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HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2020

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON READINESS HEARING

ON

FISCAL YEAR 2020 BUDGET REQUEST FOR MILITARY CONSTRUCTION, ENERGY, AND ENVIRONMENTAL PROGRAMS

HEARING HELD
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FISCAL YEAR 2020 BUDGET REQUEST FOR MILITARY CONSTRUCTION, ENERGY, AND ENVIRONMENTAL PROGRAMS

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON READINESS,
Washington, DC, Wednesday, May 1, 2019.

The subcommittee met, pursuant to call, at 2:35 p.m., in room 2212, Rayburn House Office Building, Hon. John Garamendi (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. JOHN GARAMENDI, A REPRESENTATIVE FROM CALIFORNIA, CHAIRMAN, SUBCOMMITTEE ON READINESS

Mr. GARAMENDI. The committee will come to order.

For the information for everybody that might be interested, votes ended just a few moments ago and I suspect our colleagues will be drifting in as they complete it.

Also on the floor, probably right now, is some commemorations and condolences for the lady who had my seat, Ellen Tauscher. So we all mourn her loss.

Let's see here. So today's witnesses oversee a diverse set of programs that are all of great interest to this committee, including the privatized military family housing, military construction, installation resiliency, disaster recovery, environmental programs, and planning for climate change.

Our installations are the backbone of the services and are critical for readiness. They are the place where we train the force, maintain weapons and equipment, and the platform from which we project power. Our installations support our military families and provide a safe place for our forces when they come back after deployment so that they can recover personally and reconstitute as a unit.

In addition, the force evolves—as the force evolves, our installations increasingly house critical missions that are conducted entirely from home installations. One subcommittee—one issue our subcommittee has been following for the past few months is the poorly managed privatized military housing program. If the services hope to recruit and retain the best candidates, they must ensure that they provide high-quality places for our service members and families to live.

When barracks and dormitories fall into disrepair and create [substandard] living spaces for service members, it directly contributes to poor retention. Likewise, when the services fail to take care of military families, retention also suffers.

This committee will continue to demand that the services and the Department of Defense improve their oversight of privatized military family housing. Until this committee is satisfied that all of our military families live in high-quality homes, free from hazards to their health and their safety, and that they are treated with respect and dignity by the private partners and military housing offices, we will not step back. We will continue to keep a close watch over the privatized housing programs and hold both the military and the private companies accountable.

Despite their importance, installations have all too often been neglected as funding has gone to other priorities. This year's budget requests $13.9 billion for military construction. This number does not include the additional $7.2 billion in funds that are said to be taken from military construction to build the border wall, and an additional $2 billion for disaster recovery.

That $7.2 billion that the President wants for his border wall would go a very, very long ways towards getting the installations that have been ravaged by the hurricanes back up and running. And yet less than a third of the amount of money, that $7.2 billion, has been requested thus far for disaster recovery. That is a problem.

The budget request includes $12 billion for facilities sustainment, restoration, and modernization. Last year, this committee was told that $116 billion of unfunded facility maintenance backlog and that 32 percent of the Department's facilities were in poor or failing conditions. I look forward to hearing what progress has been made in addressing that backlog in the intervening year and how this budget request will help address that challenge.

The chronicle of underfunded facilities has diminished readiness in many, many ways. Deferral of routine, periodic maintenance and building upgrades ultimately increases the lifecycle cost of a facility.

Further, in the last year, we learned that the old and undermaintained buildings failed during the Hurricanes Michael and Florence. They failed at a much higher rate than the well-maintained newer buildings and therefore added millions and millions of dollars, if not billions of dollars, to the total disaster recovery cost. Maybe there is a lesson here about repairing your work and rebuilding your roofs on a regular basis.

We have just begun to address the cost of recovering from these storms. During Mr. Lamborn and my recent trip to survey the damage at the Marine Corps Air Station Cherry Point and Camp Lejeune in North Carolina, I learned that $1 billion is needed now to supplement the fiscal year 2019 operations and the maintenance funds that were used to conduct immediate response and other near-term costs to keep these installations and their mission capable.

And yet instead of reprogramming funds for disaster recovery, this administration decided to reprogram $1 billion of unused Army Corps—Army personnel money to build a border fence.

The question of choices and priorities is obvious to us. Do we rebuild our military bases so that they can function? Do we rebuild the main base for the Marine Corps on the East Coast, or do we

use our soldiers to put concertina wire along the southern border? A choice was made. In my view, a very, very bad choice.

We are going to have to face the reality here that we are going to have to find money to replace critical money needed for infrastructure on these bases.

So Camp Lejeune, Tyndall Air Force Base, and Offutt Air Force Bases are often discussed, but they are by no means the only installations impacted by increasingly frequent extreme weather caused climate—weather events that I believe are caused by climate change.

It is essential for the Department of Defense to systematically plan for these extreme storms, for events that put these bases at risks from flooding and wildfires and droughts and earthquakes, whatever the risk happens to be, at a specific installation. This committee will want to know what the military is doing to address that particular vulnerability and what is the approach to build resiliency into these bases.

So we have got many things to look at here. We have—departmentwide, there are over 3,000 defense environmental restoration programs, otherwise known as cleaning up yesterday's mess. We find that all across the Nation. We know that many members of this committee are concerned about these problems, particularly about the problems that have been called by—have been caused by PFOAs [perfluorooctanoic acid], otherwise known as firefighting foam, that has contaminated drinking water and aquifers, not only on the installations, but sometimes on surrounding communities.

So with that, we have our work cut out for us.

My ranking member and good friend Doug Lamborn, the microphone is yours. I yield to you.

[The prepared statement of Mr. Garamendi can be found in the Appendix on page 39.]

STATEMENT OF HON. DOUG LAMBORN, A REPRESENTATIVE FROM COLORADO, RANKING MEMBER, SUBCOMMITTEE ON READINESS

Mr. LAMBORN. Thank you, Mr. Chairman. And thank you for calling this important hearing.

I welcome our witnesses, all familiar faces except for one, from our most recent hearing on military family housing programs. Though that hearing was less than a month ago, we would be glad to hear of any progress that the witnesses are able to share.

Today we focus on all installation matters. While the broader installation portfolio hasn't achieved the notoriety of the housing program, it also needs improvement. Still, I am encouraged that all services have increased funding for facilities sustainment, restoration, and modernization, FSRM, in this year's budget request.

However, after years of underfunding FSRM accounts, we are faced with a considerable backlog of critical FSRM work, with almost a third of DOD [Department of Defense] facilities in poor or failing condition. I hope that the military services will be able to sustain higher funding in the out-years.

We also recognize that the Marine Corps and Air Force, in particular, are struggling to recover from the damage caused by Hurricanes Florence and Michael, as has been noted. The chairman and

I toured Camp Lejeune and Cherry Point last month, and we saw firsthand the extent of the damage. We understand that neither service has programmed funding to address these challenges, and we are doing everything possible to provide the necessary disaster recovery funds.

We also recognize the Department is addressing contamination to groundwater caused by firefighting foam containing perfluorinated compounds. All of us want safe drinking water, of course. At the same time, we also expect that firefighters will be able to extinguish fires quickly and safely.

I encourage the Department to prioritize research into effective firefighting chemicals that are free from contaminants, and encourage you to continue working closely with the affected military communities to assure safe drinking water.

Thank you, Mr. Chairman, and I yield back.

[The prepared statement of Mr. Lamborn can be found in the Appendix on page 41.]

Mr. GARAMENDI. Thank you, Mr. Lamborn. We obviously share many of the same concerns.

I think—I was going to pass this to one of our committee members who has not yet arrived, but I do want to get on to the military housing and get on the record what the Department of Defense has done, and then drill down with each of the services as to where they are with it.

And so why don't we start with Mr. McMahon, if you could bring us up to date on the specific things that the Department has done to deal with the military housing issue.

Secretary MCMAHON. Mr. Chairman, thank you very much for the question and the opportunity to be before you and the subcommittee on a variety of issues. Obviously one that is important to you, to the ranking member, and all of the members, is where we are with privatized housing.

A reminder that that represents housing for only 30 percent of our military members; 70 percent are living out in the community. And as we have this conversation, it becomes tremendously important for us to underscore that, not only do we need to think about this 30 percent, but we need to expand to include the 70 percent and ensure they are taken care of as well.

Since last we spoke, sir, what I would tell you is we continue to focus on the same lines of effort that we discussed previously. First and foremost, what we want to do is ensure that there is a unified bill of rights, that we clearly articulate to our family members and our military members what the expectations are when they come into a privatized housing.

Where we are literally today—and we have a battle rhythm of meeting weekly to ensure we are taking the appropriate actions as an enterprise within the Department to do the things that we need to do—we have a draft of that bill of rights that we have shared with the Congress. We have gotten input from our privatized partners. We have gotten inputs from our MSOs [military service organizations] and VSOs [veterans service organizations], those organizations that represent both our military members and our veterans organizations.

And we hope in the next 10 to 14 days of being able to share that draft bill of rights with our military families, utilizing a tool that we would push out to them, get their specific feedback to ensure that we have not missed anything, and then get that feedback back in collectively so that we can move forward, we will have a published bill of rights that clearly articulates where we are.

So that is—that is our 2-meter target. That is the thing we are most focused on.

In addition, we continue to work with our privatized partners and within the services and the Office of Secretary of Defense to clearly define what a single common lease might look like to ensure that not only do we talk about these elements of the bill of rights, but also ensure that they are incorporated within the lease process that we have.

In addition, we continue to look at how we best incentivize the proper behavior, that is through both the proper agreements with our privatized members, and we are doing that service by service, company by company. The other part of that is ensuring that we have adequate oversight.

First of all, in terms of oversight, what I would tell you is that each of the services have reenergized the training and education that their military leaders get to ensure that they properly understand what those roles are.

In addition, each of the services are looking at how they reinvigorate their housing offices to ensure that, at the end of the day, that we are providing oversight there, and as part of that, ensuring that we have an advocate for our military families on the installation whose sole purpose is to represent what their needs and answer their questions, and feel like they have a voice in this process.

It is easy for our senior members to feel comfortable with this, as they have lived there for many years; for a young Marine or soldier who is 22 or 23 years old with a 19-year-old spouse, much less, so we have got to make sure that this gets to them as much as it does to anyone else.

Let me stop there, sir, and see if that generated any questions or if my partners want to add anything at this point.

Mr. GARAMENDI. Let's go to your partners and see if they want to add anything to that, and then we will—there may be some questions that the committee would like to ask on this issue.

Secretary BEEHLER. Sir, on behalf of the Army, certainly Mr. McMahon covered a lot of the points that certainly the Army has—is following up on and engaged. Just to add a few specifics, we are scheduled to add 114 additional hires in our installation housing. So far, we have hired 81 of those and hope to hire the remainder by the end of this month.

We have an inspector general assessment that has been going on to look at all sorts of issues across the privatized housing aspects of the Army, including trying to ferret out any reports of reprisals. And that report will be completed the middle of May, and obviously, the Army senior leadership will be getting that report and the recommendations and making steps to follow up with that regard.

We know that on the Army installations, the privatized housing partners have also agreed to hire additional staff in their housing

portions to be more responsive. The figure I have seen is several hundred, and they have hired a good chunk of that.

We pulled back any consideration of the quarterly incentive fees to the headquarters where we are reviewing the progress that is being made. And we are not going to, you know, make any decision on the incentive fees until we have thorough review of how the privatized partners have been doing being responsive, for instance, to work orders.

In that regard, the—with working closely with the private companies, they—the companies have launched with their review and oversight web-based portals to allow residents to submit work orders in the most expeditious fashion and then to track the progress all the way through, similar to like an Uber type of situation, concluding with once the work order is completed, the opportunity of a 30-second or 1-minute survey, whether they received satisfaction or not and additional comments.

This information is available to all levels, all the participants, meaning the residents, obviously the companies, the garrison commanders, and the Army headquarters. So it will be a very effective measure of performance and strong accountability.

We also have emphasized that the chain of command is the supporting mechanism, one of the supporting mechanisms, that the soldiers and their families should turn to in case they are having any kind of difficulty, and this has been conveyed to the residents and emphasized to the garrison commanders to make sure that they carry the message up and down literally the chain of command.

We have worked with our partners to create better metrics for, once again, overarching accountability. We have put forward an operational environmental health registry with our hope and our effort that will allow those residents who feel that they are having environment or health-related issues to be able to call into this registry and lodge their complaints so that our health service can keep track, build a database, provide advice on how to proceed in this regard, and more to come on that as that is further developed.

We also are seriously considering a variety of advocacy for the residents. One that has already been in place and very effective out in our Army facility in Monterey is what we call a mayority or a mayor, somebody who is selected from the residents, in other words is a resident, to help residents, to be an effective advocate for them. And in the surveys that we have seen that that has worked extremely well, and so therefore we are seriously considering doing that across all the 49 installations.

So, with that, I will stop and let my service colleagues talk.

Mr. GARAMENDI. Mr. Mellon.

Mr. MELLON. Mr. Chairman, on behalf of the Department of the Navy, I am going to complement what Mr. Beehler and Mr. McMahon have talked about. As Mr. McMahon started this off, we do—we meet weekly, and part of the benefit of that, I think, is sharing lessons learned and being able to accelerate off of each other's initiatives as they move forward.

So you may hear slightly different terminology, but they are often underpinned in exactly the same kinds of initiatives. So along those lines, the Department of the Navy has actually expanded the

scope of what we are looking at and gone beyond PPV [Public Private Venture] housing. We are doing all housing for military and service members.

And so for PPV for our Navy, they are 100 percent done with contact. The Marine Corps isn't tracking it exactly the same because they are tracking for all housing. They are over 99 percent for contact. On the Navy side, they are 100 percent complete with their in-home visits. The Marine Corps has already completed over 7,400 in-home visits for all types of housing.

So well on our way to getting a good hands-on understanding of where the residents are, where the issues are, and being able to correlate those into actions as we interact with our partners.

One of the biggest feedback mechanisms we are getting are—the biggest issue is the quality of the repairs they are doing. Sometimes it is a short-term repair, but the amount of timespan before they come back to execute that permanent repair is excessive. There has been confusion about whether it is a short-term repair or that is the long-term repair.

So in an effort to try and get better clarity on that, we have also got weekly metrics that are provided to the base commanders from the partners related to all of the open issues from their residents, what the status of that resolution is. And all of that data and information, just as Mr. Beehler just said, is available to those residents.

Our partners are at various stages of having electronic access to that data and information for the residents, whether it is through an app or some other means. They are at different points of implementation, but they are all working towards that same end.

As well, we have, through our medical community, established a registry and a hot line that we are currently in process of staffing that gives all the residents a direct number and a direct ability to lodge specific health issues. But we have also built it such that it links back with any health records for those families or service members. So we have got a closed-loop system so we don't miss something by having something in two different mechanisms.

Lastly, we have got two things associated with housing and housing personnel. We are working to try and free up as many resources as we can from a personnel perspective to add to base housing to augment that. We have added our requirement to the unfunded priority list for both Navy and Marine Corps in 2020.

And then the last piece, we have got a full naval audit in process that is due to wrap up towards the end of May. So I would suspect end of May, beginning of June to have the initial results back from the audit, predominantly focused on work orders, work orders processing, and the business approach for how all that is incentivized and do we need to do some things from that perspective.

And with that, I will turn it over to the Air Force.

Mr. GARAMENDI. Thank you.

Mr. Henderson.

Secretary HENDERSON. Thank you, Mr. Chairman.

First of all, I espouse the comments of my service colleagues here since we are working together on a lot of these things with—as the services and with our project owners since we share a lot of the same project owners also. And that is essentially to provide those—

in those areas where we should provide a consistent service to our residents.

I will just highlight a couple things that the Air Force is doing differently. First of all, in addition to what was—has just been mentioned, we are also doing an audit for our resident energy conservation program to ensure that the billing and the metering is being done correctly there. We had a few indicators that—we have some anomalies there, so we are going to go back and just check and make sure that we are in good stead there.

We have also—since the last time we talked, we have completed our inspector general assessment. Most of those findings were internal to the Air Force in how we internally do business and pass information through the chain of command and are linked in with housing, and then we are implementing those findings now. We have taken the time to back-brief the professional staff members of the committees on that.

Additionally, we are still continuing to work along 5 lines of effort through 25 objectives and literally hundreds of tasks now that we have incorporated those IG [inspector general] findings in there. We have completed 3,100 fixes of the 4,700 deficiencies we found during our commanders' walkthroughs.

And we are in the process of linking in our medical community to ensure that any health issues that are addressed in our housing, any housing or any of our facilities, if it is—that it is—if it is linked to the facility in any way, that the medical community is linked into that.

And then finally, I would just mention that we are getting after the personnel piece of this also. We have the unfunded request in to ensure that we can—for fiscal year 2020 to fund advocates and augmented personnel and manning in our housing management offices.

Secretary MCMAHON. Mr. Chairman, I neglected in one item, if I could, to add to this conversation, which I think is worthy of mention.

Mr. GARAMENDI. Certainly. Go ahead.

Secretary MCMAHON. And that is one of the gaps that we saw early on in this relationship is a lack of understanding, in some cases, of where our medical providers ought to go and how they ought to engage if a family came and said, I believe my child may have been exposed to lead, as an example.

And so we have created an integrated product team between my staff and the Department of Defense health providers to ensure that we can reeducate, and have clearly articulated to our health providers what it is that they ought to do, where they ought to engage, if, in fact, this type of issue is identified, to make sure that no one falls through the cracks or even perceives to have fallen through the cracks.

Thank you, sir, for allowing me to add that.

Mr. GARAMENDI. Thank you.

As I promised in our previous hearings, we are going to keep coming back to this. I am pleased that you are making progress on all of the issues.

I didn't hear you mention two that were on our mind here, one is the lease that is signed by the family and the appropriateness

of that lease, at least compared to various State laws and city and county laws with regard to tenant leases. I don't want to go into it here, but I want to make sure that that is under review.

And finally, the contract itself between the Department of Defense and the various private providers. I understand those contracts have been requested, that they are under review by the legal teams within the Department. We want to make sure that they are a well-balanced contract going forward.

And with that, I am going to ask if——

Yes, Mr. Lamborn, I know you have some comments on this, so, please.

Mr. LAMBORN. Well, thank you.

Before we go on to other questions and issues, just a clarification on the housing issue. Mr. Mellon, I think I heard you say that the Navy is conducting 7,400 housing visits? And you are working on the results of that, or is that a work in progress, or do you have that—those results?

Mr. MELLON. No, sir. So as a result of the contacts, so the 100 percent contact, as part of that, members—service members were offered to have the command and the PPV provider visit their house to actually look at whatever the condition or issue was. Of the people that we contacted, 7,400-ish requested visits.

Mr. LAMBORN. Okay.

Mr. MELLON. All I am saying is those visits have been accomplished. The issues are documented and currently being rectified and remediated in terms of whatever the issue was. I was just trying to say that for those that have asked for visits from the command, those command visits are actually occurring.

Mr. LAMBORN. Okay. Do you have metrics, quantifiable results that you can provide this committee on how——

Mr. MELLON. Yes, sir, I can take that—I don't have that data right in front of me, but I will take that for the record.

[The information referred to was not available at the time of printing.]

Mr. LAMBORN. We would love to see that.

Mr. MELLON. Yes, sir.

Mr. LAMBORN. And then for the Air Force, Mr. Henderson, you said 3,100 out of 4,700 work orders have been addressed. Did I hear that correctly?

Secretary HENDERSON. That is correct. Those were the work orders that were generated from our commanders' visits. We are following up on each one of those. We are micromanaging that, so to speak.

The other 1,300 that are left—or sorry, I think it is about 1,300 that are left, those are either material issues. We have a plan for them, but if it has to do with replacing a roof or something that has more of a long-term item, we are keeping those on the tracking mechanism.

Mr. LAMBORN. Okay. And if you could give us a more defined report on the status of that as you wrap that up, we would sure appreciate that also.

Secretary HENDERSON. Absolutely.

Mr. LAMBORN. Thank you. That is all I had at this time, Mr. Chairman.

Mr. GARAMENDI. Thank you, Mr. Lamborn.

I am going to do something a little different here than the normal order of business. I know that there is a lot of concern among the members of the committee about this particular issue. And since we are on it, let's stay on it. And so I am going to let us—each of the members, if they have a single question that they would like to put forth, it can be a long question, and let's see if we can get this issue out there.

[Cell phone ringing.]

Mr. GARAMENDI. Ah, yes, does anybody need their credit card squared away? Could you turn that thing off?

You know, Mr. Lamborn, if we don't do anything else, we have got to do something about all these sales calls that we get.

Ms. SLOTKIN. I have a bill.

Mr. GARAMENDI. You have a bill? Thank God you have got a bill. Leave it to the freshmen to solve a problem.

So if you have—let's stay on this housing, offering all the members. We will start—I see we have one on our side. I am going to go down by the seniority around, and if you have a question, let's get it out there. And—or if you have an issue and you want to put it on the table, now is your chance to do it.

Mr. LAMBORN. And then after that we will address other issues?

Mr. GARAMENDI. Yeah. I will go back and forth. I do want to get to the other issues. There is a whole host of them.

We will start here and then I will go back and forth by order of seniority.

Okay. Austin.

Mr. SCOTT. Mr. Chairman, you have already brought this up. I again want to just bring forward the language in the lease. It is not a square deal for our military families to suggest that they should pay the legal fees of a huge corporation if arbitration or mediation does not go in favor of the military family, and that is a key issue for me in making sure that we resolve that. So it is a square deal and a fair fight, if you will, for our military families.

Secretary MCMAHON. Congressman Scott, we acknowledge that, we concur, and part of this is to get to a position that we won't have to go to mediation, and that if we do so, we can do it in a way that does not drive a cost to the member.

Mr. GARAMENDI. Okay. Ms. Escobar.

Oh, Ms. Horn.

Ms. HORN. I just want to echo my colleague from Alabama's sentiments about that and——

Mr. SCOTT. Georgia.

Ms. HORN. Georgia? God, sorry. I am so sorry. I am so sorry.

Mr. BROOKS. You promoted him.

Ms. HORN. Okay. Now I am never going to live that down. I will come visit in Georgia. Good bipartisanship, right. Georgia. I apologize.

So now I am going to, you know—so a couple of things. When I was back over the course of the recess period, we met with some of the families and the concerns about not only the lease provisions, but also what was going to be available to them, the remedies in the tenant's bill of rights and I think that lease provision and the provisions in there.

I would like to hear what top-line provisions that you are going to—that you are working on to ensure that the individuals are—that our military members, our service members are being protected, as well as the followup, which I think you have already addressed.

Secretary MCMAHON. Congresswoman, if I could go to our draft bill of rights, and rather than articulate, I will simply read what I think is getting at the heart of the matter of where we are in the draft right now.

And that is, right now, as it states, resolution in favor of the resident may include a reduction in rent or an amount to be reimbursed or credited to the resident. And that is to ensure that, as in any situation where you are improperly treated, that there is some sort of remediation to you financially that you can show that we are looking forward—looking to you that we have given you something for the pain that you have endured. If that—ma'am, does that get to your question?

Ms. HORN. I think it does. I just wanted to get the top line, but I think—I met with a number of families that are still experiencing discomfort about the way that everything is progressing, and I think that this will help, but also the provisions in the lease. I would be happy to talk to you about that more.

But I think the protections, putting those in place, and also hearing from the base commanders about the need, and I know this is something we will be addressing, for sufficient personnel to do the oversight of these companies.

Secretary MCMAHON. And I think we all feel very strongly that we want to be able to get the draft bill of rights out to our military families who are living on base so they understand exactly what we are attempting to do and they have the opportunity to comment on that. And that is important to all of us, and the goal is to do that sooner rather than later.

Mr. GARAMENDI. Keeping in mind that we have many, many other things to go forward with, I want to give each member an opportunity to ask a question, be as quick as you can.

Mr. Brooks, you are up next.

Mr. BROOKS. No questions.

Mr. GARAMENDI. Pass?

Ms. Escobar.

Ms. ESCOBAR. On this subject or any subject?

Mr. GARAMENDI. Housing. If we could stay on housing here.

Down the line? Looks like Ms. Haaland.

Crow.

Mr. CROW. I had something.

Mr. GARAMENDI. Oh, sorry, Ms. Haaland. Mr. Crow has a question.

Mr. CROW. Thank you, Mr. Chairman.

You know, I know with the housing issues and dealing with a contractor, sometimes one of the most difficult things is actually just taking time off of work to meet people for inspections, to meet contractors. You know, my wife and I both work, and that is a very hard thing coordinating our schedules sometimes.

So what are you doing to ensure that the service member is being given proper time off of his or her duties to make sure they

are present during the commanders' inspections, that they are able to meet contractors, and support his or her spouse during these visits?

Mr. MELLON. I will go ahead, and I will start from a Navy perspective. All of the visits right now are at the timetable and schedule of the resident. So whether it is a home inspection, whether it is a move-in inspection, whether it is a maintenance event that needs to occur, regardless of what that—whatever that is, it is being driven by the resident.

From a getting off of not having to report for duty and those kinds of activities, that is being coordinated with their command structure to ensure that the appropriate actions are being taken and that they are being given the appropriate time——

Mr. CROW. I guess my question—I will just push back a little bit on that. I guess my question is a little bit different. I understand coordination with the command structure, but I think we all could agree that in practice that is hard, right.

And so does that, A, include—you know, at the convenience of the resident, does that include evening and weekend times? Are we opening up kind of off-duty hours, evening and weekend times to make that available so it is at the convenience of the residents?

Mr. MELLON. Again, I think it varies, I would say right now, between our partners, PPV partners and whatever constructs they have with their contractors that perform those maintenance functions. I would say from a management and leadership perspective, I absolutely believe we are accommodating evening and weekend visits, both from a command structure and from a partnership perspective.

I think the remediation of specific maintenance events may be an issue by issue, and it may have a lot to do with whatever that subcontractor's agreement is with that partnership. Those are all some of the things we are looking at as we are revisiting both the agreements between the government and the partnership, as well as the standard lease that is in work across the Department.

Secretary BEEHLER. And from the Army standpoint, I think it is pretty much the same. I would only add that the—having this web-based portal app really is helping as far as scheduling of times that are appropriate and convenient for the residents.

Mr. CROW. I would just submit, and then I will allow others to move on here, but I would like to see a public display of priority by the command structure, so working with your respective service chiefs. Maybe that takes the form of a letter or a directive or otherwise to garrison commanders and the unit commanders very clearly saying this is a priority of the service and that commanders should make every effort they can to ensure that their service members under their command can take the time available to meet this need.

Secretary MCMAHON. Congressman, let me take that for the record and take it and I owe you some feedback. We collectively would move forward in being able to implement. I understand the intent of what you are getting to. We can partner with our private partners, but let us get back to you and tell you how we attack it.

[The information referred to was not available at the time of printing.]

Mr. CROW. Thank you.

Secretary MCMAHON. Yes, sir.

Mr. GARAMENDI. Mr. Crow, if I might just add here, this problem can only be solved if the installation commander is held accountable.

Ms. Haaland, you had a—it is your turn if you have a question.

Ms. HAALAND. Thank you, Chairman.

Good afternoon, and thank you all so much for being here today.

Assistant Secretary Henderson, I understand that the Air Force has submitted $31 million unfunded requirement [UFR] to add 250 personnel to its housing management offices. While I am pleased that the Air Force is taking step to ensure appropriate staffing to meet the needs of our military families, I am disappointed that it is coming as a UFR, especially given the well-documented need for these personnel to help address the issues that we have all been talking about, the substandard conditions of military housing.

Are there any other UFRs regarding military housing? And can you explain why it wasn't included in the President's budget request when so many other things were, like money for a wall, for example?

