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HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2022

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTEENTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES HEARING

ON

FISCAL YEAR 2022 ROTARY WING AVIATION BUDGET REQUEST

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FISCAL YEAR 2022 ROTARY WING AVIATION BUDGET REQUEST

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES,
Washington, DC, Wednesday, June 30, 2021.

The subcommittee met, pursuant to call, at 3:21 p.m., in room 2118, Rayburn House Office Building, Hon. Donald Norcross (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. DONALD NORCROSS, A REPRESENTATIVE FROM NEW JERSEY, CHAIRMAN, SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

Mr. NORCROSS. We will call this meeting to order.

First of all, again, we apologize for the confusion. We were understanding that there would be a different vote schedule, and we are going to make the best of this, because, obviously, you have made your time available, and we are going to do our best to get some votes in—or excuse me, testimony. We will go to votes, and we will come back and make sure that we do what is right for the American people, and, certainly, for our military.

So with that, I would like to welcome everyone to Tactical Air and Land Forces Subcommittee hearing on military services' fiscal year 2022 budget request for rotary wing aviation programs. We have lifted most of the COVID restrictions here in the House, but this is still a hybrid hearing, and that is so true.

We have a few members that are participating remotely, although they are not on right now. We expect them, but if nobody is here, do I have to read it? Okay. We will cover ourselves. Okay. We have somebody on there, so I have to read the mandatory language.

I would like to welcome the members who are joining us today, joining here and remotely. Members who are participating remotely must be visible on screen for the purposes of identity verification, establishing and maintaining a quorum, participating in the proceedings, and voting. Remote attending members must continue to use the software platform video function the entire time while in attendance unless they experience connectivity issues or other technical problems that render them unable to participate on camera. If a member experiences technical difficulties, they should contact the committee staff for assistance.

Video of members participating will be broadcast in the room and via television and internet feeds. Members participating remotely must seek recognition verbally, and they are asked to mute their microphones when they are not speaking. Remote members may

leave and rejoin the proceedings. However, if remote members depart the hearing for a short while for reasons other than joining a different proceeding, they should leave the video function on. If members will be absent for a significant period, or depart to join different proceedings, they should exit the software program entirely, and then rejoin it when they return.

Members may use the software platform's chat feature to communicate with staff regarding only technical or logistical support issues. I have designated a committee staff member to, if necessary, mute unrecognized members' microphones to cancel any inadvertent background noise that may disrupt the proceedings. And, with that, I will now give my opening statement.

Welcome back. We obviously have a large and distinguished panel of witnesses here today, and I thank them for being on time, even though not all of us were, and making the time to have this discussion on what is incredibly important, the services' rotary wing aviation program, and the process, certainly the challenges we need to be aware of before we mark up the 2022 National Defense Authorization Act.

Rotary wing aircraft serves diverse and unique purposes across the military branches, and each service is currently in different stages of modernization of its helicopter fleets. Successful modernization and sustainment of rotary wing aircraft will lay a solid foundation for the futures of the joint force.

The Army is embarking on an ambitious led Future Vertical Lift, or FVL, aimed at developing and fielding two new major rotary platforms at the same time—Future Attack [and] Reconnaissance Aircraft, FARA, or Future Long Range Assault Aircraft, FLRAA. With Future Years Defense Programs information, this year's—excuse me. With it not in here, it is difficult to assess what the FVL funding profile is going to be. However, the subcommittee's understanding that the funding plan for the FLRAA was never revised in the outyears after a decision was made to accelerate the program by 4 years. Given the concurrent acquisition of these programs, the Army should explain how these programs will be appropriately resourced, and what actions are being taken to manage the risk within the Future Vertical Lift.

As in last year's budget, the Army did not include procurement funding for the CH–47F Block II Chinook. Only the new special operations forces aircraft are funded. The Chinook program is conducting additional testing on the advanced rotor blade now, and should have sufficient data collected and analyzed for a production decision by the end of fiscal year 2021. Certainly, we are interested in discussing the way ahead for the Chinook Block II.

With the Department of the Navy, the Navy has completed acquisition of its fleet workhorse, the MH–60, and is beginning to plan the service life extension program to keep these aircraft relevant into the next decade, while the Marine Corps is in the testing phase of two new, the CH–53K heavy lift helicopter, and the VH–92, the replacement of the Presidential helicopter program.

After 15 years of development, the CH–53K program is still discovering new and operational difficulties that need to be corrected. Now, I understand some of those are already corrected, but granted, this is the purpose for the acquisition system program, to bring

out these problems before fielding the systems. But, obviously, the 53K program should be much further along at this point, and major problem discoveries is something that we hope not to expect anymore of. We expect the Marine Corps to explain how they anticipate controlling risks and the cost of this program.

