academies and Naval Reserve Officer Training Corps units who devote four years to the development of future Marine Officers prior to their graduation from university and commissioning. Regardless of their commissioning source, every Marine Officer must be selected on a competitive selection board that is seated by Majors and above. Although the minimum requirement to become an Officer is a 2.0 Grade Point Average (GPA), 235 Physical Fitness Test (PFT), 22 American College Test (ACT), 1000 Scholastic Aptitude Test (SAT), and 74 Armed Forces Qualification Test (AFQT), the average quality indicators over the past five years have been well above those minimums and will continue to improve.

FY13–FY17 Accession Quality Standards

GPA Average	PFT Average	ACT Average	SAT Average	AFQT Average
3.2	272	26	1182	85