Secretary HENDERSON. Ma'am, there is no other UFRs. That was the only one we submitted with regard to housing. And then just some background on it, we kind of know what we needed in the housing offices because it was just 4 or 5 years ago during sequestration when we were forced into some pretty deep personnel cuts that we pulled those folks out of the housing management offices.

They did that as—the Air Force did that as a calculated risk on the auspices that the project owners could take over some of those responsibilities for oversight and overseeing their maintenance, a bigger role in quality assurance, and the agreements allowed us to do that.

And I think upon reflection and going around and taking a look at that, those cuts were ill advised. So we decided to essentially restore personnel that we always had in those offices, and we kind of knew how many it would take to get back to where we were.

So no other UFRs. And then the history of that was it was one of the cuts we took during sequestration that we are restoring now.

Ms. HAALAND. So in the future, you will fight to make sure that those—that that is put in the actual budget and not necessarily an unfunded requirement?

Secretary HENDERSON. Absolutely. We are actually changing the permanent organization structure to make that a permanent part of the CE [civil engineering] squadrons there so that those become permanent positions in the Air Force.

Ms. HAALAND. Thank you.

And I yield back, Chairman.

Mr. GARAMENDI. Thank you, Ms. Haaland.

A couple of things. Mr. Lamborn and I both immediately jumped into the housing, or I jumped into the housing and he joined me in jumping into the housing. We went right past the opening statements. I don't really want to go back to those opening statements. I do want to seek unanimous consent that the opening statements be put into the record and then we will move forward with the issues.

[The prepared statements of Secretary McMahon, Secretary Beehler, Mr. Mellon, and Secretary Henderson can be found in the Appendix beginning on page 42.]

Mr. GARAMENDI. I would urge each of the committee members to quickly thumb through, find your favorite issue, because you are about to be asked for your 5-minute opportunity for questions. I am going to start with Mr. Lamborn while I quickly thumb through.

Mr. LAMBORN. Sure. Sure.

Let me ask you first about—on the Air Force side, Mr. Henderson, if we can get the disaster relief funding that is so vital to restore Tyndall Air Force Base, will the Air Force be in a position to restore funds to the FSRM projects that were canceled or postponed earlier this year?

Secretary HENDERSON. Yes, sir.

Mr. LAMBORN. Okay. Good. Okay. That is a nice, short, quick—good, and I like that.

Secretary HENDERSON. That is our intent.

Mr. LAMBORN. And I like that.

Okay. And then for all the witnesses, what are you doing to address the problem of PFOAs and PFAS [per- and polyfluoroalkyl substances] in groundwater at installations? I know in my congressional district cities of Fountain, Security and Widefield have great concerns about this. So any one of you that could address this, I would appreciate it.

Secretary MCMAHON. Congressman, if I could start from the OSD [Office of the Secretary of Defense] level. First of all, this is an issue that has clear focus, starting with the Acting Secretary through the entire organization.

Our focus has been where the Department of Defense has been culpable for causing water to be contaminated, and that is drinking water to be contaminated, that the Department has responded, and I can tell you today that there is no one drinking contaminated water above the 70 parts per trillion where the Department of Defense had been the causal factor for that water.

Once that mitigation has taken place, and there is a variety of different ways that we have done that, then we follow the standard process outlined in statute and by the Environmental Protection Agency [EPA]. The CERCLA [Comprehensive Environmental Response, Compensation, and Liability Act] process defined a longstanding solution to ensure that we can mitigate the challenges that are out there.

And so let me address upfront one of the conversations. There has been tremendous discussion in the media about this idea that the Department of Defense was trying to drive to a different standard than what the EPA was asking for. I will tell you categorically that the Department of Defense has not been. We have been in discussions about process. We have been in discussions about how we best follow the guidance that the EPA has put out there and what that guidance looks like in terms of CERCLA, and that how that would apply to groundwater vice drinking water.

But the Department of Defense strongly supports the 70 parts per trillion for drinking water, and it is doing whatever it can to ensure that where we are culpable for the impact on human beings,

that we have mitigated that and we have a viable process for cleanup following CERCLA.

Mr. LAMBORN. Although isn't it true that EPA is still working on a final number?

Secretary MCMAHON. Yes, sir. They are looking—they are—the discussions that you have seen over the last probably week or so has been focused on a trigger for groundwater vice drinking water. We have had some differing opinions on that. We fully support the fact that EPA has put that language out for public comment. We continue to work with the EPA on that, but the specific—specificity of what has gotten the visibility of recent has been a discussion on groundwater levels vice drinking water levels.

Mr. LAMBORN. Okay. Whoever else could address that, I would appreciate it.

Secretary BEEHLER. Sir, from the standpoint of the Army, we have spent $20 million over the past several years monitoring and investigating to see where the presence of PFAS and PFOA is on all of our bases. We have come up with 13. We have taken remedies, as Mr. McMahon just said, to make sure that anybody concerned or affected is not drinking PFAS, PFOA water that—water containing 70 parts per trillion or more.

We also are engaging in regular followup monitoring, and in those areas where we have found a problem, as Mr. McMahon said, we are following the CERCLA process and taking appropriate remedial action as that process goes forward.

Mr. MELLON. So from a Navy perspective, we have got about $10 million planned in the budget associated with AFFF [aqueous film forming foam]. It is the primary cause for PFAS as it relates to fires and fire extinguishing. That is to look at both alternatives to that and look for those things that can be as robust in terms of their capability to extinguish a fire quickly.

Standards for Navy are pretty high. It gets pretty tight on the ships. It is pretty dramatic consequences. So the speed at which it can extinguish a fire is a critical piece related to its capability.

Along with that, we continue to look at different levels of mixture for the specific chemicals that generate that condition. And we are starting to roll those back in terms of percentage of mixture so we are putting less out.

Along with that are the operational concepts associated with how we are even using AFFF today. We only use it in the instance of real fires where those fires and fire conditions require the use of AFFF. We don't use it in training. We don't use it in any other instances. And when we do use it in the case of a real fire, that site is then treated as a HAZMAT [hazardous materials] site and is cleaned up at that time as a result of that.

Mr. LAMBORN. Thank you.

And Mr. Henderson.

Secretary HENDERSON. Yes, sir. So, again, I would like to espouse the comments of my service counterparts, but a couple key points for the Air Force and then a couple of key points nationally.

First of all, this is more than just a Department of Defense problem. This is a national problem for which the Department of Defense has been leading forward on. And I would submit that—to this committee that they are just going to require a whole-of-gov-

ernment approach from the interagency with assistance from Congress and the administration to get after this.

From an Air Force perspective and specifically in Colorado Springs, where I know we have spent a lot of time addressing the issues in that area around Peterson Air Force Base, first of all, we have spent about $300 million on remediation of PFAS and PFOA over the last few years. In this year's budget, we have asked for $303 million for environmental restoration alone. That is a 7.5 percent increase.

Like the other services, we use the CERCLA process, which takes on average about 8 years to get through that process. So it is slower than we would all like, but it is also the mechanism and the tool that we can use, the authority that we can use to spend money for this.

In the Air Force, we are using three lines of effort to do this. The first one is to protect human health, and this is the identify, respond, and prevent stuff that we do out at the bases every day to capture the extent of the problem, ensure that we understand the full extent of damages to the ecosystem, break the chain for any impacts to human health, and then put a long-term solution in to fix that.

The second line of effort is to ensure that we are communicating transparently with the State and local regulatory authorities and the stakeholders and the restoration advisory boards. We found in the case—in the act of trying to do a right thing, if this communication link is broken, we still risk losing the trust of the local community we are in. So we see this as an absolutely important link.

And then third is the work that we have to do here in DC to get the—to work on the whole-of-government approach, and that is working across the different services and with the Office of Secretary of Defense, along with the EPA, Department of Agriculture, Health and Human Services, on a lot of the other initiatives that we don't have the authority to do but do require Federal Government assistance. That is kind of where the Air Force is at on PFAS and PFOA, sir.

Mr. LAMBORN. Okay. Thank you all for your answers.

And, Mr. Chairman, I yield back.

Mr. GARAMENDI. Let's move along here. I am going to skip my questions, and I will come back towards the end of it.

The next, Ms. Escobar is up next. We will pick her up when she comes back.

Mr. Wilson.

Mr. WILSON. Thank you, Mr. Chairman.

I want to join you too in expressing sympathy to the family of the late Congresswoman Ellen Tauscher. She was a devoted member of this committee and just a fine person that we all had the opportunity to work with. So I want to extend my sympathy.

And, Mr. McMahon, I am grateful for the relationship between the U.S. and our European allies. In the Army Corps of Engineers, it is—they are currently building a world-class military hospital, the Rhine Ordnance Barracks Army Medical Center near Kaiserslautern, Germany, which we are really grateful is the sister city of

Columbia, South Carolina, that I have the opportunity to represent substantial portions of the community.

How is the Department of Defense mitigating the use of Russian energy sources? Is there a concern about adversaries using this to weaponize energy supplies?

Secretary MCMAHON. Congressman, as you are aware, as you look at the National Defense Strategy, we voice great concern about both Russia and China and its impact in a variety of ways, both militarily but also economically.

Clearly, there is a concern about the reliance on our partners and our allies on fuel from Russia. Unfortunately, we don't have the ability to drive what fuel a private entity outside the United States, where they source that fuel from. However, what we can do is ensure that for our installations, both in the United States as well as those overseas, is that we consider resilience of those installations and that we come up with solutions that say, not only for, for example, climate or weather or cyber, but also for energy, how is it that we can come off the grid to ensure that those type of installations can continue.

Mr. WILSON. And in line with that, Mr. McMahon, in the 2019 National Defense Authorization Act, there was a direction to the Department of Defense and Department of Energy to develop a pilot program for micro reactors. The Defense Science Board Task Force issued a report recommending the logistics demand by the U.S. military be scaled down. And is a pilot program on track to power critical loads at a permanent domestic military installations by December 2027? What is the status of any prototypes?

Secretary MCMAHON. Congressman, thank you very much for that question. There is a tremendous focus on that, not only within the Department, but at the National Security Agency level—or National Security Council level. I am personally involved in that.

And we have really a twofold way forward on that issue. The first is that we are looking in conjunction with our national labs of creating a capability to leverage whereby the commercial sector would develop the small modular reactor, be able to take that and put it at remote locations, for example, and then we would leverage that as a source of power for those installations.

The other part is looking at the micro level as to how we could on a much smaller vehicle be able to create that capability. Our research and engineering folks are focused on that. The first effort, which is the one driven by the 2019 NDAA [National Defense Authorization Act], we feel strongly that we will be able to beat that 2027 date.

In addition, the second effort, which is a smaller, perhaps vehicle-borne type that we could apply anywhere, we are in the midst right now, literally last week, of releasing a request for information for partnering with the private sector to see where we can go with this and what the art of the possible is, and we will continue to keep you updated on both efforts as we move forward with it.

Mr. WILSON. Well, that is terrific. And Congressman Garamendi and I both are keenly interested in modular and micro reactors.

And, Mr. Mellon, the Department is still working on plans to relocate 5,000 Marines from Okinawa to Guam. What is the status of the construction activities to support the move to Andersen Air

Force Base and Apra Harbor? Do you anticipate both installations being capable of supporting the additional personnel and equipment?

Mr. MELLON. So all of our construction projects associated with DPRI [Defense Policy Review Initiative] and the movement of the Marines from Okinawa to Guam and to Hawaii are on track. They are continuing to progress on schedule, and we anticipate them being ready to catch those Marines when they come ashore.

Additionally, Japan has recently gotten their portion of their projects through their Diet, so their budget is approved for this year. So the complement piece of that that comes from the Japan contingent is also funded. So all of those projects are on track.

Mr. WILSON. Congratulations.

Thank you very much, Mr. Chairman.

Mr. GARAMENDI. Thank you, Mr. Wilson.

It is your turn.

Ms. SLOTKIN. Thanks for being here, everyone.

Mr. Henderson, you were in Michigan—I am from Michigan. You were in Michigan, I think, last week or a week or two ago up at Oscoda Air Force Base seeing and talking to residents. Can you just tell me your takeaways from the trip?

Secretary HENDERSON. Yes, ma'am. You know, first of all, my takeaway is there is a lot of frustration on how slow this process is. There is extensive contamination up there and it has taken a lot of time to get through the site inspection. And as we go through that iterative process, we learn more and then we realize we have to take more tests and expand the site inspection.

The good news is, is in 2015 we brought in—we brought on a pump-and-treat facility there near—I forget the name of the marsh there on the site, but since 2015 we have been able to remove about 90 percent of the PFAS and PFOA from that plume.

Last August we also opened up a second pump-and-treat facility as an interim measure under CERCLA, and this August we will open up a third pump-and-treat facility as an interim measure under CERCLA. So while we are 4 years into the CERCLA process and we are just getting ready to move into the remedial investigation phase, there has been a lot done, and clearly there at Wurtsmith there is a lot left to do.

Ms. SLOTKIN. Yeah. I think—I don't know if you saw the press reporting from your trip on the Michigan side, but there was a lot of concern that you referenced the CERCLA process over and over again, which we understand is something that you live with.

Is there any precedent for speeding up the process or anything that Congress can do to turn what feels like a decades-long answer to the residents who literally are scared to drink their water?

Secretary HENDERSON. So first of all, I wish there was something we could all do to speed that up. Reference to the drinking water, when we did do—when we did all the drinking water test, we found that nobody on the base was drinking any water with PFAS and PFOA.

And when we checked all the base's off wells, we only found one off-base residential well, and we are providing alternate water for that. So while we are going through this process, there is nobody

that is drinking contaminated water—at risk of drinking contaminated water. So as——

Ms. SLOTKIN. But just to be clear, I am sorry, my staff member is from—literally her grandma ran the kitchens on that base. They are terrified to drink their water. Many of them are paying for their own water, like our residents in Flint are, and they can't sell their homes at a decent price. So they may not physically be drinking the water, but they are living in a situation where they feel they are because they don't have a clear answer and economically are paying the price for it.

Secretary HENDERSON. Right. I understand their concern, and we share that concern.

As far as speeding up the process, a lot of this kind of relies on the how fast we can do the testing, how fast we can drill boreholes, how fast we can understand what the extent of the plume is. So some of this is just constrained by the laws of physics and how quickly we can fully understand the problem.

While it takes some time to get it—to figure that out and to identify the full extent of the problems, it is an important step for us so that we have the right solution in place. The last thing we would want to do is spend 6 or 8 years going through the CERCLA process and identify a solution to only find out 20 years from now we got it wrong and we wasted tens of millions of dollars and not address the long-term solution for this.

Ms. SLOTKIN. Yeah.

Secretary HENDERSON. So CERCLA requires us to do that, but that is what takes most of the time. It is really the engineering and the environmental science that goes into that. And it is an unnecessary—I mean, it is an unfortunate requirement. It is part of the——

Ms. SLOTKIN. Yeah.

Secretary HENDERSON [continuing]. Part of the profession to get it right.

Ms. SLOTKIN. Well, I do appreciate you coming and taking an hour's worth of questions from our residents.

I was interested, Mr. McMahon, in your saying that it was an erroneous report in the media that the Department of Defense had pressured the EPA to lower the standards just this past week for cleaning up groundwater pollution caused by PFAS. My understanding is the proposed standards completely eliminate a section on responding to immediate threats posed by hazardous waste sites and instead focuses entirely on long-term solutions. I am glad to hear that it is erroneous.

Can I just have on record from all four of you, did you recommend the lowering of standards and the exclusion of responding to immediate threats posed by hazardous waste sites? Can I just have you all on the record, please?

Secretary MCMAHON. Congresswoman, what I will tell you categorically, we did not attempt—the Department of Defense did not try to lower the standard. What we articulated was following the CERCLA process that has been alluded to and utilizing long-standing statutes and guidance that the EPA itself has released in terms of determining what levels of PFAS/PFOA should be in groundwater.

And, again, you have my assurance that we did not try to impact either the drinking water or anything but what was the standard process for groundwater.

Secretary BEEHLER. On behalf of the Army, I have had absolutely no discussions with anybody regarding EPA regarding this issue, and I don't intend to.

Mr. MELLON. From my perspective in the Department of the Navy, we have not pushed back or had any dialogue, other than to understand the rationale behind the EPA's recommendation. We are firmly behind the scientific and logical approach laid out in the CERCLA process, and it is ultimately the EPA's call in order to set what those standards are. Once those are done, Department of the Navy is fully on board with remediation and understanding.

Secretary HENDERSON. On behalf of the Air Force, we haven't had any discussions with the EPA on this topic.

Ms. SLOTKIN. Thank you very much. I yield back.

Mr. GARAMENDI. Thank you, Ms. Slotkin.

Before we leave this contamination issue, Mr. Mellon, you said that presently, the U.S. Navy does not use any of this material in training programs. There are two other—well, actually, yeah, two other services up there. Do you use this material in training programs?

Secretary BEEHLER. On behalf of the Army, no, we do not.

Secretary HENDERSON. On behalf of the Air Force, we stopped using it for training. We only use the foam now for incidents where we needed to put out a fire, and then we treat it like a hazardous waste and clean it up right away.

Secretary MCMAHON. And, Mr. Chairman, the other element that I would add to that, that Mr. Mellon referenced in treating areas as a special type of spill, if we have got that, all of the services are doing exactly the same thing.

Mr. GARAMENDI. Thank you.

Mr. Kim, you are next.

Mr. KIM. Thank you for taking the time to come out here today. I wanted to ask about something that I have been learning more and more about as I have been focused in on the response to what happened in Tyndall Air Force Base. Something that came up over and over again was how just in the lead-up to that, in the couple months before, there were at least, I think, two hurricane exercises that took place there. And it seems like from what I have heard, that that played a really big role in saving lives. The planning and the exercises were critically important.

And this is something I think about a lot, because the joint base in my district, McGuire-Dix-Lakehurst, after Superstorm Sandy, that base was up and running 24 hours after that storm and allowed it to be sort of the base of FEMA [Federal Emergency Management Agency] operations for, you know, responding to a big chunk of the Northeast.

So I guess I wanted to hear from you, from each of you, about your respective installations just, you know, what protocols are there to be able to make sure that there are these types of exercises and plans, especially as we are just, what, about a month out from hurricane season starting up? I am just interested in understanding, you know, what protocols are put in place, you know,

which installations are required to do these types of exercises and trainings, just to kind of make sure that we are all set as we are entering the hurricane season. So if you don't mind, I would love to just hear briefly from each of you.

Secretary BEEHLER. Sir, I will start first. The Army is engaging in a variety of approaches at the installation level to counter emergencies of all type, and particularly unexpected emergency, whether they are weather, climate, cyber, whatever, natural causes, man-made causes. So some of the examples have been energy-resilient exercise that the Army has done now, some of them with OSD funding, using Lincoln Labs MIT [Massachusetts Institute of Technology] experts to help in this, to lead in this exercise. It has been done at Fort Stewart, Fort Greely, Fort Knox, which actually used Army money to do it, and then most recently, last week at Fort Bragg, where the entire facility was unplugged from the grid as if everything went down, which it really did do, and remained unplugged basically for 12 hours.

And this will have more results obviously as they examine the consequences, but it was—these have been excellent exercises. They cost roughly, depending on the size—and, of course, Fort Bragg's the largest military—the Army's installation. It is the equivalent of a city of 250,000 people. But these exercises run about $250- to $500,000, and just in my limited experience, I think they are worth every penny of it to get base commanders on up and on down prepared for unanticipated disasters, whether they are hurricanes or other aspects.

On a broader—and so we will encourage, and we are already thinking of where the next major installation would be doing this exercise, and the Army is certainly willing to fund some of these going forward.

The other thing, just quickly, we have installation management and water plans that we are requiring our major installations to put forth. We have 22 scheduled to be completed by the end of this fiscal year. And part of that whole exercise is to address the issue that you have raised, what will the installation do in an emergency situation? How will this affect the access to energy and water that would be so vital to keep that particular base resilient through the times of crisis.

Finally, we are in a process in my office of putting forth a revised directive that will give the garrison commanders greater flexibility in setting the requirements for the given base on how much energy resilience there needs to be in place in case such an emergency or disaster occurs. And we hope to have that through the system very soon.

Mr. MELLON. So what I would add to Mr. Beehler's comments, from a Department of the Navy perspective is, first, the kinds of drills and exercises and training he mentioned related to the people aspect of things, like hurricanes and HURREXes [hurricane exercises], at least from a Department of the Navy perspective, I am confident for the other services, are part of the normal command structure, normal command requirements to do them on a periodicity. It includes many things beyond that. It includes active shooter and all those aspects. So that is, I think, inculcated from a culture and command perspective.

Beyond what Mr. Beehler said, related to other attributes for plans at a base level, plans from a command perspective, we are starting to incorporate much more stringently resiliency from a design perspective, not just from individual MILCON [military construction] projects or individual modernization projects, but from an infrastructure perspective.

So the Marine Corps has recently put microgrid in place at Yuma, Arizona. So that has been up and running now for about a year, and we have got some results from that from last year in terms of things it mitigated in terms of power outages for that region.

As part of the budget for this year, they have got plans to put four more microgrids in place on other bases. So those kinds of things, I think, add and help mitigate some of the impacts of climate and climate-related activities and other issues that——

Mr. KIM. Great. Thank you. We are out of time here, so I will yield back. But if there is anything else to add, if you don't mind submitting as a question for the record. Thank you. I yield back.

Mr. GARAMENDI. Mr. Kim, I suspect Mr. Crow's going to pick up this issue and carry it forward, so perhaps there will be an answer for you.

Mr. Crow, it is your turn.

Mr. CROW. Thank you, Mr. Chairman.

Yes, as the chairman indicated, an issue of growing importance for me is this issue of energy resilience and the development of microgrids, as we have seen, you know, with Fort Sill and others that lost some mission-critical tasks during some prolonged shortages. And as we have continued to look deeper into this issue, our vulnerabilities from cyber attack on the civilian infrastructure, as well as extreme weather events, are deeply and increasingly of concern to mine.

So picking up on the topic of microgrids, I would love to hear from the rest of you on the role that you think microgrids will play, what is being done to expedite the development of those grids, in particular on the wind and solar front, and what are the critical tasks you see in the next 1 to 2 years that need to be accomplished to expedite the development of those grids.

Secretary HENDERSON. Go ahead.

Secretary BEEHLER. Congressman, I absolutely agree, microgrids are critical. The Army has started—obviously, there is always a long way to go. We have 156 installations to cover, of which I would say certainly a significant portion are top priority installations as far as their mission is concerned. But we have several programs that we have launched through our Office of Energy Initiatives, and I will put the projects that they have put forward in these areas. It is all about energy resilience. Many engage in microgrids, distributed energy. And I will put for the record, the summary of the projects, the location, their significance, for the committee.

We also have taken advantage of the Congress' funding of the ERCIP [Energy Resilience and Conservation Investment] program that OSD administers the funding, and each of the services competes for it. And the six projects that the Army has been successful in getting funding, most—that has for consideration of the latest

$150 million total, goes along with microgrids, distributed energy, battery support, combined heat and power; things that, once again, can place the Army in being resilient and in times of emergency or not even, just a regular course of business, can rely on these sources of power to make them more effective in case there are attacks in that regard.

We have the great example of Schofield Barracks in Hawaii that is a multifuel project, a public-private partnership——

Mr. CROW. Mr. Beehler, sorry to interrupt you. I do want to give Mr. McMahon an opportunity to address the question as well. Thank you.

Secretary BEEHLER. Thank you.

Secretary MCMAHON. Okay. What I will tell you, bouncing off what Mr. Beehler said, our focus has over time evolved from energy savings to energy resilience. And so utilization and microgrids are an integral part of being able to achieve that goal—to achieve that goal, to get to where we need to be, and accomplish that type of resilience in the area of energy.

Mr. CROW. Mr. Henderson.

Secretary HENDERSON. Yeah, thank you. For the Air Force, we have seven pilot projects going on right now to develop installation energy resiliency plans. We intend to franchise the best practices of that throughout the Air Force.

That plan would include many types of resiliency projects depending on the base, the geography, the physics there. It does include distributed energy for sources depending on what works there, wind, solar, natural gas, and so on. So certainly, we do that. We prioritize our projects based on five attributes: robustness, recovery, response, resourcefulness, and redundancy. We call that the five Rs, but essentially, we are bringing that into our lexicon and using that for funding, for priorities, and to put these ERCIP projects online.

Mr. CROW. Mr. Mellon, the biggest task in the next year for the Navy to address this issue?

Mr. MELLON. I think the biggest task for the Navy is to make sure we have got a sound baseline to understand where our risks are installation by installation, in particular when it comes to a lot of those installations along the coast and what some of those MILCON and modernization projects will look like so that we accommodate those risks.

Mr. CROW. Thank you. I yield back, Mr. Chairman.

Mr. GARAMENDI. Thank you, Mr. Crow.

As promised at our first hearing, this issue of energy resiliency and energy conservation will be a continuing theme that we will be hitting upon. I do want to compliment you gentlemen and your staff for your reports that are now part of our record. Many of these issues are covered there. We will come back and hit these all over again.

Ms. Haaland, you are next.

Ms. HAALAND. Thank you, Chairman.

I first wanted to just say that the contamination issue has hit home in a big way in New Mexico, and it is a huge concern of mine. Cannon Air Force Base near—a dairy farm near that, that is adjacent to the base, this man has just completely lost his business

that he has worked all his life for. And so it is definitely an important issue for me, and we will likely be adding—you know, asking more about that.

But I did want to address some issues with respect to Indian tribes and American Indian affairs. And so I will just put out my questions. If you can answer them, that is great. If you need to submit to the record, that would be fine also.

And I will start with you, Mr. McMahon. I understand the Department of Defense has requested $12,227,000 for the Native American Land Environmental Mitigation Program, NALEMP, in fiscal year 2020. Is the amount sufficient to fund outstanding and planned remediation requests, to your knowledge?

Secretary MCMAHON. Congresswoman, the answer is yes, that is what we have since, I think, 1996 requested. In addition, though, we go through this process that is an annual process. What we have put forward is a legislative proposal to institutionalize this rather than going on an annual, biannual basis. It is tremendously important, and what we hope to do is see support for institutionalizing this in a broader sense because of the importance of the program.

Ms. HAALAND. Thank you. And the Native American Management System—still to you, Mr. McMahon—the Native American Management System for Environmental Impacts, NAMSEI, tracks and maintains information on over 900 potential impacts to tribal lands and resources resulting from DOD activities. And there is a series of questions. Do you select the NALEMP-eligible sites from this list?

Secretary MCMAHON. Congresswoman, quite frankly, I am beyond my knowledge——

Ms. HAALAND. Okay.

Secretary MCMAHON [continuing]. On this. What I would like to take is all those questions for the record and make sure that we provide you a clear answer with my experts.

Ms. HAALAND. Absolutely. So I have two more questions along those lines, so I will submit these to the record. Thank you.

Secretary MCMAHON. Yes, ma'am.

Ms. HAALAND. The second question is, when developing MILCON projects, at what point in the process do you investigate whether a given project may impact Indian tribes? And at what point do you engage in tribal consultation? That is an important thing, of course, so——

Secretary MCMAHON. In each of those, if I could take them for the record and explain clearly where we are in that process.

Ms. HAALAND. Okay, that is great. Yeah, so I will submit those questions, and I will yield back, Chairman.

[The information referred to was not available at the time of printing.]

Mr. GARAMENDI. Thank you, Ms. Haaland.

We are going to do a second round of questions here. I will start that, and then Mr. Lamborn will—without objection, the committee will welcome Mr. Lamborn to the hearing. And I understand he has——

Mr. Lamborn, I am glad you showed up, but Mr. Langevin is here. I welcome you to the committee.