The Air Force is on their transitioning to a new combat rescue helicopter, the HH–60 Whiskey, and a replacement helicopter for the nuclear security missions, the MH–139 Grey Wolf. I expect the Air Force witnesses to provide updates on how these programs are progressing, and justify their requests, or in this case, Grey Wolf, the lack of one for fiscal year 2022.

Finally, I am interested in what each of the services are doing to increase survivability for the rotary wing fleet, and if and how they are working together to leverage research and investment in aircraft survivability equipment and for the common benefit. Our helicopter pilots and crews deserve the best self-protection and safety systems available.

With that, I want to take a moment and recognize our ranking member of Tactical Air and Land, Mrs. Hartzler.

[The prepared statement of Mr. Norcross can be found in the Appendix on page 29.]

STATEMENT OF HON. VICKY HARTZLER, A REPRESENTATIVE FROM MISSOURI, RANKING MEMBER, SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

Mrs. HARTZLER. Thank you, Mr. Chairman. I also want to thank our witnesses for being with us today, and I look forward to receiving an update on the status of each service's unique rotary wing aviation programs and their plans for both the sustainment and modernization of their respective helicopter fleet capabilities.

I remain deeply concerned that the President's fiscal year 2022 budget request does not adequately resource our national security, and further places military leadership in an untenable position of having to make impossible choices between near-term operational readiness, sustainment of enduring capabilities, and long-term modernization priorities.

Today's hearing will provide an opportunity for us to gain a better insight of how each service's rotary wing aviation fleets have been impacted by this budget, and whether any major changes to sustaining programs or future equipping and modernizing strategies will result.

With shrinking budgets and shifting focus, it is critical that this subcommittee understands how each service views rotary wing aircraft fitting into their future modernization plans, and what added capabilities will be required in multi-domain operations against a peer, or near-peer challenge in the Indo-Pacific region.

I expect our witnesses to discuss what major sustainment, readiness, and management issues each service is facing as you adapt your rotary wing aviation portfolio to this new operational focus, and what are you doing now to address these issues? I am pleased to see that the Army is continuing to prioritize the development of a Future Vertical Lift capability as one of its top six modernization priorities. The Army is clearly leading the way on Future Vertical Lift, developing both the Future Attack and Reconnaissance Air-

craft, and the Future Long Range Assault Aircraft at the same time. I look forward to the discussion on both the development status, and future potential of this major modernization effort. I also hope to hear how the Navy and Marine Corps are working with the Army and planning to capitalize on Army efforts and development in their own future vertical lift programs.

Sustainment and modernization of existing rotary wing platforms is also critical. As we look forward toward the future of rotary wing aviation, we must not overlook the rotary wing aircraft currently playing a significant role in the missions and operations of our military services and our National Guard today. Some of these units have been waiting for necessary aircraft upgrades and replacements for quite some time. Near to my heart, we have the Army's 1–135th Assault Helicopter Battalion at Whiteman Air Force Base, who is anxiously awaiting the arrival of its UH–60M Black Hawks to replace its aging UH–60L fleet in 2023.

And, lastly, I expect each service to briefly discuss their current aircraft survivability equipment projects and developments. Helicopters fly low and relatively slowly, rendering them especially vulnerable to enemy weapons. I want to reemphasize the chairman's statement that our helicopter pilots, crews, and passengers deserve the best self-protection and safety systems available. This seems to be an area where jointness would be without debate, leveraging research and investment projects and aircraft survivability and safety for the common benefit of all our warfighters.

I thank the chairman for organizing this important and timely hearing before we mark up our fiscal year 2022 National Defense Authorization Act, and I yield back.

Mr. NORCROSS. Thank you. Appreciate it.

And let's turn to our witnesses. Today, joining us is Mr. Doug Bush, Acting Assistant Secretary of the Army for Acquisition, Logistics and Technology, who we have had the honor of two CODELs [congressional delegations] that have been very informative. Good to have you here.

Lieutenant General Peterson, Deputy Chief of Staff of the Army for Programs. Mr. Stefany is Acting Assistant Secretary of the Navy for Research, Development and Acquisition. Lieutenant General Wise, Deputy Commandant for Aviation for the Marine Corps. Rear Admiral Andrew Loiselle. Did I get that right? Director of Air Warfare Division for Naval Operations. Ms. Darlene Costello, Acting Assistant Secretary of the Air Force for Acquisition, Technology and Logistics. Major General Moore, Director of Programs, Office of the Deputy Chief of Staff of the Air Force for Plans and Programs. We have asked for opening statements of one per service. And with that, Mr. Bush, please proceed with your statement.