Mr. LANGEVIN. Lamborn and I get that all the time. So, thank you, Mr. Chairman. And I want to thank you for allowing me to sit in and ask questions, and I appreciate the testimony of the panel and the work you are doing.

Let me start with this. The fiscal year 2018 NDAA required that the Department describe what future focus mitigations they needed to ensure mission resiliency and what resources would be required to implement them, and this is, in particular, focused on the issue of climate change and building resiliency. Unfortunately, the Department has failed, in my view, to meet its statutory mandate, and I am concerned that the investments that we are making today go to waste if they do not factor in changes in the climate. The lack of forethought, I believe, is not only fiscally irresponsible, but it also places our service members and readiness at risk.

So to all of our witnesses, this first question, I would ask just a simple yes or no. Do you agree that the changing climate poses a threat to our readiness? I will start, and I want to go right down the panel. It is a yes or no question.

Secretary MCMAHON. Congressman, the answer is we acknowledge that weather is and climate are an impact on national security.

Mr. LANGEVIN. Thank you.

Secretary BEEHLER. Army agrees.

Mr. MELLON. Yes.

Secretary HENDERSON. Yes.

Mr. LANGEVIN. Thank you. So as a followup, I want to ask what investment you are making in the fiscal year 2020 budget in order to mitigate risks that we are going to face in the short, medium, and the long term to our CONUS [continental United States] and OCONUS [outside continental United States] installations.

Secretary BEEHLER. Sir, on behalf of the Army, one significant thing that we are already doing is launching installation energy and water assessment plans at most of our major installations, starting with the most important. We hope to have 22 completed by the end of this fiscal year, meaning 4 months from now.

And as part of the assessment, they will factor in things such as extreme weather, climate, and other considerations as to how the installation shapes up as far as judging its resiliency in energy and water, where it is strong, where it is weak, and what are the corrective actions that would be needed to be taken. And so we should have those results fairly soon.

Obviously, after these plans are complete, I would be happy to share the combined results with the committee.

Mr. LANGEVIN. Thank you. We welcome that.

Mr. MELLON. From a Department of the Navy perspective, very similarly, we are launching what we are calling an optimization and modernization strategy, and that is really to look across the board, both at optimization on a base—so if you think about the devastation in Lejeune, we are reevaluating the rebuild and where those rebuild are actually going to occur, physically relocating some of those facilities from where they used to be located on the base to a different portion that is much more secure from environmental effects.

Additionally, as we walk through our modernization, we are including in that resiliency, not just from a climate, energy, water perspective, but resiliency from a cyber perspective. So all of that is being wrapped in as we look installation by installation, we overlay those MILCON projects and those modernization projects that are part of the budget, and we are ensuring as part of the design and build process we are incorporating those right characteristics into the fundamental design.

Secretary HENDERSON. The Air Force philosophy is essentially the same as the Navy, which basically is we incorporate those resiliency attributes into our projects through our FSRM funding. As we modernize or upgrade a facility, we bring it up to current code, and as we have the opportunity, for instance, at Tyndall Air Force or Offutt Air Force Base, where we can raise the flood elevation for where we put facilities, or where we take a damage or destroyed facility and relocate that out of the flood plain or an inundation zone, we are certainly taking a look at that.

We are also putting more resilient attributes into our new buildings and for the stuff that we are repairing. So for any facilities that get rebuilt at Offutt Air Force Base, if it is still in kind of a flood-zone area, we would use materials that are resistant to that. The same way at Tyndall Air Force Base; we would build it to resist the weather or whatever the threats happen to be.

We do this through our FSRM program, and the biggest thing the Air Force is doing for that is getting the funding available to do that. The funding we have requested for the last 6 or 7 years has essentially been funding on triage mode. We are just—we are taking care—we are just taking a worst-first approach where the funding only goes to the most mission-critical facilities that are in the worst shape. And when we are talking about resiliency, that takes a long-term proactive look and proactive investments at our facilities. And so we have changed our entire investment strategy this year, and I would ask Congress' help in that.

Essentially, we have taken away—we have instituted a new strategy to invest proactively in our facilities, require a 2 percent funding level of our plant replacement value, and it results in a $2 billion increase overall in the infrastructure portfolio for the Air Force. That allows us to invest in facilities at the lowest cost point in the life cycle of the facility and to make proactive investments so we can get ahead of the backlog, and so we are not spending five to seven times the amount it takes to build a facility that has failed when we could fix it earlier in the life cycle at quite a bit less than that, just because we are proactive and we can get ahead of that. So you will see that in our budget request this year, sir.

Mr. LANGEVIN. I know my time has expired. I am encouraged to hear that, because otherwise, we are doing the taxpayers a disservice if we are not thinking about these things and spending taxpayer dollars wisely, planning ahead, not just pouring good money after bad, so——

Secretary MCMAHON. And, Congressman, from an OSD perspective, across the enterprise, it is integral for us to look at resiliency, not just in one category or another at a time, but looking at it holistically as you heard. Cyber plays an integral role there. Water plays an integral role in that, and energy in addition to climate

and weather. And what we are trying to take is a more holistic look at how we build and how we spend our dollars.

Mr. LANGEVIN. Thank you.

Thank you, Mr. Chairman.

Mr. GARAMENDI. Mr. Langevin, thank you for joining us, and thank you for making this issue relevant over the last couple of years and particularly in the last NDAA.

Mr. LANGEVIN. Thank you.

Mr. GARAMENDI. And so we are going to carry on with this.

A couple of things. There are some excellent examples of failure to maintain, Camp Lejeune being one. If those roofs had been maintained over the last 40 years, upgraded sometime over the last 40 or 50 years, the loss and damage would have been substantially less.

The other thing, and this was in the written testimony, I am going to just bring it up quickly here, and that is the standard to which we are building projects in the future. I know, Mr. McMahon, in your testimony you spoke to this. I want to be—I want specific information about what upgrades in the standards that the military is using for construction. This is everything from wind to water damage, roofs, all of those kinds of things, energy resiliency and cyber.

So we are not going to go into the specifics today, but each of you raised this question, probably because we asked it—not probably, but because we asked it, and we want to see the specifics. And so we will come back, for the record, the specific standards that are going to be used.

With regard to the facilities that were severely damaged this last year, flooding at Offutt, Camp Lejeune, and Tyndall, and other places, the design plans for rebuilding are going to be under very intense review by the committee, as to the standard, as to the relocations, as to the question of moving facilities perhaps somewhere else and not having them at that base at all in the future. So we will review that in detail. Some of this has been made available to the professional staff. They are reviewing it. They will go into it in far more detail, as will the members of the committee, all of us whom share a common interest in it.

I do want to raise one more point before I pass this on to Mr. Wilson—Mr. Lamborn having passed the opportunity for a second round, although he may get engaged yet again—and that has to do with a recurring question that has occurred in my district, in California, and that has to do with both MILCON projects and FSRM projects in which local contractors are not employed, but rather national contractors, and in many cases, very few, if any, local subcontractors. This is an ongoing issue.

I don't expect a response now. I want all four of you to be aware that this is an issue that I am concerned in, was concerned 6 years ago when we tried to put a 60-mile radius around all bases requiring that, I think, 40 percent be local contractors in that area. That didn't work out, I think, because maybe it was one of the bases, 60 miles would not get you outside the base. So in any case, I am going to come back at this over and over again.

It also relates to hours, working conditions, the State laws, and what appears to be the avoidance of State laws by national contrac-

tors, some of whom call their subcontractors their employees—excuse me—some of whom call their employees subcontractors rather than employees, an ongoing issue that I first dealt with in the 1990s as insurance commissioner in workers' compensation. So we are going to come back at this again, so heads up.

With that, I will pass this off to Mr. Wilson.

Mr. WILSON. Thank you, Mr. Chairman.

And, Mr. McMahon, one final question, the European Defense Initiative is critical to allowing for faster response to the event of any aggression against the territory of our NATO [North Atlantic Treaty Organization] allies. What are the top military construction projects for the European Deterrence Initiative in the budget? And how does this compare to projects and funding from our partners?

Secretary MCMAHON. Congressman, I do not have the list in front of me exactly where we are. It continues to be an integral part. I, in fact, leave for EUCOM [U.S. European Command] on Friday to look personally at some of the construction, but I will take that for the record and come back to you and show you that.

[The information referred to was not available at the time of printing.]

Mr. WILSON. Thank you very much.

Secretary MCMAHON. Yes, sir.

Mr. GARAMENDI. Thank you, Mr. Wilson.

Mr. Crow, you are next.

Mr. CROW. Thank you, Mr. Chairman.

Just picking up on the topic of energy resiliency and microgrids. Just curious, you know, I know each of the services are doing a variety of initiatives and things, but we are only going to be as strong as our weakest link, and in some cases, that could be the local communities, you know, where a large percentage of our service members actually live and spend a lot of their time. So what is being done between the three different services, and Mr. McMahon as well, to make sure we are integrating with those local communities, sharing best practices, and providing resources and tying in our resiliency plans with their resiliency plans as well?

Secretary MCMAHON. If I could start, Congressman, and Mr. Beehler referred to one of the activities that we have ongoing, which is where we literally pull the plug on the installation. Obviously, there is a very local impact from that. But what happens is the lessons learned that come out of that activity then are shared, not only across that service, but across services. And we have funded now, at this point, five different exercises, three tabletops, to be able to share that kind of information, to be able to not only educate the leadership, but more importantly, drive behaviors as we move forward with modifying our installations in trying to answer that energy resilience.

Secretary BEEHLER. And on behalf of the Army, I will just state that, certainly with Fort Bragg, the community was definitely very much drawn in, and they will be a part of the review process and certainly be kept every step of the way and in a whole host of areas, not just this. And the major bases interact with the local governance extremely well on an ongoing basis, and so this will be just one more aspect that will further cement a well-coordinated effort.

Mr. CROW. I guess just to clarify the question for Mr. Mellon and Mr. Henderson, since we are running low on time here, I guess I am speaking less to the issue of whether we are sharing lessons learned from the base test itself as much as are we working with and providing resources and help to local communities so they develop their own resiliency plans and conduct tests as well so that they are prepared?

Mr. MELLON. So from a Department of the Navy perspective, I will try and answer that in two parts. One, as we look at modernization and resiliency for each one of our sites, part of that dialogue is with the local providers, whether it is utilities, water, wastewater treatment, whatever it is, and that dialogue is bidirectional in terms of understanding where their risks are, what dependencies we have, what our mitigations might be as we are looking at how we mitigate those risks and provide that resiliency for the base.

So there is a bit of a variation depending on how that interaction is and where they are at. Part of it is we also look at how can we best utilize the resources that are available. So in some instances where we need to make improvements, we look for opportunities to partner with the private sector, provide them that opportunity to meet that service, enter into a longer term agreement but not necessarily have to invest Navy dollars in order to do that. And we are doing that in several areas, and if you would like, I can provide you some of those examples as part of the record.

Secretary HENDERSON. Just a couple initiatives the Air Force is looking at. As we have more and more started privatizing utilities, of course, we are intrinsically linked to the public utility providers that provide that. Two big initiatives we are doing. One of them we call the mission threat analysis, and this has to do with identifying where our vulnerabilities are. In other words, if you are flying a remotely piloted aircraft and your cockpit is in Hawaii or somewhere in the Midwest, you might have two or three relay stations to get to a command center that is tracking that overseas in Germany or the Middle East, and then another link to get into the people launching and recovering the actual aircraft.

If at any point along there—it is not just energy resiliency at that base, but if at any point there we lose power or we have some type of an impact or some threat impact, we have to know how to make all those nodes resilient along the way. So understanding the vulnerabilities, and then once we do that, we are getting after—one of the initiatives we are looking at was energy as a service to the base, but now looking at energy resilience as a service. So in other words, writing those resiliency requirements into our privatized contracts with the people who are providing that.

Mr. CROW. Thank you. I appreciate that.

I yield back, Mr. Chairman.

Mr. GARAMENDI. Ms. Slotkin.

Ms. SLOTKIN. Sure. Mr. McMahon, I am just going to go back to the climate change report that you all turned in in January, and the report—I was an assistant secretary at the Pentagon where we helped write the first report that was done under, at that point, a man named John Conyers, and on just sort of starting to think about how climate would impact facilities, bases, ranges, but also

deployment of forces, if there is more conflict, the melting of the Arctic, et cetera.

And so we—prior Congress issued this requirement for report and you provided it, but it really didn't take us anywhere further than the original report that we did back in 2014. And I am just wondering, in particular, there is two areas where you didn't answer the questions. Number one, you were supposed to provide the top 10 most vulnerable locations or I guess bases in the world most vulnerable to climate change. And then more importantly to me, just for readiness, the cost estimates to mitigate the risks to those bases.

And I am just wondering if there was a reason why you didn't answer those questions in the report.

Secretary MCMAHON. Congresswoman, when we did the report, and with your background, you recognize that not all bases are created equal. And so the example that I use is that if we picked a rehab—or an R&R [rest and recuperation] installation, for example, in Hawaii, that may be facing climate change or impacts from weather, it did not—does not raise the same level of concern as perhaps one of the installations that we listed. And so what we tried to do is focus specifically on those most critical installations in the Department of Defense, and those came off of our 79 mission assurance installations, selected because of the importance of that. And in a closed environment, I would be happy to share with you why each of those installations was on the list.

But with that, what we did then is provide what we assumed to be our assessment of what the threat was based upon the five categories that the Congress gave us to consider for that. And as you know, those five categories, neither Tyndall nor Camp Lejeune would have been covered.

And so with that, what I would like us to be able to do in the future is attack this holistically, that is from an enterprise perspective, as we talk about resilience looking not only at climate and weather, but the other categories that I alluded to previously, to be able to talk about this in a way that we can paint a more effective picture and ensure that we have got the funding necessary to get to where we need to be.

Ms. SLOTKIN. Yeah, I think we would all welcome that. I think, you know, including during my time at the Pentagon, starting this conversation was a little bit like pulling teeth. And if you have a more comprehensive way to look at it or a more thoughtful way to look at it, I have no doubt that there is a better way than DOD tasking report, but I think we would welcome that. And I would say, you know, my understanding just living in the Army as an Army wife and now as an Army stepmom, just prudent planning for possible scenarios is what we do, right, and without the political piece of it, just—and I don't think we need more relevant examples than what has been going on in the past year with some of our bases.

So your help getting out of what feels like pulling teeth and into a real affirmative, positive posture where, hey, this is just contingency planning like I do with any other potential factor, I think it would go a long way to making us feel like you are taking this seri-

ously, and not because we keep asking you to, but because I actually believe it to be a factor that affects our operations.

Secretary MCMAHON. I think—and I will speak for the services as well as OSD, I think all of us recognize that, for example, sea level is rising. Quite frankly, I am not worried about what the causal factors of those are; I have to ensure, along with my partners up here, that we are taking prudent action to make sure that we are preparing for whatever that threat might be. And I think we have seen some tools of recent that I would like to share with the Congress offline that said we think we can do a better job of planning in the future and provide a more holistic picture as we look at resiliency for installations.

Ms. SLOTKIN. I think that would be great. Because I am not stuck on the politics. I just want to know we are doing the prudent planning. So I appreciate that.

Secretary MCMAHON. Yes, ma'am.

Mr. GARAMENDI. Thank you, Ms. Slotkin. The principle of the five Ps, I suppose, is at play here.

Also, during the course of the testimony, all three—or four of you witnesses have discussed the issue of risk assessment for each installation, and I take that risk assessment to be all potential risks that are at that—that could occur at that particular facility. Maybe a typhoon, hurricane, tornado, whatever it might be.

And so we are going to pursue that, and as we look at MILCON going forward, we are going to deal with that issue, which means you are going to get to deal with it too and come to us with specific ideas about how to deal with those risks.

Mr. Langevin, I believe you have another round of questions.

Mr. LANGEVIN. I do. Thank you, Mr. Chairman.

I want to go back, Mr. McMahon, just a little more specifically on Ms. Slotkin's question. I am glad she raised it in the way that she did. I wrote that language requiring the assessment of the top 10 most vulnerable military bases, as well as the costs to be associated. And I appreciate what you have to say, Mr. McMahon, about taking a holistic look, and that I applaud and I support that effort.

It doesn't excuse the Department, though, from fulfilling the requirement in the law that was the way the language was written, and we are going back to the Department and asking again for a redo and to list the top 10 most vulnerable military bases to climate change specifically.

Again, I applaud the holistic look on other challenges, but we need to know about the issues specific as it relates to climate change and then the costs associated with dealing with those effects.

And the report did not confine the Department to just looking at CONUS, but looking at OCONUS as well. And so the Department completely missed the mark on that. You looked at CONUS, but you didn't include in the report, looking at it, again, holistically but as it relates specifically to climate change, looking at worldwide. So we are going back to you on that, and I would appreciate, hopefully we can get the answers to the questions the way that we have asked—in the way we have asked them.

So as a followup, though, I do want to ask, how are you evaluating those risks as they evolve, what modeling is the Department

using to evaluate the costs to mitigate the risks, and how are you prioritizing the climate mitigation efforts within your budgets?

And just in case my time doesn't run out, in another related—unrelated topic but related to the topic at hand, the Department's first-ever comprehensive audit identified insufficient controls to ensure the accuracy and completeness of general property, plant, and equipment [PP&E], the second largest category of assets on the DOD balance sheet. The auditors found instances in which facilities had been physically demolished but remained on the property records, and the reverse, where they found facilities that physically existed but were not on the property records.

So, you know, there are wasteful costs associated with these inaccuracies, and what are each of you doing to clean up the real property inventory processes and improve internal controls related to general PP&E?

Secretary MCMAHON. Congressman, to that question, beginning with the Acting Deputy Secretary of Defense on down, on a continuous battle rhythm of being able to look at the direction for each of the services of going out and doing a 100 percent inventory, doing book-to-floor, floor-to-book assessment of where we are in terms of the audit. We acknowledge, as the Deputy Secretary has a number of times, that our books were not where they needed to be. And so we have taken an enterprise approach at the Department level with each of the services, with under secretaries from each of the services sitting in the room and ensuring between them, the Comptroller, and the CFOs [chief financial officers] that we are doing this, and the intent is to have this accomplished by the end of the fiscal year with regards to this specific question.

Mr. LANGEVIN. Thank you. And then on the other, on the modeling, and can we talk about that as well?

Secretary MCMAHON. Congressman, I was a little quick in my first answer to have gotten to this point that I was kind of hoping to miss the modeling question. I will tell you that we need to do a better job. I will tell you that at least from my perspective, that the Corps of Engineers has demonstrated some capabilities that we have not holistically used in the Department.

To the previous question that I was asked, I think there are some things that we can do better than we have done in the past in being able to articulate what those costs are. We do take it seriously, we acknowledge it, and we understand that there is an impact on many of our installations because of climate, and it does affect our national security.

So our intent was not to demean or ignore the Congress with our first report. It came out of my office, quite frankly, so you are talking to the right person. Our job is to ensure, though, that we communicate to you what we see the risks. And if asked again, I think we would take a different approach a year from now utilizing some better tools to be able to do that assessment.

Mr. LANGEVIN. Thank you, Mr. McMahon, I appreciate that. Hopefully, when the Department does the re-do, we will get the report in the way that we required it. Thankfully, the people have reelected me for at least another 2 years, I hope more than that, but I will be around for a while, and I am not going away, and I

hope we can work together on this and get the answers we need. I appreciate it.

Secretary MCMAHON. Congressman, I hope we can as well, and I hope we together can take a holistic approach to this question of resilience.

Mr. LANGEVIN. Fair enough. Thank you.

Thank you, Mr. Chairman. Mr. Chairman, I just want to thank you for holding this important hearing, the work that you are doing, whether it is on the climate change issue or resiliency as a whole and as it relates to many other topics. I appreciate your leadership——

Mr. GARAMENDI. Thank you.

Mr. LANGEVIN [continuing]. And again appreciate you allowing me to sit in on this hearing. Thank you.

Mr. GARAMENDI. Thank you for joining us, and thank you for making this an issue in the last NDAA. It is certainly going to be an ongoing issue here.

I would just add that, you know, nature has a way of also prioritizing. We have three examples here of Camp Lejeune, Tyndall, and Offutt, in which three—I guess three—two—all three were not on the list, but here we are, about $8- to $10 billion worth of problem going forward.

I have got one more thing, Mr. Langevin—Lamborn. Have you got anything else that you want to ask?

Mr. LAMBORN. My questions have been asked and answered.

Mr. GARAMENDI. Good.

I have got one more thing, and that is an ongoing question. There was a new unanimous vote of both the House and the Senate to reject the emergency declaration that the President made. He, of course, vetoed that, and then went on to request that somewhere between $7- and $8-, maybe $9 billion of MILCON projects be diverted from military construction to a border wall and other things along the border.

And this is a question for Mr. McMahon. Have the projects that are going—that are—let me put this in a different way. Have you identified—has there been any specificity in the identification of projects that are not going to be funded in this cycle as a result of the President's request?

Secretary MCMAHON. Congressman—or, Mr. Chairman, as you are aware, guidance was provided by the Secretary—the Acting Secretary to the Comptroller on moving forward, with beginning to put together a list potentially, if, in fact, the 2808 authorities were going to be used. That letter was signed, I think, on the 12th of April, with a date of 10 May of when the answer had to be back. Concurrent with that, the Acting Secretary asked for an assessment done by the Chairman of the Joint Chiefs.

Where we are today is that there are roughly—of the original list that was provided to the Congress, there is roughly $4.3 billion worth of projects to potentially cover $3.6 billion worth of projects. So we have with certain criteria, skinnied that down, not included any projects that would be projected to be awarded in fiscal year 2019.

In addition, any projects that were specifically focused on either housing or our barracks and dormitories. Where we are today is

that list from each of the services is being collected at the OSD Comptroller level. There is no specific list done today, as of today, with a date of 10 May, of being able to finalize that list to go back and meet the Acting Secretary's position, should he elect to utilize the 2808 authorities.

Mr. GARAMENDI. So 9 days from today, there will be a list of projects that are vulnerable to the 2808 request. Is that correct?

Secretary MCMAHON. That list—yes, sir, my math is the same as yours, that would be it, yes, sir.

Mr. GARAMENDI. And the amount of projects that are—the total value of the projects that are to be identified is how much?

Secretary MCMAHON. We have identified—if, in fact, the authorities are used, it is $3.6 billion that the President has identified, that potentially could come from 2808 authorities. There are—when you look at the sum total, with the criteria that we have made public, that is approximately $4.3 billion worth. So a net difference between what we need and what is available of about $700 million.

Mr. GARAMENDI. I think the use of the word "we need" is exactly what is in contention here. Do we need to do the military projects—the military construction projects or do we need to do the border wall issue?

I don't think—well, I do believe it is necessary to tell you how important this question is, not only to the military with regard to its ongoing needs for military construction, which apparently in the past the military thought were essential, and the Congress agreed, therefore, those projects were put into the MILCON budget.

The second question is that it is not at all clear that those projects will be re-funded in the future years. And also, there are many of us who really believe that the Constitution was written in such a way as to say that only Congress can appropriate money. So I will let it go at that.

Be aware that this is a very real and profoundly important question to me and I believe to many other Members of Congress. This issue will go long, long beyond this Congress, should the President be allowed to literally appropriate money using an emergency declaration. It is a profoundly important question of the division of power and the role of Congress and the role of the President. And so it is not going to be—it is not going to be a one-and-done issue. So I will let that lie where it is.

And with that, I want to thank the members—the witnesses for your testimony today. It was most helpful and fulsome. Also, your written statements cover most of the issues we have.

I do want to alert you that we will be going back on the issue of sustainment, which we did not cover today. In some ways, you did cover that in your written testimony, but we need to get to that in great detail, and we will do so in future hearings.

With that, the meeting is adjourned.

[Whereupon, at 4:30 p.m., the subcommittee was adjourned.]

A P P E N D I X

May 1, 2019

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MAY 1, 2019

Statement of the Honorable John Garamendi
Chairman, Readiness Subcommittee
"Fiscal Year 2020 Budget Request for Military Construction, Energy, and Environmental Programs"

May 1, 2019

Good morning.

Ladies and gentlemen, I call to order this hearing of the Readiness Subcommittee of the House Armed Services Committee.

Today's witnesses oversee a diverse set of programs that are all of great interest to this committee including privatized military family housing, military construction, installation resiliency, disaster recovery, environmental programs, and planning for climate change.

Our installations are the backbone of the services and are critical to readiness. They are the place where we train the force, maintain weapons and equipment, and the platform from which we project power. Our installations support our military families and provide the safe place our forces come back to post-deployment to recover personally and reconstitute as a unit. In addition, as the force evolves, our installations increasingly house critical missions that are conducted entirely from the home installation.

One issue our subcommittee has been following for the past few months is the poorly managed privatized military family housing program. If the services hope to recruit and retain the best candidates, they must ensure that they provide high quality places to live for service members and their families. When barracks and dormitories fall into disrepair and create substandard living spaces for service members, it directly contributes to poor retention. Likewise, when the services fail to take care of military families, retention also suffers. This committee will continue to demand that the services and Department of Defense improve their oversight of privatized military family housing. Until this committee is satisfied that all of our military families live in high-quality homes, free from hazards to their health and safety, and that they are treated with respect and dignity by private partners and military housing offices, we will keep close watch over the privatized housing program.

Despite their importance, installations have often been neglected to fund other priorities. This year's budget request seeks $13.9 billion for military construction. This number doesn't include the additional $7.2 billion in funds related to building the border wall that have been requested under OCO MILCON and $2 billion for disaster recovery. $7.2 billion would go a long way towards getting the installations ravaged by hurricanes back up and running and yet less than a third of that amount was requested for disaster recovery.

The budget request includes $12 billion for facilities sustainment, restoration, and modernization. Last year, this committee was told of a $116 billion unfunded facility maintenance backlog and that 32% of the department's facilities were in poor or failing condition. I look forward to hearing what progress has been made in addressing that backlog in the intervening year and how this budget request will help address these challenges. The chronic underfunding of facilities has diminished readiness in several ways. Deferral of routine periodic maintenance and building upgrades ultimately increases the lifecycle cost of the facility. Further, in the last year we learned that old and under-maintained buildings failed during hurricanes Michael and Florence at a much higher rate than well-maintained or newer buildings, adding millions to the total disaster recovery cost.

We have just begun to address the cost of recovering from these storms. During a recent trip to survey the damage at Marine Corps Air Station Cherry Point and Camp Lejeune in North Carolina, I learned that $1 billion is needed to supplement FY19 operations and maintenance funds that were used to conduct immediate response and other near-term costs to keep these installations mission capable. And yet, instead of reprogramming funds for disaster recovery the Administration instead reprogrammed $1 billion for an unnecessary border wall. And, we still do not know which military construction projects could be poached in the coming weeks to provide additional funds to the border wall, further exacerbating the issues of aging infrastructure.

Camp Lejeune, Tyndall Air Force Base, and Offutt Air Force Base are the most frequently discussed, but by no means are they the only installations impacted by increasingly frequent extreme weather caused by climate change. It is essential for the Department of Defense to systematically plan for more extreme storms, flooding, wildfires, and drought in a holistic way that mitigates known risks and ensures its installations remain viable and mission capable into the future. A holistic approach to resiliency will necessarily include resilient energy, and I look forward to hearing from our witnesses about how they intend to maximize resiliency through renewable energy, microgrids, and third-party energy resiliency financing vehicles.

In addition to installations management, I also look forward to hearing about the witness' budget requests in support of their environmental programs. Department-wide there are over 3,000 defense environmental restoration program sites across the nation that require additional clean-up actions, many of which have been ongoing for years and will continue for many years to come. In addition, the committee is very interested in the work that is being done related to PFOA and PFOS contamination in drinking water around military installations and the continued effort to find an alternative fire fighting foam.

With that, I would like to turn to our Ranking Member, Congressman Doug Lamborn of Colorado, for any remarks he may have.

Opening Statement
Ranking Member Doug Lamborn
Subcommittee on Readiness

Fiscal Year 2020 Budget Request for Military Construction, Energy, and Environmental Programs

May 1, 2019

Thank you, Mr. Chairman, and thank you for calling this important hearing.

I welcome our witnesses, all familiar faces, save for one, from our most recent hearing on military family housing programs. Though that hearing was less than a month ago, we would be glad to hear of any progress that the witnesses would like to share.

Today, we focus on all installation matters. While the broader installation portfolio hasn't achieved the notoriety of the housing program, it does not appear we fare too much better. Still, I am encouraged that all services have increased funding for Facilities Sustainment, Restoration, and Modernization in this year's budget request. However, after years of underfunding FSRM accounts, we are faced with a considerable backlog of critical FSRM work, with almost a third of DOD facilities in poor or failing condition. I hope that the military services will be able to sustain higher funding in the out years.

We also recognize that the Marine Corps and Air Force in particular are struggling to recover from the damage caused by Hurricanes Florence and Michael. The Chairman and I toured Camp Lejeune and Cherry Point last month, and saw first-hand the extent of the damage. We understand that neither service has programmed funding to address these challenges and we are doing everything possible to provide the necessary disaster recovery funds.

We also recognize the Department is addressing contamination to ground water caused by firefighting foam containing perfluorinated compounds. All of us want safe drinking water, of course. At the same time, we also expect that fire fighters will be able to extinguish fires quickly. I encourage the Department to prioritize research into effective firefighting chemicals that are free from contaminants and encourage you to continue working closely with affected military communities to assure safe drinking water.

Thank you, Mr. Chairman.

HOLD UNTIL RELEASED
BY THE COMMITTEE

Statement of

Honorable Robert McMahon

Assistant Secretary Of Defense

(Sustainment)

Before the House Committee on Armed Services

Subcommittee on Readiness

Fiscal Year 2020 Department of Defense Budget Request for

Sustainment

May 1, 2019

Introduction

Chairman Garamendi, Ranking Member Lamborn and distinguished members of the Subcommittee: Thank you for the opportunity to present the President's Fiscal Year (FY) 2020 budget request for the Department of Defense programs supporting Sustainment.

The New Sustainment Organization

With my confirmation as the Assistant Secretary of Defense for Sustainment, we have consolidated the former Logistics and Materiel Readiness and the Energy, Installations & Environment portfolios into a more holistic organization focused on sustaining warfighter support. As the principal sustainment official within the senior management tier of DoD, my mission is to advise and assist the Undersecretary of Defense for Acquisition and Sustainment, the Deputy Secretary of Defense, and the Secretary of Defense in providing guidance to the Secretaries of the Military Departments with respect to sustainment support. I prescribe policies and procedures for facilities management, energy, environment, infrastructure, logistics, materiel readiness, and product support. In addition, I exercise authority, direction, and control over the Office of Economic Adjustment and Director of the Defense Logistics Agency.

Sustainment is big business. We support warfighter capabilities through over 585,000 facilities, located on more than 500 bases, posts, camps, stations, yards, and centers around the world, with a facility replacement cost exceeding $1 trillion, not including the value of the 27 million acres of land that our installations occupy. Additionally, defense logistics alone represents a quarter of the Department's budget, while sustaining nearly $1 trillion in materiel assets, including 275 ships, 14,000 aircraft, and almost 500,000 combat and other ground vehicles. We manage approximately 5,000,000 stock numbers, 100,000 suppliers, 90,000 requisitions per day and an inventory valued at nearly $100 billion. The Defense Logistics Agency has annual sales of $38 billion.

As the head of this enterprise, my strategic objectives are to a) enhance materiel availability of DoD weapon systems; b) create and sustain resilient installations; and c) ensure safe places for our members and their families to live, work, play, and pray.

The FY 2020 budget request supports the National Defense Strategy's (NDS) three lines of effort: rebuilding readiness and lethality; strengthening alliances and partnerships; and improving performance and affordability through reform. Investments in infrastructure, environment, energy, logistics, materiel readiness, and weapons support are crucial for NDS implementation. Every mission the DoD Components undertake to defend this nation is supported by DoD installations, which are our power projection platforms.

Fiscal Year 2020 Budget Request – Military Construction and Family Housing

The President's FY 2020 budget requests over $21 billion for the Military Construction (MilCon) and Family Housing appropriation, which includes $9.9 billion for the base budget MilCon requirements, $1.3 billion for family housing, $0.6 billion for Overseas Contingency

Operations, and $9.2 billion for responding to emergencies. This represents a $9.8 billion increase from the FY 2019 enacted level primarily due to the aforementioned emergency funding, which will be used to restore funding which may be reallocated in FY 2019 to build border barriers should the Acting Secretary of Defense choose to exercise the 10 U.S.C. 2808 authority. This funding will also be used to rebuild facilities damaged by Hurricanes Florence and Michael, and for unspecified military construction to build border barriers.

This budget request continues the Department's priorities to establish a foundation for rebuilding the U.S. military into a more capable, lethal, and ready Joint Force. This funding will be used to construct or acquire facilities needed to bed-down new mission capabilities, restore and modernize enduring infrastructure, eliminate those that are excess or obsolete, and begin implementing projects supporting hurricane recovery.

Military Construction

We are requesting $9.9 billion in the base budget for military construction across the Services and Defense Agencies – an increase of approximately $1.1 billion from the FY 2019 enacted base budget. This increase is largely due to a need to fund the balance of projects that Congress incrementally funded in FY 2019; to support new capability/mission (e.g., F-35A and KC-46) bed down requirements, force structure growth, operations and training, maintenance and production, unaccompanied personnel housing, and replacing antiquated infrastructure at enduring installations in the United States and overseas.

This request includes $2.6 billion for the Defense-Wide Components including $267 million for fuel infrastructure; $697 million for recapitalization of National Security Agency and National Geospatial Intelligence Agency facilities; $494 million to address new capabilities/mission, force structure growth, and infrastructure for Special Operations Forces; and for specific programs such as the NATO Security Investment Program and the Energy Resilience and Conservation Investment Program.

In addition, the Defense-Wide request also contains $256 million for medical facility recapitalization including the third increment of $97 million of a $510 million project for the Walter Reed Medical Center Addition/Alteration; $50.0 million for the second increment (of a $381 million, five increment project) for a new bospital at Fort Leonard Wood, Missouri; and other smaller ambulatory care center/dental and support facilities. All the projects are crucial for our continued delivery of the quality health care that our service members and their families deserve.

Overseas Contingency Operations

The FY 2020 OCO budget request includes $645 million in MilCon, a decrease of $277 million from the FY 2019 enacted amount, to support critical global defense posture requirements focused primarily in European areas, including the ongoing European Deterrence Initiative (EDI). EDI enhances readiness in Europe to deter Russian aggression and provides our allies a clear indication of the United States' long-term commitment to Europe. This MilCon funding includes unspecified minor military construction and planning and design funds for airfield,

facility, and force protection upgrades. The improvements continue our efforts to strengthen combat readiness and theater Joint Reception, Staging, Onward Movement, and Integration capabilities in the region.

DoD Emergency Funding

As noted earlier, the FY 2020 budget request includes $9.2 billion of emergency funding to restore resources that may be reallocated in FY 2019 to build border barriers should the Acting Secretary of Defense choose to exercise the 10 U.S.C. 2808 authority, to rebuild facilities damaged by Hurricanes Florence and Michael, and for unspecified military construction to build border barriers.

Family and Unaccompanied Housing

In return for the sacrifices they make in service to our nation, Service members and their families expect a safe and secure place to live, good schools for their children, access to good medical care, and a viable relocation process that respects their household goods. The Department is committed to protecting the quality of life for military personnel and their families by ensuring access to safe, high-quality, affordable Family and Unaccompanied Housing where they will want to live. The environment in which our Service members and their families live impacts their quality of life, their ability to do their job, and the Department's ability to recruit and retain. Ensuring a positive housing experience and quality of life is critical to support personnel readiness for new and current missions and strategic initiatives worldwide.

Our FY 2020 budget request includes $1.3 billion to support our worldwide family housing inventory, which includes more than 34,000 government-owned and 7,100 leased family housing units. This request contains $293 million for construction of new housing and about $1 billion for operation and maintenance of DoD's government-owned and leased family housing units, oversight of privatized housing on our U.S. installations, and provisioning of housing support services to assist military members with housing issues such as resolving landlord issues or providing information on the local housing market. The requested funding demonstrates our commitment to provide safe, quality, affordable housing and housing support services to U.S. military personnel and their families.

The Department's FY 2020 budget request also demonstrates our continued commitment to modernizing Unaccompanied Personnel Housing, with more than $674 million requested for nine construction and renovation projects that will improve living conditions for more than 3,900 trainees and permanent party unaccompanied personnel. This includes $73 million for the second phase of a training barracks at Fort Sill, OK; $164 million for a bachelors enlisted quarters complex at Navy Base Guam; $110 million for a recruit barracks at Joint Base San Antonio, TX; and $134 million for a bachelor enlisted quarters project at Marine Corps Base Hawaii. Our modernization effort includes a focus on improving privacy and access to amenities that are important to our unaccompanied personnel.

Now that the Department has privatized most of its CONUS-based housing, a primary role for the Office of the Secretary of Defense is to ensure these projects maintain quality housing where

military families will enjoy living while sustaining the projects' long-term financial viability. To support this goal, the Department is requesting $3.5 million to help administer the Military Housing Privatization Initiative (MHPI) program. These funds are critical for us to monitor MHPI project financial health; respond to Office of the Management and Budget guidance related to oversight of federal credit including annual credit subsidy re-estimates for government direct loans and loan guarantees; and conduct analyses of MHPI projects under financial stress that may require a restructure or modification (e.g., as a result of hurricane damage). Our oversight of the MHPI program includes privatized family and unaccompanied housing, as well as lodging the Army privatized at 40 U.S. installations over the last 13 years.

Military Housing Privatization Initiative

Under the Military Housing Privatization Initiative (MHPI) legislation established in 1996, the Military Departments have privatized 99 percent (more than 200,000 units) of installation family housing in the U.S., with more than 80 MHPI projects currently in place across approximately 150 installations.

The Department is confident that housing privatization was the right thing to do. Privatization has dramatically improved the quality of on-base housing and has facilitated the long-term investment necessary to maintain high quality housing. The MHPI allowed the Military Departments to leverage private sector expertise and funding to improve the quality of installation housing in the United States much faster than DoD could have done through traditional military construction and ongoing operation and maintenance funding.

Under the MHPI, Military Departments conveyed their existing government housing units to competitively selected privatization entities (i.e., the MHPI projects). MHPI projects operate under long-term (~50-year) ground leases and associated legal agreements with a Military Department, with one 25-year option period. In return, the MHPI projects assumed ownership of the houses and the responsibility for operation, maintenance, construction, and replacement of the housing during the lease term, in accordance with the authorities as defined in Title 10, United States Code.

In light of the media reports and recent hearings on the poor conditions and service some military families experienced over the last several years, I am increasing the oversight my office provides to ensure the Military Departments fully and effectively exercise their responsibilities to ensure that privatized housing is managed in a manner protective of human health and the environment. This includes establishing new reporting requirements and programmatic reviews regarding Military Department monitoring of potential hazards in privatized housing, such as reporting on the number of child falls from windows in MHPI (or military-operated) housing.

The Department and our housing privatization partners are committed to working together to increase our collective communication with military families to better ensure they have a positive experience living in privatized housing. This will start with the issuance of a Resident Bill of Rights. We will be working with Congress, the Military Departments, the privatized housing owners, and military families to articulate the responsibilities and expectations between renters and lessors. We will also be increasing our engagement with military families throughout

their residency. Through increased engagement, we will better educate military families about their roles and responsibilities to help identify any issues with housing conditions, and the roles and responsibilities of the privatized partner and the installation housing teams. Our commitment to increase engagement also extends to Military and Veteran Support Organizations and advocacy groups such as the Military Family Advisory Network.

In all cases, we commit to work with our housing privatization partners to ensure any and all resident concerns are addressed in a highly responsive, timely, and professional manner, with emphasis on expediting resolution of any concerns involving potential health or safety issues. We want our military families to know that we truly care about their experience living in privatized housing and that we want to collectively do better in delivering safe, high quality, affordable housing where our military members and their families will want and choose to live.

The Department of Defense understands that the family is important, and we honor the sacrifice that Service members and their families make to serve our nation. The Department recognizes we have a moral obligation to military families to provide safe and quality housing, and we take that obligation seriously. We are committed to the long-term success of the MHPI projects and MHPI program, and will continue our oversight of the MHPI portfolio to ensure delivery of quality housing for Service members and their families over the life of the projects. Bottom line, this requires a twin focus: ensuring our residents have a positive experience living in privatized housing, and ensuring the long-term viability of the MHPI projects for future military families.

Facilities Sustainment and Recapitalization

In order for the Department's facilities to support the goals of the National Defense Strategy, they must be well maintained and renovated periodically. Over the last two years, the Department has increased its funding to sustain and modernize existing facilities. While our Components must still take risks in maintaining facilities, this budget request continues to improve our overall funding and reduce risk in our most important infrastructure.

Facility Sustainment funding, which includes the regularly scheduled maintenance and repair or replacement of facility components, is the foundation of the Department's investment to maintain the condition of our facilities. These periodic and predictable investments must be made across the service life of a facility to slow its deterioration and optimize its performance to support the safety, productivity, and quality of life of our personnel, while also reducing long-term recapitalization requirements. The Department's Operations and Maintenance (O&M) funding for Facility Sustainment in the FY 2020 budget request is $10.4 billion, representing a seven percent increase compared to our FY 2019 budget request. This investment improves our collective sustainment rate to over 86% of our Facilities Sustainment Model requirement. This is still short of our 90% goal, but nonetheless represents significant movement in the right direction.

In addition to Sustainment funding, Restoration and Modernization funding enables renovations and upgrades to ensure a facility can support assigned missions. Thanks to authority provided in the FY 2017 National Defense Authorization Act, the DoD Components are increasing their pursuit of opportunities to more cost-effectively repurpose existing facilities to accommodate

new missions. Our FY 2020 budget request includes almost $5 billion in the Operations and Maintenance account for facilities restoration and modernization, an increase of almost 80 percent over our FY 2019 request. As with our sustainment program, this also represents movement in the right direction to address the backlog of requirements in aging and obsolete facilities.

Environmental and Safety Programs

Installations are key platforms for our nation's defense. Therefore, we must make them resilient and a "safe" place for not only our service members, but their families living on our installations and our surrounding communities. The Department's environmental investments support these objectives through activities ranging from managing critical habitat and avoiding training restrictions to addressing drinking water health advisories and making the best use of limited cleanup dollars. The President's FY 2020 Budget requests $3.6 billion for environmental programs, which is an increase of $185 million compared to the FY 2019 request.

We are requesting $1.3 billion to continue cleanup efforts at the remaining Installation Restoration Program (IRP) sites and Military Munitions Response Program (MMRP) sites. The IRP is focused on cleanup of hazardous substances, pollutants, and contaminants, while the MMRP is focused on responding to unexploded ordnance and munition constituents at former military ranges. This includes $1.1 billion for "Environmental Restoration," which encompasses active installations and Formerly Used Defense Sites (FUDS – sites that DoD transferred to other Federal agencies, States, local governments, or private landowners before October 17, 1986). The remaining $254 million is for "BRAC Environmental."

Progress Towards Cleanup Goals

Goal: Achieve Response Complete at 90% and 95% of Active and BRAC IRP and MMRP sites, and FUDS IRP sites, by FY 2018 and FY 2021, respectively			
	Status as of the end of FY 2017	Status as of the end of FY 2018	Projected status at the end of FY 2021
Army	91%	91%	94%
Navy	82%	83%	88%
Air Force	83%	86%	92%
DLA	86%	85%	95%
FUDS	84%	86%	92%
Total	**86%**	**88%**	**92%**

By the end of 2018, the Department, in cooperation with State agencies and the Environmental Protection Agency, completed cleanup activities at 88 percent of Active and BRAC IRP and MMRP sites, and FUDS IRP sites, and is now monitoring the results. During FY 2018 alone, the Department completed cleanup at over 469 sites. Of the roughly 39,500 restoration sites, more than 33,500 are now in monitoring status or have completed cleanup.

Our focus remains on continuous improvement in the restoration program: minimizing overhead; adopting new technologies to reduce cost and accelerate cleanup; refining and standardizing our

cost estimating; and improving our relationships with State regulators through increased dialogue. All of these initiatives help ensure that we make the best use of our available resources to complete cleanup.

However, challenges remain that slow our progress. For example, unregulated or emerging chemicals of concern, such as perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), are becoming a top priority and require the DoD to reprioritize or reopen previously made decisions which will cause delays in achieving our goals. Additionally, some sites have no feasible solution to clean up the contamination, and as a result, the Department is making significant investments in environmental technology to identify new potential remediation methods.

Environmental Technology

A critical part of DoD's approach to meeting its environmental obligations and improving its performance is the continued pursuit of advances in science and technology. The Department has a thirty-year record of researching, developing, and transferring innovative environmental technologies from the laboratory to actual use in the field. Many of these technologies are also now widely used by other federal agencies and industry, benefitting the nation as a whole.

The overall FY 2020 budget request for Environmental Technology is $178 million, centered on two key programs - the Strategic Environmental Research and Development Program (SERDP - focused on basic and applied research) and the Environmental Security Technology Certification Program (ESTCP - focused on validating more mature technologies to transition them to widespread use). The FY 2020 budget request includes $66 million for SERDP and $39 million for ESTCP for environmental technology demonstrations, with an additional $27 million requested specifically for energy technology demonstrations. These Defense-wide environmental technology programs coordinate closely with the Military Services to ensure research, demonstration, test and evaluation are focused on the Departments most pressing environmental needs.

These programs have already achieved noticeable results and have the potential to significantly reduce long-term costs by implementing new ways of treating groundwater contamination, to increasing training land availability by developing more effective management strategies for installation managers, and to reduce the life-cycle costs of multiple weapons systems through development and demonstration of innovative coatings and materials. During the past two years, we have also launched an aggressive initiative to address management issues associated with the use of Aqueous Film Forming Foam (AFFF) including development of fluorine-free alternatives for AFFF, as well as development of more efficient and cost-effective sampling, analysis, and treatment options for AFFF-related chemicals including perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), and related per- and polyfluoroalkyl substances (PFAS). In the critical area of installation energy, we are focused on proving technologies and solutions that cost-effectively improve the energy security and resiliency of our installations, and that protect our energy assets and facilities from cyber-attacks.

Improving Installation and Climate Resilience

DoD must adapt current and future operations to address a variety of threats and increase the resilience of our installations. We recognize the effects of a changing climate are a national security issue with potential impacts to Department of Defense missions, operational plans, and installations. We have been and will continue to be proactive in developing comprehensive policy, guidance, and tools to mitigate these impacts, with a focus on robust infrastructure, sound land management policies, and increased energy resilience.

From a resources perspective, DoD is incorporating climate resilience as a cross-cutting consideration for our planning and decision-making processes, and not as a separate program or specific set of actions. Specifically, the Department considers resilience in the installation planning and basing processes. This includes consideration of environmental vulnerabilities in installation master planning, management of natural resources, design and construction standards, utility systems and service, as well as emergency management operations.
The Department has been proactive in developing policy, guidance, and tools to mitigate the impacts of a changing climate. These mitigation strategies focus on infrastructure and land management.

From a policy perspective, the Department has published several issuances to ensure the Services and Joint Staff integrate climate scenarios into planning. DoD Directive 4715.21, Climate Change Adaption and Resilience, assigns responsibilities to components to incorporate climate considerations into planning for infrastructure and operations. DoD Instruction 4715.03, Natural Resources Conservation Program, requires consideration of climate impacts during development of Installations Natural Resources Management Plans. In 2017, the Department updated DoDI 6055.17, DoD Emergency Management Program, to ensure the consideration of an all hazards approach to manage risks, including weather and climate related impacts on military installations.

Additionally, the Department regularly updates its building codes, known as Unified Facilities Criteria (UFCs), to reflect updated or more stringent industry and Federal standards. Over the past year, DoD has updated the Master Planning and High Performance and Sustainable Building Requirements UFCs to strengthen climate considerations. The Department has and will continue to develop tools for installation planners and engineers to assess climate impacts and develop mitigation strategies. Recent examples include The Planning Handbook on Climate Change Installation Adaptation and Resilience, produced by Naval Facilities Command (NAVFAC) in January 2017, and the Coastal Assessment Regional Scenarios Database (CARSWG) database with regionalized sea level scenarios for DoD sites worldwide.

Environmental Conservation and Compatible Development

The Department continues to manage its land, water, and airspace to ensure our military and civilian personnel have the access they need to conduct mission-essential activities. As training, testing, and operational requirements expand and new weapons systems are introduced, access and use of ranges becomes increasingly important. The FY 2020 budget request for

Conservation is $445 million. The Department will invest these funds to maximize our flexibility to use lands for military purposes and to address incompatible land uses beyond our fence lines.

The Department's lands and waters are vital to readiness. However, they also support a diverse array of fish and wildlife species, including nearly 500 that are federally protected under the Endangered Species Act, and over 550 that are at risk of needing listing protection. Managing for healthy and resilient natural landscapes, such as reducing fire risks, avoiding wildlife conflicts, removing invasive species, and improving range and training areas, provides the conditions necessary for mission-essential activities.

Regulatory protections related to threatened and endangered species and their habitats can pose significant mission challenges by restricting use of our existing ranges and training areas, or limiting our development of new infrastructure. In recent years, there has been a marked increase in the number of species being petitioned and evaluated for listing under the Endangered Species Act. To better address these issues, we have initiated a partnership with the Department of the Interior to target conservation efforts for species of primary concern to the Department. The three primary goals of this initiative are to facilitate species recovery and de-listing, establish local and regional partnerships to recover species or prevent new species from being listed, and to develop innovative tools and approaches that provide greater regulatory predictability.

The Department's participation in broader conservation partnerships for listed species is beginning to see returns on those long term investments. This past year the Lesser Long-Nosed Bat, a species that resides on three Southwest installations, was considered recovered and removed from the list of threatened and endangered species. This success alleviated training restrictions related to Unmanned Aerial Vehicle (UAV) operations and use of pyrotechnics on 18,743 acres at Fort Huachuca, AZ. Four additional species are also currently being evaluated or have been proposed for either a status change from endangered to threatened, or removal from the list of threatened and endangered species.

Building on this success, we will continue to work with our federal, state, and non-governmental partners to develop new and innovative regulatory approaches that streamline processes and provide greater mission flexibility. We will also be working to develop more comprehensive initiatives that better capitalize on both our on-installation conservation programs and our off-installation conservation partnerships through the Readiness and Environmental Protection Integration Program.

Readiness and Environmental Protection Integration Program

The Readiness and Environmental Protection Integration (REPI) program supports DoD's efforts to build a more lethal and resilient force. Investments protect training, testing, and operational assets of the Department, contributing to installation resilience and sustainment of existing and new mission capabilities. Through the REPI program, we engage in a long-term and cooperative strategy to ensure military mission sustainability by limiting incompatible development near our installations and ranges. Protecting these lands using the REPI program is a more cost-effective

approach to sustain military readiness for the Department and the taxpayer than settling for suboptimal test and training alternatives or workarounds, such as replacing compromised assets with new range construction or relocating missions. This cooperative land protection also provides direct benefits to our partners and neighboring communities through the conservation of limited resources shared by the installation and its neighbors. REPI initiatives contribute to the longevity of working farms, forests, and ranchlands; increase recreational opportunities for nearby residents, active military families, and veterans; and increase the installation's military value. The REPI program invigorates public-private partnerships that strengthen military installation ties to local communities. These local alliances help to foster an increased level of communication and cooperation, which enables installation commanders to better accomplish their vital test, training, and operational missions. In the last 16 years, REPI partnerships have protected more than 586,000 acres of land around 106 installations in 33 states. In addition to the tangible benefits of preserving DoD's existing training, testing, and operational assets, these efforts have resulted in significant contributions to the economic health and recreational opportunities for local communities.

One example of a REPI initiative is working to sustain the F-35 mission at Hill Air Force Base (AFB). Located in the fastest developing locale in the state of Utah, Hill AFB anticipates that without the REPI program, the arrival of the F-35 will face significant encroachment challenges in the next 5-10 years. Challenges such as public safety concerns, noise and nighttime lighting complaints, and water availability pose potential threats to the F-35 mission. Experts at Hill AFB say flight test patterns may have to be rerouted or aircraft launch hours may have to be restricted without encroachment mitigation.

In addition to directly preserving and enhancing key mission capabilities through innovative partnerships, the REPI program has developed an approach that supports land use and habitat conservation practices beyond installation boundaries to ensure military installations do not become refuges of last resort for threatened, endangered, or at-risk species. Under this approach, DoD engages with other governmental and non-governmental partners who work with private landowners to develop voluntary initiatives and agreements that promote practices that help avoid or mitigate regulatory restrictions on training, testing, and operations on DoD lands. These efforts ease the on-installation species management burden and reduce the possibility of restricted activities.

Within the Department's $445 million budget for conservation, $75 million is directed to the REPI program. The REPI program is a cost-effective tool to protect the nation's existing training, testing, and operational capabilities at a time of decreasing resources.

To further REPI investments, DoD, along with the Departments of the Interior and Agriculture, continues to advance the Sentinel Landscapes Partnership to work with private and non-Federal landowners to conserve large landscapes where conservation, working lands, and national defense interests converge. Established in 2013, the Sentinel Landscapes Partnership further strengthens interagency coordination and provides taxpayers with the greatest leverage of their funds by aligning federal programs to advance the mutually beneficial goals of each agency. From 2014 through 2018, seven Sentinel Landscapes have been designated. In 2018, DoD and the Military Services invested approximately $22 million in the seven Sentinel Landscapes,

which will further leverage funds from federal, state, local, and private partners. In 2018, the U.S. Department of Agriculture Natural Resources Conservation Service awarded $7 million in Regional Conservation Partnership Program funding to develop the North Carolina Sentinel Landscapes High Priority Protect Program. The investments made in Sentinel Landscapes help ensure readiness and protect operational flexibility.

Addressing Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)

Ensuring the health and safety of our Service members, the families living on our installations, and the surrounding communities is one of our top priorities. This includes the investigation and cleanup of PFOS and PFOA in drinking water where previous Department of Defense activities are determined to be the source. DoD has committed substantial resources in the last three years and has taken significant actions to respond to concerns with PFOS and PFOA.

One commercial product that contains PFOS and PFOA is Aqueous Film Forming Foam, or AFFF. Besides DoD, this highly effective firefighting foam has been used by airports, fire departments, and the oil and gas industry, among others. However, AFFF only accounted for approximately 3-6% of PFOS production in 2000 and DoD is just one of many users.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) provides a consistent approach across the Nation for cleanup. This includes prioritizing sites for cleanup using the CERCLA risk-based process – essentially worst first. The Defense Environmental Restoration Program statute provides authorities to DoD to perform and fund cleanup actions and requires they be carried out in accordance with CERCLA. The first step is to identify known or suspected releases. DoD has identified 401 active and Base Realignment and Closure installations with at least one area where there is a known or suspected release of PFOS or PFOA. The Military Departments then determined if there was exposure through drinking water. If so, DoD's priority is to quickly address unacceptable levels of PFOS/PFOA in drinking water. As of today, no one is drinking water above EPA's drinking water lifetime health advisory of 70ppt where DoD is the known source.

With the exposure pathway broken, the Military Departments are prioritizing sites for further action using the longstanding CERCLA risk-based process – essentially worst first. These known or suspected PFOS and PFOA release areas are in various stages of assessment, investigation, and cleanup. As DoD moves through the CERCLA process, we will work in collaboration with regulatory agencies and communities, and share information in an open and transparent manner. We are committed to funding the remainder of assessments and investigations as we move into the later phases of CERCLA process.

DoD has also committed significant funds in research and development to identify and test fluorine-free AFFF. As previously discussed, our SERDP and ESTCP programs launched numerous efforts and on-going projects from small scale to field demonstrations. At the conclusion of these projects, the Department will have invested $60 million in PFAS-related research and development, with additional research and demonstration projects under consideration for funding beginning in FY 2020.

We have already taken steps to remove and replace AFFF containing PFOS from our supply system and to prevent new releases of AFFF. The Military Departments no longer use AFFF for maintenance, testing, and training activities. When AFFF is used to fight a fire, it is contained to prevent releases to ground water.

Currently, no fluorine-free version of AFFF meets the military's stringent performance requirements to extinguish petroleum fires. We have solicited research projects to identify and test the performance of fluorine-free AFFF. These efforts support DoD's commitment to finding an AFFF alternative that meets critical mission requirements, while protecting human health and the environment, and will represent $10 million in research and development funding.

In summary, DoD is taking immediate actions to reduce the risks from PFOS and PFOA. Our efforts reinforce DoD's commitment to meeting critical mission requirements while protecting human health and the environment. The Department recognizes that this is a national problem involving a wide array of industries and commercial applications, as well as many federal and state agencies. Therefore, it needs a nation-wide regulatory solution.

Department of Defense Energy Programs

Energy is an essential enabler of military capability and the Department depends on energy-resilient forces and facilities to achieve its mission. In FY 2018, the Department consumed over 85 million barrels of fuel to power ships, aircraft, combat vehicles, and contingency bases at a cost of nearly $9.2 billion. At over 500 worldwide military installations, the Department spent $3.4 billion in FY 2018 on energy to power over 585,000 facilities and 160,000 non-tactical vehicles.

The National Defense Strategy outlines an operational environment where "every domain is contested – air, land, sea, space, and cyberspace," and the "homeland is no longer a sanctuary." Preparing for the battlefield of 2025 and sustaining installation and operational energy resilience necessitates the assured delivery of cyber-secure fuel and power in contested environments against near-peer competitors.

To enable resilient, efficient, and cyber-secure energy for Joint forces, weapon systems and installations, the FY 2020 President's Budget includes approximately $4.2 billion in energy investments, including both *operational energy* (the energy required for training, moving, and sustaining military forces and weapons platforms for military operations) and *installation energy* (the energy used to power permanent installations and non-tactical fleet vehicles).

In support of operational energy, the Department is requesting $3.5 billion to upgrade and procure new equipment, improve propulsion, adapt plans, concepts, and plan wargames to account for increasing risks to logistics and sustainment, and enhance how the Department considers energy in developing new capabilities. As the Department responds to changing threats in Europe, the Indo-Pacific, and the Middle East, these initiatives are increasing capability and decreasing risks for warfighters deployed around the globe.

In support of installation energy, the Department is requesting $698 million to for energy resilience and energy conservation initiatives, most of which are directed to existing buildings. This includes $548 million in the Military Component Operations and Maintenance accounts for sustainment and recapitalization projects, which generally involve retrofits to install improved lighting, high-efficiency HVAC systems, double-pane windows, energy management control systems, and new roofs. The remainder ($150 million) is for the Energy Resilience and Conservation Investment Program (ERCIP), which is a MilCon account that funds projects to improve energy resilience and security, save energy and water, reduce energy costs, and most importantly, contribute to the mission readiness of our military installations.

Our mission is to sustain warfighting readiness and lethality by providing all energy-related policy and governance for programs and activities that enable resilient, efficient, and cyber-secure energy for Joint forces, weapon systems, and installations. To do so, the FY 2020 President's Budget supports initiatives across four primary areas, outlined below.

Energy Resilience

As defined in Section 101 of Title 10, energy resilience is the "ability to avoid, prepare for, minimize, adapt to, and recover from anticipated and unanticipated energy disruptions in order to ensure energy availability and reliability sufficient to provide for mission assurance and readiness, including mission essential operations related to readiness, and to execute or rapidly reestablish mission essential requirements." To this end, the Department has been engaged in the following programs that increase energy resilience for our weapons systems and installations.

Energy Resilience and Conservation Investment Program (ERCIP). ERCIP is a key Department tool to enable more robust energy security. DoD is requesting $150 million for this program for FY 2020, including $113 million for energy resilience projects and $37 million for energy conservation projects. The ERCIP portfolio has a combined Savings to Investment Ratio (SIR) of 1.63. In other words, every dollar we invest in ERCIP is returned to the Department with a discounted cost savings of $1.63 over the lifetime of the project, demonstrating that, in many cases, energy resilience does not have to come at a price premium. For example, at Beale Air Force Base, ERCIP funding will provide an electrical substation which will provide a secondary source of power from an alternate power provider to ensure the Global Hawk mission has the reliable power it needs. At Anniston Army Depot, the project will provide on-site generation and grid controls which assure critical production and maintenance of combat vehicles during extended grid outages. Both projects provide improved energy resilience to their critical missions.

Micro-reactor Demonstration. As directed in the FY 2019 National Defense Authorization Act, DoD and DoE are in the planning stages for a pilot program to demonstrate a commercially developed, Nuclear Regulatory Commission (NRC) licensed, micro-reactor to power critical loads at a permanent domestic military installation by December 2027. The demonstration will evaluate the energy resilience capability and the cost effectiveness of micro-reactor technology.

Operational Energy Capability Improvement Fund (OECIF). Overseen by the Under Secretary of Defense for Research & Engineering, OECIF supports operational energy research programs. The FY 2020 President's Budget requests $70 million to initiate new projects and sustain projects started in FYs 2017-2019. Ongoing initiatives include efforts to increase the energy performance of unmanned systems, enhance power and thermal management for high pulse power weapons, wirelessly transmitting energy in the far field, and one-year analytical studies to identify operational energy science and technology gaps.

Installation Energy Resilience Policy and Governance. The Military Departments continue to implement energy resilience initiatives aligned with Department of Defense Instruction 4170.11, *Installation Energy Management*. This is the first policy the Department issued to define energy resilience; critical energy requirements; and operation, maintenance, and testing requirements for energy resilient systems.

Standardized Mobile Electric Power Systems. In August 2018, the Department established a DoD family of mobile electric power generation, distribution, storage, and management systems. This policy addresses the growing need for power at contingency bases with a standardized, interoperable, and maintainable family of equipment, while allowing mission-driven exceptions. The effort decreases the logistics burden – and risk – for deployed forces while enabling advanced equipment to reach the field at lower cost in less time.

Installation Energy Plans. The Department's ongoing energy efficiency efforts not only contribute to energy resilience by reducing critical loads, but have also lowered our base operating costs by $5.4 billion since FY 2005. In May 2018, the Department expanded its Installation Energy Plan (IEP) policy to require the integration of energy resilience and cybersecurity at all installations. The process of comprehensive energy planning will provide a holistic approach to identifying, evaluating, and mitigating energy risks to critical missions. The IEPs are slated for completion by the end of FY 2021.

Training and Education. Across the Force, there is a need for uniformed and civilian personnel who are prepared to develop and implement effective solutions for energy resilience and cybersecurity. For civilian and military installation energy managers, we finalized the Energy Manager Competency Model. Additionally, we foster collaboration among the Sustainment organization, the Department of Energy, and other agencies to communicate key priorities and coordinate inter-departmental events. For example, the annual Energy Exchange, Defense Logistics Agency's Worldwide Energy Conference, and the Federal Utility Partnership Working Group, provide relevant training for our workforce. In addition, for uniformed personnel, we are working to bolster energy-informed, risk-based decisions by expanding the Defense Logistic Agency's Joint Petroleum Seminar and Joint Petroleum Officers Course.

Energy Risk

To prioritize resources, the Department is identifying, assessing, and integrating energy-related analyses and risks into Department decision-making, as follows:

Energy Informed Wargames. To better evaluate and mitigate the effects of energy disruptions on the mission, we are actively engaged in integrating energy risks into our wargames and exercises. In 2018, my office participated in three events sponsored by the Army, Defense Logistics Agency, and USTRANSCOM. With the integration of realistic constraints to logistics capacity and threats to our fuel storage and distribution, our efforts will improve Department decision-making in operation plans, concept and capability development, and program investments. Looking ahead, the Department anticipates executing a Joint energy wargame by the end of FY 2019 that evaluates energy risks in the Indo-Pacific area of operations.

Energy Resilience Exercises. In alignment with U.S. Code and DoD instruction, we are performing full-scale and black-start energy disruption exercises of our energy resilience and backup power systems to evaluate risks to the readiness of our military installations. In FYs 2018 and 2019, the Department will have completed three tabletop exercise and five black-start readiness exercise tests at critical military installations. There is another planned black-start readiness exercise to be completed by the conclusion of FY 2020.

Energy Resilience Tools and Analyses. The Department continues to identify and develop critical energy requirements, models, and metrics for decision-making across the installation and operational energy portfolios. For installation energy, the DoD commissioned the Massachusetts Institute of Technology Lincoln Laboratory (MIT-LL) to address a congressional requirement to evaluate the costs, risks, and benefits associated with energy resilience and mission readiness against energy supply disruptions on military facilities and installations. Site-level assessments conducted across a number of military installations identified critical energy requirements and metrics for the purposes of identifying energy resilience projects. Also, the life-cycle cost analysis tool, which assesses tradeoffs between mission performance and costs, is now being assessed for enterprise-wide adoption across the Department.

Energy Performance

The Department continues to leverage alternative financing authorities that ensure lower cost, resilient energy performance across DoD installations. Through mechanisms such as power purchase agreements, performance-based contracts, enhanced use leases, utility energy service contracts (UESCs), utilities privatization, and energy savings performance contracts (ESPCs), the Department has awarded over three billion dollars in alternative finance contracts to ensure energy performance, efficiency, and resilience on our military installations since 2011. In accordance with more recent congressional direction, the Department issued revised policy to integrate energy resilience and cybersecurity considerations into these alternative financing mechanisms.

The Department takes full advantage of non-Federal financing for distributed energy projects to ensure the energy resilience of our installations. This approach minimizes DoD capital investment by using contracts that incentivize industry to fund infrastructure resilience improvements. When the business case supports it, the Department pursues distributed energy projects with microgrid-ready applications able to sustain continuous power in the event of a disruption. Both the Air Force at Hill Air Force Base and the Army at Fort Huachuca awarded ESPCs last year, which included implementation of on-site generation. In addition, the project at

Fort Huachuca includes a microgrid, which will ensure the delivery of available, reliable, and resilient power while reducing life cycle costs through an ESPC with our industry partners.

Further, my Energy team is conducting a Defense Energy Resilience Bank study, also known as the DERB, to review best practices from the commercial finance industry and lenders to implement and accelerate alternative finance for energy resilience project development. This multi-stakeholder collaboration with government and industry partners is critical to develop integrated and holistic alternative finance projects that ensure the Department's energy resilience objectives are met cost effectively.

Cyber Secure Facilities

Reflecting the role of our facilities as nodes for projecting and sustaining power, the Department is reducing the cyber risks to facility related control systems (FRCS) to ensure reliable power for critical missions. Similar to our approach to energy resilience, the department integrated cyber security into our energy policies and guidance of the course of the last year. For example our military installations are including cyber security considerations in the development of their installation energy plans, along with the pursuit of alternative finance. Specifically, FRCS considerations are now integral to utility privatization agreements, ESPCs, and UESCs.

Further, to build a FRCS defense posture, the Department recently began developing cybersecurity plans to account for the capabilities and resources required to implement controls on its highest prioritized assets and systems. We will continue to work with the Department's Chief Information Officer and Principal Cyber Advisor toward solutions and resources ensuring FRCS are defensible, survivable, and resilient to operate and sustain critical functions in a cyber-contested environment. Additionally, in July 2018, the Deputy Secretary of Defense issued a memorandum, *Enhancing Cybersecurity Risk Management for Control Systems (CS) Supporting DoD Owned Defense Critical Infrastructure*, mandating the Components cyber secure these critical systems.

Additional High Interest Programs

Border Security

On April 4, 2018, the President directed the Secretary of Defense to support the Department of Homeland Security (DHS) in securing the southern border, including assistance to "stop the flow of deadly drugs and other contraband, gang members and other criminals, and illegal aliens into the country."

On February 15, 2019, the President declared that a national emergency exists at the southern border of the United States that requires the use of the armed forces, making available certain emergency authorities, including Section 2808 of Title 10, U.S. Code.

Section 2808 provides that, in the event of a national emergency declaration requiring use of the armed forces, "the Secretary of Defense, without regard to any other provision of law, may

undertake military construction projects, and may authorize the Secretaries of the military departments to undertake military construction projects, not otherwise authorized by law that are necessary to support such use of the armed forces."

No military construction funds may be obligated under Section 2808 unless the Acting Secretary determines that military construction projects are necessary to support the use of the armed forces in addressing the national emergency for which the armed forces are required. At this time, the Acting Secretary has not decided whether any barrier construction projects are necessary to support the use of the armed forces and thus authorized under Section 2808. To inform his decision as to whether such military construction projects are necessary, the Acting Secretary has requested from DHS a list of proposed border barrier construction projects, prioritized in order of effectiveness, that DHS considers to be most effective in improving the effectiveness and efficiency of DoD personnel supporting Customs and Border Protection (CBP) and securing the southern border. DHS provided its input to DoD on March 20, 2019.

In support of the Acting Secretary's consideration of Section 2808, DoD is conducting a deliberate process to identify MilCon projects that could be used as funding sources, if necessary, for MilCon projects to support the use of the armed forces in connection with the national emergency. The Department will notify the appropriate committees as required by Section 2808 of any decision to undertake MilCon projects to support the use of the armed forces under this authority.

Additionally, the Defense Logistics Agency (DLA) is supporting Secretary of Defense-approved requests for assistance from the Department of Homeland Security via validated and Service-funded requisitions. As of February 28, 2019, DLA has provided over $7.7 million worth of Class IV materials in addition to over $3 million in subsistence, $56K in clothing and individual equipment, and $3.3 million of re-utilized material in support of operations. DLA remains well positioned to support additional requirements.

Military Construction Reform

Reform of the military construction process, although not represented as a budget request item, continues as an important effort of my office. Our goal is nothing less than to ensure warfighters are provided delivery of fully-mission-capable facilities within the timelines stated. We are looking for ways to reduce cost where possible, but perhaps more importantly, to improve communication between stakeholders and timeliness of completed facilities which fully meet user requirements over their expected service lives. We are continuing our proactive assessment of recent challenges in MilCon project delivery and program management to identify improvements in the MilCon process and implement reforms in a number of key areas, to include: improving identification of project requirements; enhancing collaboration between resource sponsors, end users, and construction agents to ensure projects meet mission requirements within budget constraints; selecting the best engineering and acquisition strategy to cost-effectively meet mission requirements; identifying risk mitigation measures before cost or schedule changes adversely impact the mission; and increasing awareness and accountability at all levels of management and performance as problems arise. The Department is also consulting

with our industry partners to identify commercial best practices to lower costs, save time, measure performance differently, and improve project quality in support of the warfighter.

Guam and the Commonwealth of the Northern Mariana Islands (CNMI)

As Acting Secretary Shanahan recently testified, China's increasingly provocative behavior in the Indo-Pacific, particularly in the South China Sea (SCS) should concern us all. Between 2013 and 2018, China increased its air and sea incursions into the SCS twelvefold. Our posture in the Indo-Pacific, specifically in Guam and the Commonwealth of the Northern Mariana Islands (CNMI) continues to be critical to countering China's influence.

The Department continues to work on the relocation of approximately 5,000 Marines from Okinawa to Guam. This initiative reduces the burden on our Japanese allies, while bolstering regional security in the Pacific. Its focus is on sustaining a forward-deployed responsive force that counters the reach of the People's Republic of China, the aggressions of North Korea, and other regional threats, while ensuring the capability to provide regional support at a moment's notice. Marine Corps forces realigning in the Pacific will establish an improved force composition, installation construction and modernization, and new strategic hubs, of which Guam will be the most significant. This venture between the U.S. and the Government of Japan will enhance interoperability and strengthen deterrence in the Indo-Pacific Region.

The main cantonment area on Guam for the Marine Corps will be known as Marine Corps Base Blaz, to honor Marine Brigadier General Vicente "Ben" Tomas Garrido Blaz, the highest ranking Chamorro to have served in the Marines, located at Finegayan in the Northwest. We are still in the land clearing phase of construction with approximately 85 percent of land clearing complete. The North Ramp of Andersen Air Force Base (AAFB) will be home to the USMC Air Combat Element housing the MV-22 (Osprey), the H-1, and the CH-53 platforms. Hangar 1, which houses the Ospreys is completed and operational. Overall, the North Ramp construction is approximately 50 percent complete. AAFB Northfield, which is directly above the cantonment area, provides a live-fire training range for small arms and will provide a multi-purpose machine gun range. The south side of AAFB will provide urbanized training.

Apra Harbor, located in the southwest of the island, will be a sea embarkation hub. It will have the capability to support all vessels that support USMC operations, black bottom vessels and high speed vessels. Apra Harbor will also provide forces with refueling piers and an ammunition wharf. Improvements at Apra are approximately 60 percent complete.

The relocation is expected to achieve initial support capability in the mid-2020s, contingent on affordability and environmental analyses. The FY 2020 budget request includes $277 million in MilCon and Planning & Design funding, including $91.2 million for the second increment of a multi-purpose machine gun range on Guam. Overall, the Government of Japan has committed $3.1 billion to fund this relocation and has already transferred $2.023 billion of its commitment to the U.S. Treasury. We are also asking your support to authorize the use of up to $13 million of funds appropriated in 2014 to mitigate the effects of the military construction workforce on the healthcare system of Guam, as identified during the National Environmental Policy Act process related to the Marines' relocation to the Territory.

Another initiative to increase our capabilities in the Indo-Pacific region is the Air Force's construction of facilities and infrastructure for Divert operations at Tinian International Airport. The Department signed a lease purchase agreement in November of last year and anticipates signing the final lease agreement this May. This represents a major milestone in one of the more challenging transactions we have worked. Divert operations would occur as training exercises to support readiness in the event other locations in the western Pacific are unavailable to support standard operations. For example, humanitarian assistance staging, including noncombatant evacuation operations, could also occur at the airport in the event of an emergency or disaster. The Divert initiative is estimated to cost ~$380 million. For FY 2020, the budget request includes $316 million to construct fuel tanks, a fuel pipeline, hydrant system, taxiway, and parking apron.

As the westernmost U.S. territory in the Pacific, Guam and CNMI offers tremendous potential to posture the U.S. for the future, engage with our regional partners, and train to maintain core competencies. This is why we continue to pursue live-fire training ranges and training areas in the CNMI. These capabilities would fulfill INDOPACOM training shortfalls and be the only U.S. venue to conduct Marine Air Ground Task Force, Joint, and Combined-level live-fire amphibious assault and maneuver from the sea, with supporting naval gunfire and close air support. The environmental analysis for this is on-going. A key element of the analysis is a construction capacity study that will forecast the amount of construction activity CNMI can support.

I would be remiss if I did not mention the devastation caused by Super Typhoon Yutu. On October, 24, 2018, the Category 5 hurricane-equivalent storm made landfall on CNMI. Its 180 mph winds caused devastating destruction in the region and according to the National Oceanic and Atmospheric Administration, it was the second strongest system to hit U.S. soil in recorded history. However, despite the catastrophic damage from the typhoon, the CNMI has chosen to continue moving the Air Force Divert initiative forward, demonstrating the strength of our relationship.

Workforce Issues in Guam and Commonwealth of Northern Mariana Islands

Stable economies in Guam and the CNMI, underpinned by a sustained labor pool, are critical to the Department's ability to implement the National Defense Strategy. Reliable access to a sustained labor pool in these forward-most territories is a national security issue that must be addressed if we hope to mitigate expanding Chinese influence and achieve our national security objectives in the region.

We thank Congress for the relief provided in the Northern Marianas Island U.S. Workforce Act of 2018 passed last July. Extending the transition period for the full application of federal immigration laws by 10 years (to December 31, 2029), and Guam and CNMI's exemption from the H-2B nationwide cap, will buy Guam and the CNMI time to work toward an interagency endorsed, long-term solution for ensuring sustained access to a viable labor pool Without long-term access to a foreign labor pool, the economies of these isolated U.S. territories will suffer and the cost of ongoing defense projects could skyrocket beyond their current estimates.

Military Aviation and Installation Assurance Siting Clearinghouse

The Military Aviation and Installation Assurance Siting Clearinghouse continues to protect the Department of Defense's ability to train, test, and operate as the nation expands its renewable and other commercial energy development and power transmission. The Department appreciates the statutory changes made by Congress in the FY 2018 National Defense Authorization Act to codify the Clearinghouse role in DoD's Title 10 responsibilities, and is actively implementing the new requirements to better protect DoD missions. As an example, the Clearinghouse now notifies state Governors and solicits their input on energy projects where DoD has made an initial determination that a project will have an adverse impact to a mission. This increase in visibility helps protect DoD missions by identifying any state concerns with an energy project at an early point in the review process, as well as by identifying any state procedures that may assist DoD in finding a compatible siting solution.

As a result of congressional direction and our own efforts, we are effectively evaluating the mission impact of commercial energy projects and implementing affordable and feasible mitigation solutions to protect DoD missions. In CY 2018, the Department reviewed over 5,000 applications for energy projects through the FAA's Obstruction Evaluation Process, which continues our historical increase of approximately 20% per year. Of these 5,000 projects, 795 were wind development projects. Commercial wind development typically poses the greatest compatibility challenge to DoD due to the height and the physical obstruction that wind turbines can pose in low level flight routes, and adverse impacts to radar systems. DoD has resolved concerns with numerous energy projects though collaboration between the Clearinghouse, the Military Departments, local communities, states, and energy developers, thereby maintaining the Department's ability to train, test, and operate while enabling development of alternative energy resources.

Protecting and Enhancing our Training and Test Range Infrastructure

The Clearinghouse is also leading the Department's efforts to develop a strategic plan for training range investments. In order to ensure that our testing and training range infrastructure is sufficient to support the National Defense Strategy, we are assessing our ranges' ability to support training for peer and near-peer adversaries. This assessment will result in a strategic plan for range investment to address identified gaps, improving combat credibility by offering opportunities for more realistic maneuver, attack, and opposing force engagement. The strategic plan will be completed in FY 2020 and will complement a parallel assessment of test ranges by the Test Resource Management Center.

Accelerating Materiel Readiness Recovery

Accelerating materiel readiness recovery is one of my near-term imperatives in alignment with the National Defense Strategy to increase lethality. Overall sustainment readiness is a foundational component of military strategy and pacing aspect of producing uninterrupted U.S. military capability. There is no one-size-fits-all approach – no silver bullet solution to the challenge before us today.

Effective and efficient public and private industrial capabilities & capacity is the end state we seek as the Department's accountable agent for enterprise level sustainment outcomes. Our strategy for accomplishing this follows three lines of effort; accelerating materiel availability improvement, strengthening the viability of the organic industrial base, and operationalizing sustainment reforms. Maintenance, at both the field and depot levels, is foundational to our ability to rebuild readiness, as our National Defense Strategy directs us to do. My team is laser-focused on getting Mission Capable (MC) and Operational Availability (A_o) rates where they should be – challenging the status quo, reversing negative trends, and driving an aggressive reform agenda based on improved data-driven decision-making and leveraging best commercial practices. This is no small task given a $78 billion annual spend for maintenance activities alone, and a workforce of over 606 thousand DoD personnel.

You are undoubtedly aware of the 80% Mission Capable memo that was signed this past September for F-16, F/A-18, F-22, and F-35 critical aviation assets. Our intent is to apply that same level of attention and visibility across all of our fleets—air, ground, and sea. So let me focus on what we are doing at the enterprise level to drive enduring change and improvement. Foremost, we are accelerating Materiel Availability improvements across our fielded fleets. I've charged my team with setting performance targets and measuring progress across the entire enterprise. I now can access and leverage over 1.5 billion maintenance and supply transactions going back to 2005; a virtual goldmine in my estimation. We are refining our capabilities to understand the specific causes of availability loss and/or cost drivers at the enterprise level and synthesizing that information to inform decision makers about cost and availability relationships for every weapon system.

We are also improving the viability of our organic industrial base capabilities. While our metrics initially focused primarily on mission and field-level outcomes, our next priority is depot performance and its contribution to overall supply chain effectiveness. We are working in concert with the Deputy Chief Management Officer's Cost Management team to map baseline costs of material and maintenance operations and to improve enterprise supply demand visibility and decision-making. We are also exploring and applying opportunities for broader application of commercial best practices within our public depots and repair activities.

Product Support for Weapons Systems

Sustainment supports Department decision makers with comprehensive, timely, relevant, and actionable assessments for weapon system development and acquisition. More specifically, we provide the DoD enterprise with policy, processes, guidance, and tools that drive effective product support planning and execution at best value; and lead the cultural transformation necessary to deliver optimal life cycle product support.

As part of these efforts, we are pushing initiatives to address Operating & Support (O&S) Cost projections early in the program life-cycle that do not fully capture the cost to achieve the readiness levels our warfighters need. Requiring Sustainment Risk and O&S Cost Risk analysis significantly earlier than is currently the norm, by the Analysis of Alternatives (AoA) Phase, will enable Affordable Readiness of critical sustainment cost drivers (manpower, spares,

consumables, and fuel efficiency). In addition to establishing and filling the supply chain, it also means establishing essential and early repair capability of depot level reparable and line replaceable units (DLR and LRU) by the scheduled Materiel Support Date - well-prior to initial operating capability (IOC) plus 4 years. We must balance near-term production cost with the long-range readiness of deployed fleets and fielded systems -- that in reality coexist in the POM process. We also continue to improve policy and governance of the "middle tier acquisition authority" granted to the Department by Congress in order to accelerate the delivery of emerging capabilities into the hands of the warfighter. This authority provides streamlined pathways for middle tier acquisition technologies that can be prototyped within two to five years, or be put into production within six months and completely fielded within five years.

My Product Support team is especially focused on improving aircraft availability and reducing sustainment cost for the F-35 program. We are working with our allies and partners to develop sustainment capabilities where appropriate; supporting numerous ongoing cooperation efforts, including information exchanges and engagements to facilitate interoperability and enhance relationships; providing logistical expertise to develop partner logistics capacity; and supporting Geographic Combatant Commands in developing their country assessments, their Security Cooperation Programs, and their Foreign Military Sales packages.

Logistics Support to the Warfighter

The core competencies of Supply, Transportation, Equipment Management, Contingency Support, and Logistics Policy and Compliance were integrated under the Deputy Assistant Secretary of Defense for Logistics as part of forming the new Sustainment organization. The Defense Logistics Agency (DLA) also performs a critical logistics role as the nation's combat logistics support agency. DLA manages the global supply chain – from raw materials to end user to disposition – for the Army, Navy, Air Force, Marine Corps, Coast Guard, 10 combatant commands, other Federal agencies, and partner and allied nations.

We secure our supply chains, institutionalize Operational Contract Support, and implement policies and strategies to mitigate threats from vendors in overseas locations. The Department seeks ways to strengthen our supply chains to support critical capabilities. Logistics personnel work closely with the Acquisition community to prevent procurement of counterfeit, defective, and malicious material. Efforts to encourage the development of supply chain standards is paying off as the Government Accountability Office (GAO) removed Supply Chain Management from its 2019 High Risk Report. Additionally, DLA supply chains drive over $35 billion in goods and services annually, providing 86 percent of the Military Services' spare parts, and nearly 100 percent of fuel. By staying synchronized with the Services' plans, DLA will take the required steps to proactively acquire and position material for aviation systems, land systems, and maritime systems, as well as industrial hardware, clothing and textiles, construction and equipment, medical, subsistence, and fuel and energy to ensure the readiness of our military forces.

Since 2007 the Department has consistently worked to establish Operational Contract Support (OCS) as an enduring capability to support current and future operations. In August 2018, the Department began implementing 15 critical actions endorsed by the Joint Requirements

Oversight Council (JROC) to fully integrate OCS across the Department, to strengthen the ability to perform OCS tasks, and ensure OCS supports all phases and ranges of joint military operations. Within OCS, Vendor Threat Mitigation (VTM) is critical. VTM is the capability to identify, assess, and mitigate risks posed by vendors supporting DoD operations outside the United States to ensure we do not do business with those entities that support our adversaries. Efforts are underway to mitigate risk to operational effectiveness and institutionalize OCS solutions by the end of 2022.

We also understand the need to build logistics-related alliances within and outside our Federal Government structure and have taken action to build ties with other Agencies, industry leading companies, and allies to improve operations. One partnership success example is the General Service Administration (GSA) acquiring more mission support vehicles for conversion from an expensive DoD-owned to a DoD-leased fleet. This action reduced DoD vehicle sustainment cost over the past five years by $217M (15.7%). Additionally, DLA provides some level of materiel or service support to about 40 federal agencies, 50 states, 300 localities, and 115 international partners. DLA has the capacity to augment federal contingency responses domestically and internationally. Hurricane-season demand topped $1.2 billion in support in 2017 and $105 million in 2018.

Another important effort is the Logistic Reform Team, with a focus on identifying common sets of metrics and tools to measure and monitor our contribution to warfighting capability in terms of availability of weapon systems and cost per day of availability. Continued support of ongoing efforts to reform logistics processes not only increases weapon system readiness, but also drives down sustainment costs. The Team is evaluating sources of sustainment and commodity procurement processes, innovating our logistics processes to outpace our adversaries, and increasing transparency and governance across the enterprise.

Readiness for the warfighter is also improved through DLA's organic industrial base program, where appropriated funds are used to enable industry a means to meet known surge requirements within our long term contracts when they don't have business case to do so otherwise.

Reaching beyond sustainment organizations, we are partnering with the personnel community to improve the military personnel relocation experience by modifying the household goods relocation process.

In support of audit readiness, we are taking actions to improve accountability of mission critical assets and to achieve a clean audit in the Department. We are reviewing notices of findings and recommendations received from independent public accounting firms and performing assessments of potential valuation methodologies for General Equipment, including weapon systems, for consideration as the Department-wide approach for properly valuing them. This will improve the integrity of financial data, which positions the Department to operate more efficiently and apply costs savings toward improving lethality. Additionally, we are working with the audit community and USTRANSCOM on the implementation of an enterprise-level transportation management system that will be a significant building block towards auditability.

F-35 Enterprise

The Sustainment organization touches the F-35 enterprises across multiple domains. F-35 sustainment continues to be a major focus area of the Department, as we work to increase readiness to meet the 80 percent Mission Capable rate goal set as well as reduce F-35 sustainment cost to align with the Service-budget-informed affordability constraints. As part of the strategy to meet these goals within the FY 2019-2024 time frame, the Department named U.S. Transportation Command (USTRANSCOM) and the Defense Logistics Agency (DLA) as the Global Transportation and Distribution Provider, as well as the Product Support Provider for F-35 North American Warehousing. In this capacity, they will provide wholesale and retail warehousing infrastructure and management supporting Air Logistics Complexes and Fleet Readiness Centers, along with management of designated commercial warehouses within the North American Region. Additionally, DLA and the Services have developed organic supply chain initiatives to improve readiness and lower total lifecycle costs. Further, we issued an updated F-35 Life Cycle Sustainment Plan FY 2019 that identified eight success elements necessary for the Department to improve readiness and cost to meet warfighter needs.

In FY 2018, the Department accomplished a major acquisition milestones across the F-35 sustainment enterprise. Our teams improved air vehicle availability by three percent through our reliability/maintainability progress, delivered Block 3F Air System, completed Phase 2 Global Supply Solution Capability and Capacity (for FYs 2020-2022), reduced DoD ownership costs from FY17 actuals, and planned for the Autonomic Logistics Information System re-architecture.

State and Community Engagement – Office of Economic Adjustment

The request for the Office of Economic Adjustment ensures it may continue to support its many engagements with states and communities who are key partners to help the Department meet our mission. Specific program lines supported by this request include: compatible use engagements to lessen the impairments on our local missions brought about by civilian development and activity, including energy project siting; industry efforts that promote installation resilience through improved understanding of local and regional supply chains' susceptibility to funding fluctuations and cyber attacks; mission growth efforts to plan and deliver the necessary public services and infrastructure to support our forces; and, in a few rare circumstances, operational support to sustain Local Redevelopment Authorities as they await the disposal of property previously excessed through base closure actions. These funds will also permit the necessary oversight and execution of more than $700 million in obligated projects to improve public schools on our military installations that support the education of 11,000 military dependents annually; nearly $300 million in transportation improvements to improve access to many of our premier medical facilities for wounded warriors, their families, and our medical personnel; and, close to $180 million in outside the fence investments on Guam for water and waste water systems to support our Indo Pacific efforts. These projects are critical to support quality of life issues for our service members and their families.

<u>Conclusion</u>

Thank you for the opportunity to present the President's FY 2020 budget request for DoD programs supporting sustainment. We appreciate Congress' continued support for our enterprise and look forward to working with you as you consider the budget request.

The Honorable Robert H. McMahon
Assistant Secretary of Defense for Sustainment

Mr. McMahon is the Assistant Secretary of Defense for Sustainment. He serves as the principal staff assistant and advisor to the Under Secretary of Defense for Acquisition and Sustainment, Deputy Secretary of Defense, and Secretary of Defense on sustainment in the Department of Defense, and is the principal logistics official within the senior management. Mr. McMahon provides oversight of logistics policies, practices, and efficiencies to enable readiness across the Department of Defense and manages over $170 billion in logistics operations. Mr. McMahon provides budgetary, policy and management oversight of the Department of Defense's real property portfolio that consists of 28 million acres, over 500 installations, and more than 500,000 buildings and structures valued at $1 trillion dollars. He is responsible for the Department's planning, programs, and capacity to provide mission assurance through military construction, facilities investment, environmental restoration and compliance, installation and operational energy resilience, and occupational safety programs. Mr. McMahon previously served as the Assistant Secretary of Defense for Logistics and Materiel Readiness from November 2017 to August 2018.

From 2015 to 2017, Mr. McMahon served as President of Fickling Management Services in Macon, Georgia. He led a team of commercial real estate professionals whose portfolio spanned eight states. Previously, he served as the Director of Field Operations and Site Lead (Warner Robins Air Force Base, Georgia) of the Boeing C-17 Globemaster III Integrated Sustainment Program (GISP), and as the CEO of the 21st Century Partnership in Warner Robins, Georgia.

Mr. McMahon retired from the Air Force as a Major General in 2012, after more than 34 years of service. Born in Toledo, Ohio, he entered active duty in the United States Air Force after graduation from the U.S. Air Force Academy in 1978. His command experience includes a maintenance wing, a logistics group and two maintenance squadrons. He has served as the Director of Maintenance for the Ogden Air Logistics Center, and as the Director of Propulsion for the San Antonio ALC. General McMahon was also the military assistant to the Assistant Secretary of the Air Force for Installations, Environment and Logistics, Headquarters U.S. Air Force. He has also served as the Director of Logistics, Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force.

Immediately prior to retirement, General McMahon served as Commander of the Warner Robins Air Logistics Center, Robins Air Force Base, Georgia. He was responsible for worldwide logistics support for C-130 and C-5 transport aircraft, F-15 fighter aircraft, U-2 reconnaissance aircraft as well as support for remotely piloted vehicles, Air Force helicopters, air-to-air missiles, surface motor vehicles and high-technology airborne electronics, avionics and electronic warfare requirements. The center was one of three Air Force air logistics centers and the largest single-site industrial complex in the state of Georgia.

Mr. McMahon holds a Bachelor of Science degree from the United States Air Force Academy and a Master of Science degree in Maintenance Management from the Air Force Institute of Technology.

RECORD VERSION

STATEMENT BY
MR. ALEX BEEHLER
ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS, ENERGY & ENVIRONMENT)

BEFORE THE

SUBCOMMITTEE ON READINESS
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES

FIRST SESSION, 116TH CONGRESS

ON FISCAL YEAR 2020 BUDGET REQUEST FOR MILITARY CONSTRUCTION, ENERGY, AND ENVIRONMENTAL PROGRAMS

MAY 1, 2019

NOT FOR PUBLICATION UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES

Introduction

Chairman Garamendi, Ranking Member Lamborn, and distinguished members of the Committee, thank you for this opportunity to testify on the "Fiscal Year 2020 Budget Request for Military Construction, Energy, and Environmental Programs" and answer any questions you may have. I want to begin by thanking the committee for its continued support and commitment to our Soldiers, Families and Civilians. Your leadership and guidance were instrumental in the successes we achieved last year, and I look forward to working with the Committee to achieve our mutual goals of Readiness, Modernization, and Reform throughout the programs and initiatives I oversee.

Modernization Strategy

The Army's modernization strategy focuses on making soldiers and units more lethal to win the Nation's wars and come home safely to our installations. The Army's Military Construction (MILCON) request demonstrates our continued effort to modernize facilities and maximize available resources to provide secure, sustainable facilities that will meet the Army's emergent needs in three critical subsets of installation Readiness: Power Projection, Mobilization, and Warfighter Lethality. For FY 2020, we apply $1.8 billion of our budget request to Strategic Power Projection; $1.4 billion for the Regular Army; $211 million for the Army National Guard (ARNG); $61 million for Army Reserve (USAR); and $66 million for the Army portion of the Base Closure Account.

The $1.4 billion Regular Army MILCON request will allow us to move forward with critical projects that enhance the Army's ability to compete against our Nation's adversaries. FY 2020 projects include a Cyber Instructional Facility ($107 million) at Fort Gordon, Georgia; an Aircraft Maintenance Hangar ($62 million) at Hunter Army Airfield, Georgia; and a Powertrain Facility Maintenance Shop ($86 million) at Corpus Christi Army Depot in Texas.

Our $211 million ARNG budget request is focused on recapitalizing readiness centers — the heart and soul of the National Guard — as well as ranges to allow the Guard to perform federal missions. Several of these projects will consolidate units and functions into a single facility, allowing the Guard to close multiple older facilities.

The $61 million FY 2020 budget request for the USAR replaces our most dilapidated and failing facilities, and an additional $9 million will support critical needs through the Unspecified Minor Military Construction account.

We appreciate the funding Congress provided the Army in recent years to meet the most pressing needs on our installations. The FY 2020 $5.9 billion Facilities Sustainment Restoration Modernization budget request sustains this trend and gets us closer to meeting our full sustainment requirements. The $3.5 billion sustainment portion of the request increases to 85 percent the total modeled requirement and will allow us to conduct more deliberate preventive maintenance activities. The $2.2 billion restoration and modernization portion of the request, an increase of $600 million over the FY 2019 request, will enable the Army to continue addressing our most critical maintenance backlog requirements. Commanders continue to optimize their resources and facilities by consolidating units into our best facilities, maximizing space utilization, and disposing of excess facilities.

Providing Safe, Quality Army Family Housing

Soldier and Family Housing as well as Quality of Life programs are an investment in the Army's most valuable asset — our people. I have been deeply troubled by reports in the media and concerns expressed by our Soldiers and Families of poor conditions and poor customer service associated with privatized housing. We have prioritized this matter and implemented changes in processes and procedures across the installation management enterprise to address known issues, and our assessments continue. The Army remains committed to improving infrastructure and services that foster Soldier

readiness and support Soldier and Family resilience, thus allowing Soldiers to focus on their mission.

The Army Family Housing budget allows us to provide homes and related housing services to Soldiers and their Families living around the world. For FY 2020, the Army requests $141 million for Family housing construction. This will fund the fourth and final increment of $83 million for new housing at Camp Humphreys, South Korea, which meets the requirements of Commander, U.S. Forces Korea for on-post housing. The request also directs $30 million to improve poor and failing housing units in Baumholder, Germany, and $19 million to address failing housing at Tobyhanna Army Depot, Pennsylvania.

We are requesting $358 million to sustain all Family Housing operations, cover utility costs, ensure proper maintenance and repair of government Family Housing units, lease properties where required, and provide privatized housing oversight. We are committed to providing our Soldiers and Families the best possible living conditions, commensurate with their service to our nation.

We are also investing in our unaccompanied Soldiers' quality of life by constructing a $32 million permanent-party barracks at Fort Hood, Texas. To address deficits at our Initial Military Training locations, we are requesting funds for Advanced Individual Training (AIT) barracks complexes at Fort Sill, Oklahoma, and Joint Base Langley-Eustis, Virginia for $73 million and $55 million respectively, and $54 million in addition for a reception barracks complex at Fort Jackson, South Carolina.

Reform through Optimizing the Army's Footprint

Reforming how the Army manages its real estate assets is a continuous process. The Army balances mission-required sustainment and improvement investments with the divesture of excess facilities and infrastructure, consistent with the Facility Investment

Strategy (FIS) annually distributed to all Army Commands and Components to help shape MILCON and Operations and Maintenance (O&M) requests.

The Army's FIS framework optimizes investments in construction, sustainment, improvement, and disposal of facilities to meet mission requirements, enhance Readiness, and lower costs with a balanced and funded investment plan. The tenets of the FIS are: (a) sustain enduring facilities, (b) improve facility quality and function, (c) dispose of facilities no longer needed, and (d) build out only the most critical shortfalls by optimizing and rebalancing facility investment.

Demolition is the most common method of facility reduction, but it is part of a system-wide approach that includes the use of recently enacted conversion authority (FY 2017 National Defense Authorization Act, Section 2802) to re-purpose and better utilize existing facilities as a cost-effective alternative to military construction.

As installation tenants are relocated out of leased, temporary, failing, or failed buildings and into more compact and/or better quality facilities, the Army is programming and executing necessary demolition projects to reduce permanently future Army sustainment requirements. This, in turn, generates re-occurring savings that can be put to better use.

One example of Army Reform efforts already paying dividends is since 2013, the Army has disposed of over 16 Million Square Feet (MSF) of facilities, mostly through demolition. In addition, the Army has reduced its sustained inventory an additional ~3.5 MSF by transferring property back to host nations (~2.6 MSF) and improving its real property data and records through ongoing audit activities (~0.9 MSF).

Among the benefits of footprint optimization through demolition, existing units and tenants are prevented from spreading into vacant or underutilized facilities simply because they can. When needed demolition and facility reduction efforts are deferred,

units move into available vacated space, sustainment resources are spread too thin, and the entire Army facility inventory degrades faster than anticipated.

These are efficiency measures the Army can and is taking using current authorities, but I should also point out some challenges to significant reoccurring savings. For example, overhead costs for operating an installation are relatively inelastic regardless of changes in that installation's population or building square footage. In other words, if the population of an installation drops by 20 percent, the overhead costs of that installation do not drop on a one-to-one basis. Rather, they typically decrease by a much smaller percentage.

Energy and Water Resilience

We appreciate Congressional support for the FY 2019 National Defense Authorization Act, which includes a $43.39 million plus-up for the FY 2019 Energy Resilience and Conservation Investment Program (ERCIP), of which the Army received $9.33 million.

Energy and water resilience provides support to our Soldiers and joint service partners across the installation portfolio and is a critical component of Army Readiness. Energy and water resilience enhances our ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from utility disruptions that impact critical operations on military installations, bases, and camps. Uninterrupted access to energy and water is essential to sustaining critical Army missions, providing installation support to operational warfighters, and enabling Army Readiness.

This last point, Readiness, is the Army's number one priority, and the resilience goal supports this objective by aligning with the Secretary of Defense and the Secretary of the Army's efforts to build, sustain, and ensure warfighting capabilities. As outlined in the National Defense Strategy, Army modernization efforts support our Readiness priority, so we can meet both current and future threats. Army installations are

Readiness platforms where our Soldiers live, train, and work. Attaining desired Readiness levels requires both a system-wide assessment of current conditions and a modernization effort that seeks to mitigate risk, while setting conditions to meet all threats. The Army's 156 installations must be ready, secure, and capable of deploying and sustaining forces in contested environments, anytime and anywhere the Army may be called upon to fight and win our Nation's wars.

Energy resilience requires on-site energy production, which is also an example of how installations can both contribute to Army Readiness and Modernization. The Army prioritizes energy infrastructure projects that will provide assured energy at key installations for critical mission Readiness. These projects seek to modernize energy systems that will mitigate against increasing threats from manmade and natural disasters. In Hawaii, the Army worked with Hawaiian Electric Company to develop a 50-megawatt multi-fuel project capable of providing secure energy during emergencies to Schofield Barracks, Field Station Kunia, and Wheeler Army Airfield. The project is located above the tsunami inundation zone and will establish a "black start" capability, thereby enhancing grid resilience to the benefit of both the Army and the community. In partnership with OSD, the Army also has conducted energy resilience readiness exercises, which shut off commercial power and test the readiness of our energy systems and infrastructure at Fort Greely and Fort Stewart. The Army also independently conducted a readiness exercise on Fort Knox. These exercises are vital to ensure mission-critical operations can continue on our bases and identify mission risks for funding consideration.

Safeguarding our Environment

The Army defends those things most prized by all nations – our land, our natural resources, and our people. We are obligated to protect those resources that we so faithfully defend.

As mentioned before, the Army is prioritizing Readiness and Modernization. Readiness training for multi-domain, high intensity conflict and Modernization of warfighting materiel require access to realistic environmental conditions that would be experienced during combat, including large scale landscapes with diverse and complex terrain. Natural resources are strategic assets critical to the Army's warfighting Readiness and Modernization.

We have come to learn that the training potential of our lands is directly affected by the loss or alteration of natural landscapes. Limitations on timing of training and testing activities, loss of range facilities and assets due to increases in wildfires and floods, and training constraints due to protected species and habitats are some of the documented impacts. Endangered species and their habitats exist as integral parts of Readiness training, and these landscapes contain some of the last, best habitats for endangered species. In fact, the Department of Defense (DoD) has a greater density of threatened and endangered species than any other Federal agency, and the Army has the greatest density of threatened and endangered species in the DoD. Currently, 126 Army installations contain 254 threatened and endangered species, which is why two million acres of Army training lands have management requirements for threatened or endangered species, which allows Army personnel to train, but with restrictions on those activities.

However, we have numerous recovery success stories. Habitat conservation and recovery of our installation populations of the American Bald Eagle at Aberdeen Proving Ground, MD; Red-cockaded Woodpeckers at Fort Bragg, NC and Fort Stewart, GA; Black-capped Vireos and Golden-cheeked Warblers at Fort Hood, TX; in addition to the Karner Blue Butterfly at Fort McCoy, WI and the Lesser Log-nosed Bat at Fort Huachuca, AZ have proved to be a win-win for the Army and endangered species. Habitat conservation and species recovery have maintained training landscape realism and relieved endangered species training limitations on more than 325,000 acres of Army mission landscape. These conservation efforts have resulted not only in

endangered species recovery but also increased access to capable and realistic Army landscapes that support tough, realistic, large scale combat training operations.

These are important successes; however, the Army's tremendous obligation to protect the land and important natural resources under its control is not without challenges. Based on Army endangered species trends (analyses spanning nearly 20 years), we expect that as more species are listed, and as new Army training missions are identified, Army-wide endangered species expenditures will continue to increase, and new training constraints will occur. As endangered species recovery populations increase at specific installations, expenditures and training restrictions may decrease at those locations, but installation-specific decreases in costs and species restrictions due to local endangered species population increases are not likely to offset the Army-wide impacts of overall increasing numbers of listed endangered species.

The Army is participating in important environmental initiatives to address challenges and grow those populations in order to prevent additional threatened or endangered listings. These efforts include: Off-installation species conservation crediting for Endangered Species Act compliance, Department of the Interior / DoD endangered species action plans to address continued listing of recovered species, and conservation plans for candidate species such as the gopher tortoise at Fort Benning, GA.

These challenges must be met through cooperation, and success does not occur in isolation. In each instance of species recovery at an Army installation, partnering with stakeholders has been a key factor. The Army's working relationships with state and federal agencies, universities, non-governmental organizations, and neighboring private property owners are important to the success of our conservation program and the Army's mission.

Readiness and Modernization depend on the environmental infrastructure and necessitate access to realistic natural landscapes and environmental conditions that

Soldiers experience during combat. The Army sustains our environment by making certain that our air and water are clean and safe, and rare and vanishing ecosystems including endangered species and their habitats are conserved. In sustaining the environment, the Army secures the mission by ensuring installation lands have the capabilities to support readiness and modernization.

Other Installation Modernization and Reform Efforts

Army installations are now clearly included in the battlespace under the Army's Multi-Domain Operations construct. This means that installations, as part of the Strategic Support Area, are considered vulnerable to new threats from a range of potential adversaries. Cities across America are taking advantage of new and emerging technologies that deliver enhanced public services to their populations at significant cost savings, and the Army is similarly exploring ways to implement technology that will support Readiness and resilience within a modernization framework. Accordingly, one of my top priorities is to prepare our installations for the future using a deliberative process. This "Installations of the Future" effort is leveraging innovation, technology, and partnerships to ensure a modern Army has modern installations capable of serving as our initial maneuver platforms. This technology theme was further endorsed by congress when the FY 2019 NDAA was passed with language supporting smart basing. During FY 2019, we are exploring further private sector partnership and contracting opportunities that test additional technologies including sensor technology and analytics for security, Readiness, training and modernization. Our intent is to undertake a limited number of demonstration projects that allow the Army to collect data, perform deep analytics, and apply an artificial intelligence to enhance Readiness. Successful pilots will inform future budget requests. I would welcome the chance to provide you or your staff a more detailed briefing on this initiative.

As you are all aware, the entire Department of Defense is undertaking dedicated management reform efforts to reduce costs and improve the delivery of goods and services. The Army's installation management community is an active participant in a

wide variety of Department of the Army and Department of Defense-led efforts, ranging from contract reform, space utilization, and facilities/lease consolidation. Additionally, I intend to work with Army senior leaders to continue to optimize our approach to installation management, including structure, major processes, and operations.

Conclusion

Army Readiness begins on Army installations. We need ready and resilient installations that ensure our Soldiers are properly trained and can be deployed anywhere in the world in order to fight and win our Nation's wars.

The Army is methodically increasing its facility sustainment levels and focusing its infrastructure investments on Readiness, Modernization, and Reform priorities that support power projection, mobilization, and the warfighter. Predictable, adequate, sustained, and timely funding allows the Army to maintain critical infrastructure and training lands to support Soldiers, Civilians, and Families.

We greatly appreciate the funding provided in FY 2019 and commit to being responsible stewards of the resources entrusted to us.

Thank you for the opportunity to present this testimony and for your continued support of our Soldiers, Civilians, and Families.

Mr. Alex A. Beehler
Assistant Secretary of the United States Army (Installations, Energy and Environment)

Mr. Alex A. Beehler was confirmed by the U.S. Senate on Jan. 2, 2019, and sworn in as the 16th assistant secretary of the U.S. Army for Installations, Energy and Environment (ASA(IE&E)) on Jan. 10, 2019.

As ASA (IE&E), he is the primary advisor to the Secretary of the Army and Chief of Staff of the Army for all matters related to Army installation policy and oversight, and coordination of energy security and management. In addition, he is responsible for policy and oversight of sustainability and environmental initiatives; resource management, including design, military construction, operations and maintenance; Base Realignment and Closure (BRAC); privatization of the Army real estate portfolio and installations' Safety and Occupational Health programs.

Mr. Beehler previously served from 2004 to 2009, in the Office of Under Secretary of Defense for Installations and Environment, first as the Assistant Deputy for Environment, Safety and Occupational Health (ESOH), then Principal Deputy, and Acting Deputy Under Secretary. In those capacities, Mr. Beehler served as the principal assistant and advisor for all environmental, safety and occupational health policies and programs in the Department of Defense (DoD). Those programs included cleanup at active and closing bases, compliance with environmental laws, conservation of natural and cultural resources, pollution prevention, environmental technology, fire protection, safety and explosive safety, and pest management and disease control for defense activities worldwide. He also was the first Chief Sustainability Officer (CSO) of the Department of Defense.

Mr. Beehler also has extensive experience in private industry, where he served as a director of environmental and regulatory affairs. Mr. Beehler has maintained a strong background in federal environmental policy, having served in the Department of Justice as a senior trial attorney for environmental enforcement and at the Environmental Protection Agency as a special assistant for legal and enforcement counsel. He also served as staff counsel on the U.S. Senate Judiciary Committee.

Mr. Beehler is a member of the bar of Maryland, Virginia and the District of Columbia. He received a bachelor's degree from Princeton University in public and international affairs and a law degree from University of Virginia.

Mr. Beehler and his wife Stephanie have two adult children.

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON READINESS

STATEMENT OF

MR. TODD C. MELLON

ACTING ASSISTANT SECRETARY OF NAVY
(ENERGY, INSTALLATIONS AND ENVIRONMENT)

BEFORE THE

HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON READINESS

MAY 1, 2019

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON READINESS

Chairman Garamendi, Ranking Member Lamborn, distinguished members of the Readiness Subcommittee, thank you for the opportunity to sit before you today with my fellow Service leaders to testify on the Department of the Navy's Energy, Installations and Environment (EI&E)'s PB20 budget request. In support of the President's goal to protect our homeland and our National Defense Strategy, Secretary Spencer has focused Department of the Navy efforts to restore military readiness and increase lethality by taking care of our people, improving our processes, and creating greater capabilities in every area of the Navy and Marine Corps fighting force. We are rethinking how the EI&E portfolio is most effectively aligned with this direction. I will first discuss this with respect to Military Construction (MILCON), and then with respect to our infrastructure sustainment and operations. The PB20 request delivers an arrest in backlog growth, and we are modernizing facilities in support of our Sailors and Marines and their warfighting missions.

Military Construction

MILCON enables Navy and Marine Corps warfighting capability, provides quality of life for the All-Volunteer Force, and ensures we are ready to accomplish the Department's global mission. The DON continues to invest in MILCON to provide maximum readiness in support of current and future mission requirements. Our PB20 MILCON program includes 40 projects, planning and design (P&D), and unspecified minor construction (UMC) at a value of $2,955M. We are investing in new platforms, technologies, and infrastructure that will add capability to our submarine force and ability to address maintenance requirements, and increase our surge capacity from Fleet

concentration areas. A majority of the Department's MILCON program is in direct support to National Defense Strategy lines of effort to 1) increase lethality (new platforms), 2) support our Combatant Commanders as they strengthen alliances, and 3) reform the Department's business practices for greater performance and affordability. Additionally, the program continues to recapitalize our four Naval Shipyards and supports the long-term implementation of the Commandant's Infrastructure Reset Strategy. Examples of MILCONs that are building a more lethal force include:

- Ammunition Pier, Seal Beach, CA. This project constructs an ammunition pier, ordnance operations facilities, and physical security barriers with the capability to load two destroyers or one amphibious ship pier side, enabling increased onload and offload capability to support deployment cycles and surge requirements.
- Navy CMV-22B Maintenance Hangar, Coronado, CA. This project constructs a new high bay hangar, providing maintenance and administrative space to support Navy CMV-22 operations at Naval Air Station North Island.
- F-35 Training and Simulator Facility, Marine Corps Air Station Cherry Point, North Carolina. This project constructs a new flight simulator facility capable of supporting Full Mission Simulators and other training devices in order to provide pilot training and proficiency in support of the F-35 aircraft.

The PB20 MILCON program also includes overseas projects that enhance global reach and persistent presence of forward-deployed naval forces. One such example in Yokosuka, Japan is:

- Pier 5 (Berths 2 and 3). This project constructs a concrete, fixed, single-deck Type II General Purpose Pier with capabilities to support CG-47, DDG-51 and future DDG-1000.

Facilities Sustainment, Restoration and Modernization

In the past, the DON took risk in infrastructure maintenance, which affected facility condition and mission readiness. We are shifting to a more integrated approach and driving toward filling critical readiness gaps, and are pleased to report this year's budget request will arrest the growth in maintenance and repair backlog. We are modernizing DON infrastructure by using non-traditional means, not just appropriated dollars. I am encouraging Navy and Marine Corps to embrace technology, consolidate and shrink our footprint, increase our productivity, and lower our total ownership cost. Modernizing our facilities is the biggest challenge we face in supporting training, operations and quality of life. Examples include:

- Replace SSN Berthing Pier 32, New London, CT. This project replaces an inadequate and structurally deteriorated attack submarine (SSN) pier to meet current standards for supporting Los Angeles and Virginia-class SSNs.
- II Marine Expeditionary Force (MEF) Operations Center Replacement, Marine Corps Base Camp Lejeune, North Carolina. This project replaces 70-year old, functionally inadequate facilities with new, efficiently configured headquarters/operations facilities to support II MEF, II Marine Expeditionary Brigade (MEB), and the Littoral Warfare Training Center Training Facility.

To help drive modernization, the USMC continues to implement their Infrastructure Reset Strategy and Installation Next initiatives. We are also developing the Navy Infrastructure Readiness Plan. In both efforts, a key to modernization is to embrace our core functions and look to best business approaches with the private sector and with state and local communities to satisfy our non-core functions so that we wisely invest taxpayer dollars on mission priorities. As an example, we are maximizing our use of existing intergovernmental support agreements, which allow us to provide, receive, and share services, supplies, resources, and support already provided by state or local communities for their own needs. You are helping us modernize with the expanded authorities you provided including the classification of "conversion" work as "repair," an increase in the Unspecified Minor Construction limit from $3M to $6M, and the increased cost limitation for Operations and Maintenance funded minor construction from $1 million to $2 million (the largest incremental increase ever authorized). These three expanded authorities enable us to be more responsive to Fleet requirements and to use limited MILCON funding where it is most needed. To help Navy and USMC better use these and other authorities, I have recently published the Installation Commanders' Authorities Guide to help our enterprise, state and community partners consider all available authorities, along with appropriated dollars, to further modernize Navy and USMC facilities. For example, by using 40 USC 501 we recently delivered third party financed infrastructure to acquire 16 megawatts of power to produce COLUMBIA submarine propellers at the Philadelphia Navy Yard. 40 USC 501 allowed us to

accelerate submarine delivery that would have otherwise been delivered later by the traditional MILCON.

Public-Private Venture (PPV) Housing

We are working with a sense of urgency and deliberateness to pursue improvements in our government housing portfolio. We have contacted 100% of our PPV residents and completed all 7,400 visits as requested by residents. We now require our PPV partners to submit weekly metrics to Installation Commanders and hold weekly reviews; have also initiated an out of cycle resident satisfaction survey, and requested additional billets for housing and contractual oversite. We are exerting more effective oversight, communicating more with our tenants and Public Private Venture (PPV) partners, and are working to ensure our partnerships provide quality housing that has improved measurably and substantially. Immediate action has been taken to reach out to every family in PPV housing and to develop remediation plans to ensure Sailors, Marines and their families have safe, quality living quarters and that their commands are advocating for such.

In the mid and longer term, we are actively working on other improvement initiatives such as improving work order transparency, improving what is meant by work order completion and issue resolution, developing improved communications and identifying legal and budgetary gaps. Our Naval Audit Service is performing a comprehensive review of the PPV program and providing insight into how to improve accountability across the program. And, we are adjusting business practices to correct systemic issues, such as leveraging mobile technology and upgrading database systems.

Our goal is to ensure expeditious, enduring and comprehensive PPV housing improvements.

Our PB20 Family Housing request is for $366M, of which $48M is for construction renovation and $318M is for operation and maintenance.

Defense Posture Review Initiative (DPRI)

The DON continues to demonstrate our steadfast commitment to United States national security interests in the Indo-PACOM area of responsibility. Our commitment is made alongside the Japanese contribution. In PB20, the DON request for Guam totals $277M to build support facilities for 5,000 Marines who plan to arrive in 2024, a machine gun range and bachelor enlisted quarters. We are also asking your support to authorize the use of up to $13 million of funds appropriated in 2014 to mitigate the effects of the military construction workforce on the healthcare system of Guam. This support is critical to meeting DOD's final National Environmental Policy Act requirement related to the military construction on GUAM. Our commitment to Japan is steadfast as demonstrated by continued execution of the construction program required to realign Marine forces from Okinawa to Guam. The military construction effort on Guam is proceeding as planned, and the Government of Japan's efforts to support the transition remains on track.

Real Property Audit

Regarding Financial Improvement and Audit Readiness (FIAR), the DON submitted its financial statements for audit in 2018. Auditors were unable to obtain sufficient documentation to provide a basis for an audit opinion. Real property was rated

a material weakness as "existence and completeness", and "valuation of real property inventory data" were found to be lacking. As a result, the Marine Corps and Navy received a "disclaimer of opinion."

We are learning as we go and making improvements as we proceed. The DON is committed to accounting for 100% of its real property assets, valued at nearly $400B, and taking steps to improve financial reporting of real property. Both Services, while at different stages of audit, are making marked progress to meet our commitment. The Navy is conducting a physical count of all its 113,000 real property assets; we expect to be complete in April 2019. Already, the Navy has corrected over 2,300 errors in iNFADS, our real property database. The Marine Corps has completed its evaluation on their real property inventory and is working on valuation and migration to the Marine Corps Enterprise Resource Planning (ERP) tool.

Environmental and Safety Risks

The effects of climate change have the potential to impact Department of the Navy missions, operational plans, and installations. Recent severe weather events such as hurricanes and wildfires in the western states have demonstrated comprehensive impacts such as extreme precipitation, wildfires and desertification in addition to sea level rise.

Initial estimates indicated Hurricane Florence caused $3.6 billion in damage to Camp Lejeune, MCAS New River and MCAS Cherry Point, damaging 809 facilities or 18% of our infrastructure at those installations. Sea level rise, land subsidence, and changing ocean currents have resulted in more frequent nuisance flooding and increased vulnerability to coastal storms.

To minimize risk to missions and our installations, we are assessing the resiliency of our installations with the view of ensuring our footprint is able to support our current and future readiness. For example, at Norfolk we are engaged in initiatives and partnerships with local governments to mitigate risks. Two years ago, the Naval Facilities Engineering Command (NAVFAC) released a handbook on assessing climate impacts and evaluating adaptation options in master plans. We are committed to understanding our risk and evaluating how we can best enable our installations to support readiness.

We have also undertaken initiatives in our safety program. We have embarked on a two-year Safety Awareness Campaign with the overarching goal of continuing to reduce the mishaps by increasing awareness of the operational necessity of risk management and the integral role a culture of safety plays in mission accomplishment. The campaign includes messaging focusing on 4 themes: (1) Every Sailor, Marine, and civilian cares enough to be a safety leader.; (2) Reporting helps us learn and prevent; (3) Cutting corners costs lives; and (4) Reduced mishaps improve readiness.

Conclusion

The Department continues to carefully and deliberately manage its portfolio to restore Navy and Marine Corps readiness, increase lethality of our missions, and to improve the quality of life for Sailors, Marines and their families.

Modernizing our facilities and business operations will bring important and lasting improvements in support of readiness and quality of life. I look forward to working with Congress to deliver an innovative and resilient program that supports

mission success for the United States Navy and Marine Corps, the most formidable expeditionary fighting force the world has even known.

Mr. Todd Mellon
Acting Assistant Secretary of the Navy (Energy, Installations and Environment)

On March 31st, 2019, Mr. Todd C. Mellon, SES-3, assumed duty as the Acting Assistant Secretary of the Navy Energy, Installations and Environment (EI&E). His responsibilities include oversight and policy for Navy and Marine Corps facilities sustainment, restoration and modernization; military construction; acquisition, utilization and disposal of real property and facilities; environmental protection, planning, restoration and natural resources conservation; and safety and occupational health. Since February 2019, he served as Principal Deputy Assistant Secretary of the Navy (EI&E).

Prior to joining the Office of the Assistant Secretary of the Navy (EI&E), he was the Director for Sustainment within the Office of the Assistant Secretary of Navy (Research, Development and Acquisition). Prior to his arrival to the Secretariat, Mr. Mellon was the Executive Director for the F-35 Lightning II Joint Program Office from 2010 through 2018, where he was responsible for acquiring and delivering the Department of Defense's fifth-generation strike aircraft as well as the F-35 Global Sustainment Strategy for three U.S. Services and eight Partner Countries.

Mr. Mellon graduated from Embry-Riddle Aeronautical University with a bachelor's degree in Aeronautical Engineering in 1986. After graduating from the Logistics Intern Development Program in 1991, Mr. Mellon was promoted to assistant program manager for Logistics for the F/A-18E/F in 1997 and directed the acquisition planning and execution of the logistics support system for the Navy's newest tactical aircraft and successfully developed and implemented the Naval Aviation's first performance- based logistics support contract with industry, which continues to serve throughout the Navy and DoD as the model for industry partnership. In recognition of this significant and unprecedented accomplishment, Mr. Mellon was awarded the Navy's Admiral Stan Arthur Civilian Logistician of the Year Award. In December 2001, Mr. Mellon was selected as the Division Director for Logistics Information Systems.

Mr. Mellon was appointed to the Senior Executive Service as the Director of the Design Interface and Maintenance Planning Department on July 24, 2005. In that capacity, Mr. Mellon led a national organization of over 1400 people and was responsible for ensuring supportability of newly developed weapon systems as well as for the establishment and sustainment of integrated logistics support for fleet operations and maintenance throughout the life cycle of Naval Systems. He was awarded the Presidential Rank Award in 2010.

DEPARTMENT OF THE AIR FORCE

STATEMENT BY

HONORABLE JOHN HENDERSON
ASSISTANT SECRETARY OF THE AIR FORCE
(INSTALLATIONS, ENVIRONMENT, AND ENERGY)

BEFORE THE

SUBCOMMITTEE ON READINESS
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: INSTALLATIONS, ENVIRONMENT AND ENERGY POSTURE

MAY 1, 2019

NOT FOR PUBLICATION UNTIL RELEASED
BY THE COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES

Introduction

The United States faces an increasingly complex global security environment, characterized by overt challenges to the free and open international order and the re-emergence of great power competition. As we prepare for near-peer conflict, we must continue projecting power to meet our nation's national security needs. The Air Force fights from its bases; thus, ready and resilient installations are the foundation to a lethal and ready Air Force. Securing this foundation sends a powerful strategic message to our adversaries and allies.

Over a decade of challenging fiscal constraints and important competing priorities associated with critical readiness and modernization shortfalls have forced the Air Force to assume managed risk across its infrastructure, resulting in a backlog of deferred maintenance. This backlog is currently estimated at $33 billion, and it could triple in 30 years if spending levels and business practices do not change. Although infrastructure readiness decays slowly, it also recovers slowly; and restoration requires long-term commitment. Now is the time to take responsible actions to address this backlog, cutting the risk of adverse readiness impacts to joint warfighting operations. We recently codified these responsible actions in our new Infrastructure Investment Strategy (I2S). The I2S provides the framework for securing necessary investment and implementing process improvements, cost effective modernization, and innovation across our facilities sustainment, restoration, modernization, recapitalization, and military construction portfolio. Its implementation will ensure a lethal force ready to compete and win in the present and future era of great power competition.

The total Air Force Fiscal Year 2020 President's Budget (FY20 PB) request for infrastructure totals $11,340M. This funds military construction (MILCON), facility sustainment, restoration and modernization (FSRM), housing, legacy Base Realignment and Closure (BRAC) cleanup, facility operations, and our environmental programs, including remediation of Perfluorooctane Sulfonate (PFOS)/Perfluorooctanoic Acid (PFOA). In preparing the FY20 PB request, the Air Force deliberately evaluated both today's needs and the capabilities demanded by future threats, including a rapidly growing China and resurgent Russia, rogue nations, and violent extremist organizations. The result is a budget aligned with the five priority missions of the National Defense Strategy, one that will prepare the Air Force for the high-end

fight. It balances installation readiness, capability, and capacity with the need to maintain and field a credible and affordable force today, and into the future.

Infrastructure Investment Strategy (I2S)

The Air Force fights from its installations. Its ability to generate combat power is explicitly linked to not only the readiness of Air Force buildings and pavement, but also their strategic location, surge capacity, airspace, and ranges. All are aspects of the vast Air Force infrastructure portfolio, and all are critical to Air Force readiness and lethality in support of the National Defense Strategy.

To stabilize, sustain, and strengthen our installations, we recently introduced our Infrastructure Investment Strategy (I2S). The I2S provides the framework for securing necessary investment and implementing process improvements, cost effective modernization, and innovation across our facilities sustainment, restoration, modernization, recapitalization, and military construction portfolio. Its implementation will ensure a lethal force ready to compete and win in the present and future era of great power competition.

The I2S is being executed along three primary lines of effort:

- **Restore Readiness to Power Projection Platforms** – Resilient and ready Air Force installations demonstrate strength to our adversaries and commitment to our allies
- **Cost Effective Modernization of Infrastructure** – Improving Air Force installation readiness requires targeted, informed and optimized investment in modernization and sustainment
- **Drive Innovation in Installation Management** – Restoring Air Force installations requires state-of-the-art business and operations analytics, contemporary acquisition tools and techniques, innovative asset management, and strong relationships with communities and private sector partners

Four imperatives align and unify these I2S lines of effort: (1) adequate and stable funding, (2) informed and intelligent business management practices, (3) unity of effort across the enterprise, and (4) revitalized squadrons. The I2S ensures infrastructure investment is aligned with the highest mission critical priorities and timed to optimize lifecycle costs by upgrading facilities before they are too expensive to repair, and it optimizes the Air Force

infrastructure footprint, increasing facility utilization rates across the enterprise and demolishing or divesting from facilities that are not cost effective to sustain or repair.

The I2S leverages private sector best practices to the maximum extent possible. Examples include acquiring and managing facilities sustainment, restoration, and modernization materials and services as a single, efficient enterprise, developing cost management strategies specific to different spending categories, leveraging data to improve the timing of sustainment and recapitalization actions, and establishing standards of services and equipment to reduce design cost and achieve economies of scale. These efforts will improve enterprise-wide cost efficiency, an increasingly critical objective as highly technological, fifth generation fighter aircraft requiring larger logistical and sustainment footprints arrive at various locations.

The I2S also capitalizes on the Air Force's nearly decade-long initiative to vastly improve asset visibility through in-depth facility condition assessments integrated with progressively more robust sustainment management and geospatial information systems. As of October 2018, we completed and captured in our sustainment management system Facility Condition Assessments for 75% of all facilities. This data enables unprecedented levels of insight into present and future requirements. We can "see" current requirements and "predict" future requirements through data-driven life-cycle degradation analysis. By leveraging asset visibility, in conjunction with operations research analysis, we are able to run multiple scenarios that include varying investment levels and policy decisions. These scenarios inform strategic investment trades and shape future planning to ensure our installations remain mission-ready.

Military Construction

The I2S focuses on mission-driven, well-timed investment, but the foundation is a recommitment to adequate,, stable resourcing for Air Force infrastructure through our military construction (MlLCON) and facility sustainment, restoration and modernization (FSRM) accounts. To support a dynamic global posture and increase lethality, our military construction (MILCON) budget has increased by $400 million from FY19, bringing the FY20 request to $2.72 billion. Aligned with the National Defense Strategy, the MlLCON program prioritizes resources to the high-end fight, demonstrates strength to our adversaries and commitment to our allies, and supports global posture through new weapon system bed-downs and aging infrastructure recapitalization.

Combatant Command Infrastructure

Our FY20 MILCON request supports combatant commander requirements in Europe, the Indo-Pacific, the Middle East, and North America. We remain committed to efforts initiated by European Command (EUCOM) in FY15 to reassure North Atlantic Treaty Organization allies and European partners of the United States' commitment to our collective security and territorial integrity. The FY20 European Deterrence Initiative (EDI) MILCON program builds on FY19 efforts to set deterrence conditions in the theater and enable the joint team and our allies to respond quickly to aggressive regional actors. FY20 EDI MILCON investment enhances EUCOM's materiel prepositioning options and improves airfield capacity, fuel systems, and munitions storage at bases in Iceland and across mainland Europe.

The Air Force recognizes that a rapidly growing China aims to undermine long-standing alliances and displace American influence in the Indo-Pacific region. Our FY20 budget request includes several infrastructure investments in the Pacific to enhance our partnerships and regional resilience. Our FY20 budget request also enhances global reach and military cooperation between the United States and Australia through expansion of tanker capacity at RAAF Tindal, Australia.

In support of Central Command, our budget request also includes two projects to continue the development of Muwaffaq-Salti Air Base in Jordan. These projects strengthen the resilience of logistics infrastructure needed to rapidly support operations in the Levant. Lastly, in support of Northern Command, our budget request includes funding for Air National Guard fighter alert shelters at Truax Field, Wisconsin.

New Mission Infrastructure

The FY20 President's Budget request supports continuing modernization of our aging aircraft fleet. The request includes facilities supporting Air Force weapons system acquisition and modernization programs including the F-35A, KC-46A, T-X, Presidential Aircraft Recapitalization, and UH-1 replacement. Achieving full operational capacity for new weapons systems depends not only on the aircraft acquisition, but on the delivery of necessary hangars, maintenance and training facilities, airfields, and fuel infrastructure.

Major elements of our MILCON request supporting fleet modernization include KC-46A flight training facilities at Travis Air Force Base, California; and infrastructure enabling continued beddown of F-35A aircraft at Eielson Air Force Base, Alaska, Nellis Air Force Base, Nevada, and Royal Air Force (RAF) Lakenheath, United Kingdom. Additionally, this year's budget requests funding for the final increment of the Presidential Aircraft Recapitalization hangar and maintenance complex at Joint Base Andrews, Maryland. Lastly, our request includes projects at Joint Base San Antonio, Texas, for the planned T-X replacement of the T-38C, and a project at Kirtland Air Force Base, New Mexico, supporting replacement of the UH-1.

Existing Mission Infrastructure

Our budget request substantially increases funding for urgently needed existing mission recapitalization compared to FY19. Recapitalization efforts focus on two mission critical areas: (1) the nuclear enterprise, and (2) research, development, test, and evaluation infrastructure. The FY20 budget funds construction of a Weapons Storage Facility at Malmstrom Air Force Base, Montana, and the Ground Based Strategic Deterrent Mission Integration Facility at Hill Air Force Base, Utah. The weapons storage facility will replace an array of 24 facilities averaging over 50 years old with a modern consolidated facility, while the Ground Based Strategic Deterrent facility will provide a central hub for the research, development, and acquisition efforts necessary to replace the Minuteman III intercontinental ballistic missile. The FY20 request also funds the second increment of construction for a new, state-of-the art laboratory space at the Massachusetts Institute of Technology's Lincoln Laboratory, a federally funded research and development center focused on solving problems with direct national security implications.

Facility Sustainment, Restoration and Modernization

Facility sustainment, restoration, and modernization (FSRM) funds are equally as vital as the Air Force MILCON budget, providing a non-MILCON pathway for mission-critical projects. The two funding streams work together to deliver ready, resilient installations. This year's proposed FSRM budget represents a considerable increase over the previous year. Coupled with our MILCON spending, the FSRM budget will enable our Infrastructure Investment Strategy to provide adaptive infrastructure that assures combat readiness and lethality. The FY20

President's Budget request includes $4.1 billion in funding for Air Force FSRM, a 40% increase in funding over the FY19 President's Budget request.

The Air Force measures FSRM investment as a percentage of plant replacement value (PRV), which is the estimated cost to design and construct replacement facilities, utilities, and infrastructure to meet modern standards. FY19 represented a low point for FSRM spending, reducing our infrastructure investment level to 1.5% of PRV. This investment level fell significantly below the Air Force minimum target of 2% and the industry standard of 4-6%. In FY20, the Air Force will begin a substantial infrastructure investment increase to restore the health of our installations. The FY20 President's Budget invests in FSRM at 2% of PRV, which represents a marked increase from last year. This correction sets the stage for consistent, stable, and predictable funding for Air Force installations and underpins the readiness and lethality those installations provide in support of the National Defense Strategy.

Base Realignment and Closure (BRAC)

The Department of Defense is not currently considering any base closures. If authorized and funded by Congress to study BRAC, we would use the authority to develop realignment options to better support the National Defense Strategy. Under our current authorities, the Air Force is focused on efficient management of facilities through its comprehensive Infrastructure Investment Strategy (I2S). The I2S directs Air Force commanders to divest unneeded infrastructure, optimize strategic basing posture to improve readiness, and invest proactively to ensure fiscal stewardship of every dollar spent on installations.

The FY20 PB request ($54M) funds environmental restoration and property transfer at 35 former Air Force installations closed through prior BRAC initiatives. Our BRAC cleanup program focuses on protecting human health and the environment, as well as projects that transfer acreage and achieve beneficial reuse of property. The Air Force transferred more than 98% of the property from 40 formerly closed installations back to communities for beneficial use, producing $2.9B in annual savings. We expect complete transfer from all previous BRAC rounds by 2027. While property transfer is complete at 34 of the 40 BRAC locations, the remaining property transfers are delayed for at least six years because of the need to divert resources to address emerging contaminants, primarily PFOS/PFOA used in legacy firefighting foam. From fiscal years 2013 to 2018, the BRAC program originally budgeted $64.9 million for

perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) related requirements. However, due to additional requirements to protect public health and drinking water, we have to date spent $129.9 million in BRAC funds for PFOS and PFOA identification, investigation, and remediation. The additional $65 million was funded by deferring other environmental requirements. The FY20 budget request funds BRAC program activities associated with the highest environmental risk requirements, such as protection of drinking water.

Environmental Stewardship

The safety and health of our Airmen, their families, and our community partners is a top priority. To meet our obligations to protect human health and the environment, the FY20 PB request includes $303M in funding for Environmental Restoration activities associated with the cleanup of current installations, including munitions sites, and $428M for Environmental Quality programs including environmental compliance, environmental conservation, and pollution prevention. These funds ensure all aspects of natural resources management are successfully integrated into the Air Force mission.

Environmental Restoration

The Air Force remains focused on completing investigations and establishing remedial actions to reduce risk to human health and the environment in a prioritized manner. We currently have more than 13,200 restoration sites at our active and closed installations. Recently, much of our Restoration program focus has been on emerging contaminants, most notably, PFOS and PFOA.

The safety and health of our Airmen, their families, and our community partners is our priority and we are committed to addressing PFOS and PFOA contamination caused by Air Force activities. In accordance with fiscal law, we can fund and execute environmental actions where Congress has provided specific statutory authority (e.g., via the Comprehensive Environmental Response Compensation and Liability (CERCLA) framework, Safe Drinking Water Act, NDAA, etc.) to do so. We currently follow the CERCLA process to address PFOS and PFOA releases attributable to Air Force activities, and we will continue to partner in good faith with local communities, state regulatory authorities, federal interagency partners, and Congress to comply with environmental protection law.

Air Force PFOS and PFOA Strategy

There are no National Primary Drinking Water Regulations for PFOS and PFOA, but the Environmental Protection Agency (EPA) has established drinking water Health Advisories (HAs). Thus, the Air Force has focused its PFOS and PFOA strategy on protecting human health and ensuring mission activities do not affect installation and supporting communities' access to safe drinking water. Three strategic lines of effort (protect human health, communication, and whole of government initiatives) provide a new, expanded framework to guide the Air Force response to issues associated with past PFOS and PFOA releases.

The first line of effort, protect human health, involves a three-pronged approach, "Identify, Respond, and Prevent," to address two related but separate aspects to responding to environmental releases of PFOS and PFOA, assuring access to safe drinking water and environmental restoration, or clean-up, of sites. The second line of effort focuses on open and transparent collaboration and communication with federal, state, and community stakeholders. The third line recognizes the necessity for a whole of government approach to addressing the national PFOS and PFOA issue by partnering with stakeholders to include the Office of the Secretary of Defense (OSD), interagency partners, and Congress. These three parallel lines of effort form a transparent, consistent, and repeatable strategy, with the understanding that each affected site is unique and may result in a range of mitigation and clean-up actions.

The first line of effort has the largest budget impact. This line of effort entails the Air Force using authorities granted under the Comprehensive Environmental Response Compensation Liability Act (CERCLA, 42 USC 9601 et seq.) and the Defense Environmental Restoration Program (DERP, 10 USC 2700-2710) to conduct off base drinking water and cleanup actions related to PFOS and PFOA. CERCLA takes an average of eight years to complete the first four phases that result in a documented decision, the "Record of Decision" (ROD). This includes efforts to coordinate with the regulators the actions the Air Force will take to address the contamination. Once action begins, it can take decades to reduce soil and groundwater contamination to acceptable levels, in order to achieve final site closure. In prioritizing CERCLA environmental cleanup actions, the Air Force uses a risk-based decision making process with protection of drinking water as a top priority. Emerging requirements to address PFOS and PFOA have significantly increased the scope of the Air Force-wide

restoration program. Moreover, due to the scope and scale of PFOS and PFOA related restoration activities, we expect this issue to continue to have an impact on future budget requests for the next decade or more.

Environmental Quality

With this request, the Air Force ensures a resilient natural infrastructure and maintains sound environmental stewardship by funding compliance with environmental laws. The environmental compliance program focuses on regulatory compliance for our air, water, and land assets. Examples of compliance efforts include more detailed air quality assessments to analyze environmental impacts from Air Force activities, protecting our groundwater by improving management of our underground and above ground storage tanks, hazardous waste management and disposal, and ensuring environmental plans and permits are compliant and up-to-date.

Efforts in pollution prevention include maximizing the diversion of solid waste from landfills to reduce the volume and cost of disposal, while avoiding contamination of our natural infrastructure, recycling used oil, fluorescent light bulbs, and spent solvents, and supporting our hazardous materials pharmacies to effectively reduce and safely manage the use of hazardous materials. We also continue to protect the health of our Airmen and the environment by making investments to minimize hazardous materials usage and hazardous waste disposal through the demonstration and validation of new technologies.

We remain firmly committed to a robust environmental conservation program. Prior appropriations have allowed the Air Force to invest in conservation activities on our training ranges and provide direct support to mission readiness. The conservation program in FY20 supports ongoing habitat and species management efforts for 125 threatened and endangered species on 53 Air Force installations. This year's budget request also provides for continued cooperation and collaboration with other government agencies, like the U.S. Fish and Wildlife Service. These partnerships help us to provide effective ecosystem and habitat management, which includes wildland fire management, while also avoiding any losses in our capability to support the military mission due to the presence of endangered species on our installations. Furthermore, the FY20 budget will further the Air Force's implementation of tribal relations policy to ensure the unique trust relationship that the U.S. government currently shares with

tribes continues, and it will provide opportunities to communicate aspects of the Air Force's mission that have the potential to affect tribal communities.

The Air Force remains firmly committed to responsible environmental restoration and quality. As trustee for more than 9 million acres of land including forests, prairies, deserts, wetlands, and coastal habitats, the Air Force is very aware of the important role natural resources play in maintaining our mission capability. To maintain military readiness the Air Force needs realistic test and training environments, which themselves are ecosystems. Quite simply, if we don't maintain the ecosystems we use to test and train and clean up the impacts of past mission activities, we will not be able to maintain military readiness.

Housing

Ready and resilient Airmen are a critical component of a lethal, powerful Air Force. The Air Force remains committed to providing Airmen and their families with quality housing and a sense of community on our installations. To better understand the scope of potential health and safety problems in our housing inventory, the Secretary and Chief of Staff of the Air Force directed a 100% review of our homes. The initial results are driving immediate fixes and will guide long term actions to ensure our families are living in healthy and safe homes.

The FY20 President's Budget seeks $398.6 million for both military family housing construction and military family housing operations and maintenance. These funds will support our continued focus on eliminating inadequate housing from our inventory and correcting health and safety deficiencies.

Our military family housing construction request of $103.6 million will fund construction of 76 homes and supporting neighborhood infrastructure at Spangdahlem Air Base, Germany; whole house improvement of 12 government-owned homes on Yokota Air Base, Japan; and whole house improvement of 29 government-owned historic homes at Wright-Patterson Air Force Base, Ohio. Our military family housing operations and maintenance request of $295 million will fund efforts to sustain, improve and modernize our government-owned inventory of approximately 15,200 family housing units. Combined, these funds will ensure we continue to support the housing needs of Airmen, their families, and our Army, Navy and Marine Corps teammates housed in our government-owned inventory.

In 2013, the Air Force met our goal of privatizing family housing at all stateside locations, including Alaska and Hawaii, through 32 housing projects at 63 installations with an end-state of 53,237 homes. Our focus in the United States is now on the long-term oversight of this portfolio of privatized homes.

We are also committed to ensuring unaccompanied Airmen are provided quality housing on our dormitory campuses. Funded out of the Air Force FSRM account, our investment strategy for dormitories focuses on restoration and modernization of these facilities in their existing configurations. This strategy will meet the Department of Defense goal of 90% adequate dormitory rooms for permanent party unaccompanied Airmen and reduce the requirement for replacement construction. This enables us to focus MILCON funds on modern, formal training facilities for our newly recruited Airmen, such as the Airman Training Center at Joint Base San Antonio, Texas included in the FY20 President's Budget.

Challenges in Privatized Housing

We share the concerns of our Airmen as well as the concerns of this Committee when we are confronted with instances where our housing objectives have not been met. The health and safety of our Airmen and their families is a leadership imperative and when there are challenges, Air Force leadership owns it. We have intervened with the project owners, advocated for our residents, and supported installation commanders in our mission to take care of our Airmen and their families.

The Air Force has taken a number of near-term actions to address these challenges, including the recently completed Inspector General assessment of policies, procedures, and best practices for handling resident complaints and protecting residents from potential health and safety hazards. We also released a letter to all commanders from the Secretary of the Air Force and Chief of Staff of the Air Force reiterating chain of command responsibilities with regard to the health and safety of residents in privatized housing. Lastly, we are conducting a review of the staff size and authorities in the housing management offices which are so important in supporting our residents and keeping the chain of command informed of challenges.

Also, we are taking steps to improve our communication and expand the resources available to Airmen and their families. We established a toll-free call center where residents can report concerns with privatized housing, and we are crafting policy to implement a tenant council

for both privatized and government-run housing across the Air Force enterprise. The Air Force Judge Advocate General has provided guidance to legal offices to educate tenants about the services available through military legal assistance, tenants' rights under leases and state law, and the process for filing claims. Finally, we are working in coordination with the Office of the Secretary of Defense, the other military services, our project owners, and stakeholders on a joint service Resident Bill of Rights and common Military Housing Privatization Initiative tenant lease which will inform military families living in privatized housing of their rights and establish consistent expectations with the landlord-tenant relationship and responsibilities.

We have also initiated a number of medium and long-term efforts to address shortcomings in privatized housing, which include automated systems to improve maintenance work order visibility, maintenance quality assurance, performance incentive fee structure, and enhancement of the Air Force Civil Engineer Center annual site visits to include additional feedback from commanders and residents.

Air Force leadership at every level is committed to rectifying the poor conditions that exist in some privatized homes. Senior Air Force leaders have conducted multiple privatized housing site visits in the last month and I will continue inspecting base housing projects during each installation visit I make.

Air Force Community Partnership Program (AFCP)

In an effort to drive innovation to secure our future, we continue to leverage our highly successful AFCP. This program taps into the intellectual capital and innovative spirit of installation and community leaders to find creative ways to accomplish the Air Force mission by cultivating "win-win" partnerships between our installations and local communities. With 62 installations and communities participating in the program, we have implemented more than 350 partnership agreements that have generated more than $57 million in Air Force benefits and $25 million in community benefits. This year, we plan to further expand the program by supporting more installations and focusing on initiatives with enterprise-wide applicability. While focus on the mission is always our number one priority, we also strive to facilitate collaboration with civic leaders to encourage consideration of the quality of schools and professional licensure reciprocity for military spouses in an effort to help ease the stress that comes with transferring duty stations. Community partnerships function as an important tool to help minimize the cost of

our installations, enhance mission effectiveness, and promote quality of life for Airmen and their families.

Supporting Military Families Through Optimized Basing

The Air Force recruits Airmen, but we retain families. While the Air Force We Need calls for growing the force by 40,000 people, we must not lose the Airmen we have. Military members report that educational opportunities for their children and the ability of their spouses to sustain careers influence their continued service decisions. Each member relocation stresses both of these aspects in their lives. The Air Force, through its strategic basing process, is developing criteria to inform decisions for future missions that recognize those communities that support the needs of military families. We are evaluating kindergarten through high school quality education metrics, the school's ability to assist and support military children, and the state's accommodation of spousal out-of-state licenses. Placing missions in locations considered best for Air Force operations, as well as Airmen families, will increase retention rates and allow military members to focus on their service.

Installation Energy and Water Resilience

Energy and water are finite resources that often require long, complex, interdependent, and vulnerable logistics tails. The Air Force must have reliable power and water to accomplish both operational and training missions. The overarching vision for the Air Force's installation energy and water program is "Mission Assurance through Energy Assurance." This vision is focused on securing the ability to perform its warfighting mission, in the face of disruptions to traditional sources, while simultaneously optimizing energy and water productivity through technology and process improvements.

When assessing energy and water infrastructure requirements, the Air Force carefully considers resilience and cost, with emphasis placed on resilience, or the ability to plan for and respond to a denial of service. From the Air Force perspeetive all energy and water projects must improve resilience in some capacity. Cost, the second factor, focuses on meeting requirements in the most cost effective manner. Finally, in recognition of the supply chain value associated with renewable energy, a third factor considered in evaluating energy sources is whether the source is clean.

Installation Energy Resilience

Energy enables Air Force missions, without it our ability to project power would be halted or severely hindered. Thus, the Air Force Installation Energy program focuses on ensuring Air Force installations have the energy required to fight from our bases, at all times, no matter what circumstances are encountered. One key focus area addresses the growing threat associated with natural or nefarious events or activities that result in a denial of service, such as, missions being separated from access to the national electrical grid and the increasing potential for long duration power outages. Using mission thread analyses, the Air Force is working to identify key nodes on and off installations, identifying critical vulnerabilities through denial of service scenarios that begin with a comprehensive understanding of mission requirements and current system operations.

One aspect of this approach involves detailed insight into historical data associated with past power outages. In FY18, Air Force installations reported 239 notable outage incidents to their basic energy commodities (i.e. electricity, water, steam, natural gas, and waste water), notable outages defined as greater than or equal to 8 hours. This represents a 33 percent decrease from FY17. This decrease is believed to be partly attributed to increased investment in, and improved maintenance of, energy systems on Air Force installations, better situational awareness, and more accurate reporting of outages.

One way the Air Force is mitigating the risk of power outages is through the use of third-party financing to develop on-base generation assets. One example is the 28-megawatt solar photovoltaic array at Vandenberg Air Force Base (AFB), CA. This array began operating in January 2018; the power it generated will be used exclusively by the base, providing about 35 percent of Vandenberg AFB's annual energy usage. In another example, in August 2018, the Air Force cut the ribbon on the DoD's first wind-powered microgrid capable of powering the 24/7 Intelligence, Surveillance and Reconnaissance mission of the 102nd Intelligence Wing. The Wing is located at Otis Air National Guard Base in Massachusetts. This new microgrid provides energy almost exclusively from renewable energy sources, offering a high-level of energy resilience.

Water Resource Management

Recognizing the constantly changing threat environment, the Air Force is placing a renewed emphasis on water resilience. Threats to water availability range from aging water infrastructure, vulnerable utilities, or malicious attacks to water scarcity, potentially the consequence of a variety of factors, including changes in precipitation patterns, water quality issues, or encroachment. The Air Force is in the nascent stages of establishing a water resource management program that moves away from managing water based primarily on conservation and condition assessments toward a risk-based approach, which more directly supports mission assurance. This shift will be in concert with an increased focus on the Air Force's installation development and activity management planning processes; it will help provide greater transparency at the enterprise-level, aiding efforts to strategically direct infrastructure investments based on mission requirements.

The Air Force also recently started to conduct enterprise-level threat reviews, regional analyses on water stress, and installation-level water needs assessments, as well as increased engagement with external stakeholders, such as water utilities and regional water management agencies. These efforts will drive dialogue between mission owners, installation planners, and water suppliers in anticipation of a self-assessment and data collection phase of program development. Sophisticated water stress forecasting models from the public and private sectors will provide the technical basis for the analysis.

Installation Energy and Water Planning

As the Air Force shifts its thinking away from single point solutions with fixed time horizons to more dynamic solutions for variable time lines, we are committed to reducing installation vulnerability through the incorporation of holistic resiliency measures in installation master plans. The Air Force utilizes five key resilience attributes, the 5Rs, to prioritize energy projects and ensure targeted enabling system investments are effective in supporting mission needs. The 5Rs describe both how a system is planning for crisis in advance and how the system performs in event of crises.

The Air Force is developing a standardized framework for all Air Force installations to identify, track, and adjust requirements to advance the energy and water resilience goals of the

installation. The Air Force intends to complete 22 installation energy plans by the end of FY19, with a target of finalizing plans for 70 major Air Force installations by the end of FY22.

In 2017, the Air Force established the Office of Energy Assurance (OEA) to balance the objectives of an installation's energy initiatives while optimizing cost and providing resilient energy solutions in support of the Air Force mission. In its role as the Energy Storefront for all Air Force energy resilience initiatives, OEA serves as the single point of entry for all installation energy requirements, and integrates energy assurance into the Air Force installation energy project portfolio by leveraging public, private, and community partnerships.

Financing Energy and Water Infrastructure

The Air Force energy program relies on both direct investment and third-party financing. Direct investment typically comes through FSRM funding, and third-party financing vehicles include Energy Savings Performance Contracts (ESPC) and Utility Energy Service Contracts (UESC). In total, the Air Force awarded 10 ESPC and UESC projects totaling $358.6 million in calendar year 2018; and we expect these performance contracts will result in close to 1 million MBTU/year in annual energy savings.

The Air Force is also continuing to explore innovative funding solutions and is piloting the development of an Energy-as-a-Service business model to better support Air Force installations in meeting their energy requirements. Through the Energy-as-a-Service business model, the Air Force envisions realigning Air Force energy procurement and management functions through a single, comprehensive contract to deliver holistic energy solutions to meet the electricity and energy resilience requirements at an installation. The Air Force named Altus AFB in Oklahoma and Hanscom AFB in Massachusetts as pilot sites. These locations, which represent different geographic, mission, and energy profiles, provide a unique opportunity to understand how Energy-as-a-Service may apply at other Air Force installations across the enterprise. In late 2018, the Defense Logistics Agency, working with the Air Force, published a sole source justification and approval to work with Western Farmers Electric Cooperative at Altus AFB.

Operational Energy

The Air Force Operational Energy program seeks to enhance combat capability for the Air Force by developing and championing smart energy solutions through new technologies, data solutions, and innovative process improvements. With operational energy comprising approximately 81 percent of the overall $6B Air Force energy bill in 2018, improving how aircraft and aircrews use aviation fuel can fund more combat power and training opportunities for the warfighter, whether in permissive or constrained environments.

To achieve our vision of maximizing combat capability through optimized aviation fuel use, the Air Force Operational Energy office is organized along four lines of effort: Current Operations, Logistics and Sustainment, Future Operations, and Strategic Engagement.

Current Operations

Our Current Operations division focuses on maximizing combat capability by improving enterprise-wide data collection, and conducting analysis to identify areas where existing mission operations can be conducted more effectively with fewer resources. The division works with stakeholders across the Air Force enterprise to implement the FY18 fuel data collection strategy, and to develop modernized information systems and software applications to address outdated aerial refueling planning tools.

For example, we are continuing development of the tanker planning tool "Jigsaw," which transitioned tanker scheduling for the Al Udeid Combined Air Operations Center (CAOC) from whiteboards to a digital planning system. The next stage of development will introduce an "auto-pairing" capability to optimize matching tankers to receivers, on interfaces between Jigsaw and other CAOC systems.

Additionally, the Current Operations division is working on a project to improve global tanker operations with the continuation of Magellan (formerly Galactic), a tool that would optimize tanker allocations and maximize the combat and training effectiveness of each tanker aircraft. Other initiatives include modelling fighter training requirements to support aircraft basing decisions and conducting Line Operations Efficiency Analyses (LOEA), where subject-matter experts visit and observe the operation and maintenance of aircraft to identify best practices and recommend changes for optimizing fuel use while maximizing capability and

readiness. LOEAs have been completed for the E-3, RC-135, C-5 and C-17 platforms, resulting in significant efficiency opportunities, while the KC-135 LOEA is currently underway.

Logistics and Sustainment

Our Logistics and Sustainment division focuses on improving Integrated Life Cycle Management processes and fuel supply logistics across the Air Force enterprise. For example, by leveraging 21st century technologies like infrared imaging, laser scanning methods, and advanced manufacturing techniques for the inspection, rework, and coatings of engine compressor blades, we are ensuring overhauled legacy engines deliver optimized engine performance. In another example, research and analysis of conventional and alternative fuel certification processes, fuel additives, fuel transfer and storage equipment is helping identify and solve problem areas, improving the resiliency of the jet fuel supply chain in energy constrained environments. Comprehensive fuel logistics supply chain modeling in wargame scenarios ensures adequate consideration of shortfalls, and the 2nd and 3rd order operational effects of adversaries' efforts to target fuel supply chains. All of these efforts support the Air Force and U.S. Government energy system postures to optimize system demand, improve throughput of supplies, and enable assessments on the adequacy of current and forecast posture configurations.

Future Operations

Our Future Operations division provides data-informed decisions needed to leverage technological advances and innovative concepts for our legacy and future fleets. Additionally, the Future Operations team guides acquisition policy to ensure Air Force acquisition stakeholders address operational energy requirements associated with new and major modification programs, via the Energy Key Performance Parameter requirement and the Energy Sustainability Analysis study. Working closely with the Air Force Research Laboratory, future operations analysis meets current and anticipated operational needs, and expands the art of the possible by advancing key technologies and enablers.

For example, supporting advanced unmanned aircraft systems (UAS) development and fielding not only reduces energy demand within theater, but also displaces intelligence, surveillance, and reconnaissance (ISR) and strike missions traditionally flown by exquisite aircraft, with advanced unmanned systems able to stay on station for several days unrefueled.

Future Operations efforts with the Air Force Research Laboratory (AFRL) to employ cutting edge computational fluid dynamics tools are being employed to help refine the aerodynamics of legacy aircraft, improving efficiency and increasing the range/payload/loiter trade space. The secondary effects of specific fuel consumption improvement will increase readiness through increased aircraft availability, since lower required engine operating temps for these more aerodynamically efficient aircraft will reduce maintenance and improve engine lifespan.

Future Operations analysis also involves developing and implementing software applications for modeling and simulation of theater energy "ecosystems" – i.e. fuel logistic supply chains. Recently, Future Operations developed software supported the Global Engagement 18 and Long Duration Logistics wargames, for the first time supporting realistic fuel constraints in these events. The results highlighted the criticality of the energy infrastructure and the necessity for energy planning within all phases of an operation. In aggregate, optimizing operational energy across our legacy and future fleets is paramount to projecting U.S. military power and maintaining our warfighting edge.

Strategic Engagement

Our Strategic Engagement division capitalizes on education and training opportunities, and a comprehensive strategic communications strategy, to promote smart operational energy initiatives and to build an energy-aware culture across the Air Force. Through multi-channel digital communications and content development, awareness campaigns, leadership engagement, training courses, and targeted and consistent messaging, we help inform Airmen about smart energy practices and the impact these practices have on maximizing combat capability and mission readiness.

Conclusion

The Air Force We Need requires that we sustain ready and resilient Air Force installations, as our installations serve as the power projection platforms for our Nation's Air Force. Air and Space power, and the installations, ranges, airspace, and energy required to propel it, is critical to the success of advanced generation, multi-domain joint warfighting operations. To remain mission capable, the modern battlefield demands 21st century technologies, streamlined operations, and advanced energy logistics. The foundation of Air

Force readiness and lethality is an integrated network of air bases that enable our Airmen to fly, fight, and win, generate combat readiness, and provide safe and healthy communities for our families. The strategic importance of our Air Force requires us to focus infrastructure investments to ensure bases provide the resilient capability and capacity that we need now, and 50 years from now.

Prior years' fiscal challenges have led the Air Force to accept managed risk in infrastructure. The FY20 PB request increases infrastructure investment to strengthen the Air Force's global network of installations, focusing on innovative, cost-effective installation management and facility sustainment, restoration, and modernization. The military construction portion of the budget will support combatant command priorities, new weapon system beddowns, and recapitalization of aging facilities. The military family housing portion of the budget will sustain and improve our inventory of government-owned homes. Together, these investments will secure our global power projection platforms and provide safe communities for our Airmen and their families. The FY20 PB also provides funds to meet our environmental stewardship obligations, including cleanup of current installations and those closed during previous BRAC rounds, as well as environmental compliance, conservation, and pollution prevention.

In an era of great power competition, the Air Force must prioritize enabling a lethal force to compete and win in today's and tomorrow's fights. This FY20 PB request prioritizes investment in the ready and resilient Airmen and installations that our nation's high-end fights demand.

John W. Henderson
Assistant Secretary of the Air Force for Installations, Environment and Energy

The Honorable John W. Henderson is the Assistant Secretary of the Air Force for Installations, Environment and Energy. He is responsible for the formulation, review and execution of plans, policies, programs and budgets to meet Air Force installations, energy, environment, safety and occupational health objectives. Mr. Henderson was commissioned in the U.S. Army Corps of Engineers in May 1994, upon graduation from the South Dakota School of Mines, and retired in the grade of colonel in 2017 after a 23-year career. Mr. Henderson commanded an engineer battalion during operation Enduring Freedom and deployed with the 25th Infantry Division and U.S. Army Corps of Engineers during two tours supporting operation Iraqi Freedom. He held multiple command and staff positions throughout his career, to include five assignments with the U.S. Army Corps of Engineers, culminating as the Omaha District Commander. Mr. Henderson is registered as a licensed professional engineer in the state of South Dakota.

EDUCATION
1994 Bachelor of Science, Civil Engineering, South Dakota School of Mines and Technology, Rapid City
2002 Master of Science, Civil Engineering, South Dakota School of Mines and Technology, Rapid City
2006 U.S. Army Command and General Staff College, Fort Leavenworth, Kansas
2015 National Security Fellowship, Massachusetts Institute of Technology, Cambridge

CAREER CHRONOLOGY
1995-1996, Platoon Leader, 44th Engineer Battalion, 2d Infantry Division, Camp Howze, Republic of Korea
1996-1997, Executive Officer, 82d Engineer Company, 2d Infantry Division, Camp Edwards, Republic of Korea
1997-1998, Company Commander, Engineer Brigade, 2d Infantry Division, Camp Howze, Republic of Korea
1999-2000, Company Commander, Charlie Company, 864th Engineer Battalion, Fort Wainwright, Alaska
2000-2001, Aide-De-Camp to U.S. Army Alaska Commanding General, Fort Richardson, Alaska
2001-2002, student, South Dakota School of Mines and Technology, Rapid City
2003-2004, Hydraulics/Hydrological Engineer, U.S. Army Corps of Engineers, Vicksburg, Miss.
2004-2004, Operations Officer, U.S. Army Corps of Engineers, Multi-National Forces – Iraq, Baghdad, Iraq
2004-2005, Resident Engineer, U.S. Army Corps of Engineers, Vicksburg, Miss.
2005-2005, Deputy District Commander, U.S. Army Corps of Engineers, Vicksburg, Miss.
2006-2007, Operations Officer, 25th Infantry Division, Tikrit, Iraq
2007-2008, Battalion Executive Officer, 25th Infantry Division, Multi-National Division-North, Tikrit, Iraq
2008-2010, Honolulu District Deputy Commander, U.S. Army Corps of Engineers, Schofield Barracks, Hawaii
2010-2011, Pacific Ocean Division Chief of Staff, U.S. Army Corps of Engineers, Fort Shafter, Hawaii
2011-2013, Battalion Commander (OEF), 864th Engineer Battalion, Joint Base Lewis-McChord, Wash.
2013-2014, Corps Executive Officer, I Corps, Joint Base Lewis-McChord, Wash.
2015-2017, Omaha District Commander, U.S. Army Corps of Engineers, Omaha, Neb.

AWARDS AND HONORS
Legion of Merit Bronze Star Medal with two oak leaf clusters
Meritorious Service Medal with silver and bronze oak leaf cluster
Humanitarian Service Medal
Combat Action Badge

PROFESSIONAL MEMBERSHIPS AND ASSOCIATIONS
Society of American Military Engineers
American Society of Civil Engineers
National Society of Professional Engineers

(Current as of March 2018)

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MAY 1, 2019

QUESTION SUBMITTED BY MR. WILSON

Mr. WILSON. A significant expense to DOD the annual cost to address corrosion, identified as more than $22 billion dollars in previous reports. A large portion of that cost relates to maintaining facilities and infrastructure. Fiber reinforced polymer composite materials are strong, durable, and corrosion-proof, making them uniquely capable to increase performance and resiliency of installations, while reducing unnecessary maintenance costs. To what degree has the Department deployed, or considered for deployment, composite infrastructure solutions? Are there barriers that presently exist to broader deployment?

Secretary MCMAHON. The Department is aware of the unique mechanical properties that fiber reinforced composites, including carbon fiber reinforced composites, offer. These include resistance to corrosion in most environments experienced by our facilities and infrastructure. The Corrosion Policy and Oversight Office within the Office of the Secretary of Defense has collaborated with the Military Departments to sponsor 12 technology demonstration projects in this area over the past decade. The goal of these projects is to evaluate the suitability of, and benefits provided by, fiber reinforced composites in specific applications and, if successful, to pursue implementation of them throughout the Department by development or modification of Unified Facilities Criteria (UFC) and Unified Facilities Guide Specifications (UFGS) hosted on the Whole Building Design Guide (wbdg.org). To date, two technologies have reached implementation: one project resulted in a modification to a UFGS, and one project has resulted in the development of a new UFGS. The other projects may result in additional UFC and UFGS developments or modifications in the future as additional test results and performance data become available.

The primary barrier to more extensive use of fiber reinforced composites is their relatively higher price compared to conventional materials with similar mechanical properties. Implementing fiber reinforced composites in a particular project requires justification through a life cycle cost analysis. Another barrier is the lack of accepted structural design criteria for some of the targeted applications.

QUESTIONS SUBMITTED BY MR. BISHOP

Mr. BISHOP. The DOD April 26, 2019 Business Operations Plan for the Department talks about the need to reduce delays in recruitment of civilians that result in managers substituting "more expensive military or contractor personnel in place of less costly federal employees." Cost is not the only dimension to this problem. What happens when a military works outside of the specialty for which they were trained to perform a civilian type function? Does that affect stress on the force and retention. Is this a harbinger or metric for a hollow force if and when such diversions happen too often?

Secretary MCMAHON. This topic is not in my portfolio as the Assistant Secretary of Defense for Sustainment, and I defer to the Office of the Undersecretary of Defense for Personnel & Readiness for any detailed responses.

Mr. BISHOP. Describe briefly the analytical processes in your Department that specifically model your military force structure requirements and capabilities? Do these analytical processes specifically analyze requirements for each component, both Active and Reserve, along with the civilian workforce, as your budget documentation for the Department overall seems to suggest? Does the budget process, both with the budgetary uncertainty in Congress, or the way OMB and the Department's program and budget processes work create impediments to fully informing your decisions on the optimal balanced military and civilian force structure?

Secretary MCMAHON. This topic is not in my portfolio as the Assistant Secretary of Defense for Sustainment, and I defer to Office of the Undersecretary of Defense for Personnel & Readiness for any detailed responses.

QUESTION SUBMITTED BY MS. STEFANIK

Ms. STEFANIK. Fort Drum is proud to lead the way and serve as a unique example of a DOD installation that has 100% of its energy provided by renewable energy sources, and that operates on the installation itself. While I understand and respect that you cannot comment specifically on ReEnergy's biomass fuel plant and its relationship with Fort Drum due to ongoing contract negotiations, I am curious, Secretary Beehler, if you can share some of the challenges, important lessons learned or highlights that would be beneficial for my colleagues and I—as well as the other services—to understand?

Secretary BEEHLER. Thank you for recognizing that the Army is presently constrained in what it can offer as lessons learned from our privatized energy projects. I can however offer the following two general observations:

- With regard to any long-term contractual commitment for products or services, the Government's requirements can, and often do, change over time. Both parties to the contract should anticipate this possibility (or inevitability).
- Federal agencies must evaluate all purchasing strategies and options in order to anticipate, and adapt to, the market dynamics in order to optimize available resources to satisfy government requirements.

QUESTION SUBMITTED BY MS. ESCOBAR

Ms. ESCOBAR. I am concerned about the Department's approach to a critical aspect of installation resilience: management of stormwater. Congress has expressed clear support for utilities privatization including in the FY17 NDAA which specified that stormwater systems and components were intended to be included under title 10, section 2813 which governs utilities privatization. Yet it appears the Department may not be taking full advantage of the efficiencies and benefits available from private-sector expertise through the utilities privatization program. Congress's concern about these issues has only been heightened by recent storms. Fort Bliss and other military bases around the country face serious threats from stormwater. Utilities privatization can be a valuable tool for the services to confront these threats, and to modernize water management on bases while improving efficiency, and potentially costs. The Army has been using this authority for nearly 15 years. The Air Force's 2019 Infrastructure Investment Strategy outlines goals to capitalize on private sector expertise. Considering the clear hazards on display this year at Offutt and Tyndall Air Force Bases, how do the Department and the Air Force plan to use these existing utilities privatization authorities, that include stormwater systems, to implement the provisions of the Infrastructure Investment Strategy?

Secretary MCMAHON. Utilities Privatization is one of many authorities that the Department uses to improve the reliability of its utility infrastructure. While Title 10, Section 2688, enables the Department to convey utility systems, it does not statutorily define stormwater systems as eligible "utility systems" for privatization. As such, the Department relies on other authorities to address its stormwater infrastructure needs.

The condition of the Department's stormwater conveyance systems varies widely by each Military Service. As noted in its May 2019 Report to Congress on Storm Water Conveyance Systems, Air Force stormwater conveyance systems are cited as performing at a degraded level with roughly half the inventory having a condition assessment rating from poor to failing. In alignment with its Infrastructure Investment Strategy, the Air Force has programmed over $190M in capital improvements to its stormwater conveyance systems from FY20 to FY26.

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