STATEMENT OF DOUGLAS BUSH, ACTING ASSISTANT SECRETARY OF THE ARMY FOR ACQUISITION, LOGISTICS AND TECHNOLOGY, DEPARTMENT OF THE ARMY; ACCOMPANIED BY LTG ERIK C. PETERSON, USA, DEPUTY CHIEF OF STAFF, G–8, HEADQUARTERS, U.S. ARMY

Mr. BUSH. Thank you, Mr. Chairman. Chairman Norcross, Ranking Member Hartzler, and distinguished members of the House Armed Services Committee Subcommittee on Tactical Air and Land

Forces, good afternoon. Thank you for the invitation to appear before you to discuss the Army's rotary wing aviation portfolio and the resources requested in the President's budget for fiscal year 2022. I am pleased to be joined today by my teammate, Lieutenant General Erik Peterson, Deputy Chief of Staff G–8, as well as our Navy, Marine Corps, and Air Force counterparts. We appreciate you making our written statement part of the record for today's hearing.

Mr. Chairman, our shared mission in the Army is to ensure the Army continues to achieve overmatch against all potential adversaries, ensuring that our Army can fulfill its mandate to successfully deter, and if necessary, fight and win our Nation's wars as part of the joint force.

Next, I would like to briefly take a moment to address the subcommittee's specific requests outlined in the invitation. First, the committee asked for an overview of Army aviation modernization and equipping strategies for fiscal year 2022 that identified major planned changes in the strategy from fiscal year 2021.

Overall, I think the fiscal year 2022 budget request for the Army reflects continuity, and the Army's continued commitment to its high-priority modernization programs. While members will find adjustments were made to some programs, I believe that the fiscal year 2022 budget request of $34.1 billion overall for Army research, development, and acquisition, which includes $2.8 billion for aviation procurement and $1.8 billion for aviation research and development, reflects careful choices and supports continued progress on the Army's top modernization priorities.

Second, the committee asked for an explanation of major new modernization initiatives in fiscal year 2022. In response, I would ask the committee members to review our joint witness statement that summarizes our ongoing efforts to modify—to modernize our current fleets, as well as the progress we were making to develop future platforms, such as the ones mentioned by the chairman, FARA, FLRAA, and also future unmanned aircraft systems.

Third, the committee asked for an identification and description and justification of unfunded priorities, major equipment shortfalls, and unacceptable risk. With regard to unfunded priorities, I would refer members to the Army Chief of Staff's unfunded priority list. In addition, I am not aware of any major equipment shortfalls or unacceptable risks in my area of responsibility.

Fourth, the committee asked for an assessment of rotary wing industrial base and its ability to support Army modernization and sustainment. While no budget is without risk, I am confident the request before you represents what we consider acceptable risk to the rotary wing industrial base. With the help of Congress, the Army has used multiyear procurement contracts as a means to both achieve significant cost savings, and ensure industrial base stability. I would ask for the committee's support of the Army's fiscal year 2022 request for new multiyear procurement authority for both the Apache and Black Hawk aircraft.

Fifth, the committee requested an overview of the Army's aircraft survivability systems. Aircraft survivability is, of course, a critical element of the Army's modernization and readiness efforts to equip the force and maintain dominance. The aircraft survivability port-

folio provides advanced laser defeat capabilities, such as the common infrared countermeasure system, which will be an enduring system. For other systems, I would request discussing that in a different setting.

Lastly, the committee asked us to provide any other budget details and programs you believe merit attention to include notable acquisition reform efforts. I think this budget request reflects a careful balance, as I mentioned, between funding for enduring and future modernization.

With respect to authorities, we are grateful to you and your colleagues on the committee for reform initiatives that have been instrumental in our efforts to streamline and gain efficiencies in the acquisition process. This includes our use of middle-tier acquisition authority for rapid prototyping to accelerate efforts linked to our modernization priorities.

We have also used other transaction authority or OTAs to help streamline the acquisition research activities, prototype projects, and follow-on production. In both of these areas, you have my commitment that the Army will use these authorities conservatively, and only where needed to accomplish our modernization objectives. You also have my commitment to ensure appropriate internal Army oversight measures are in place to monitor use of these authorities.

Let me close by saying that realization of our modernization efforts is highly dependent on what is in the Army's fiscal year 2022 budget request. The investments in this budget request complement and reinforce the Army's modernization efforts you have so far steadfastly supported. The key is predictable, adequate, timely, and sustained funding to ensure the United States Army remains the best equipped land force in the world. I sincerely appreciate your time today and look forward to your questions.

Thank you.

[The joint prepared statement of Mr. Bush and General Peterson can be found in the Appendix on page 31.]

Mr. NORCROSS. Thank you.

Mr. Stefany.

STATEMENT OF FREDERICK "JAY" STEFANY, ACTING ASSISTANT SECRETARY OF THE NAVY FOR RESEARCH, DEVELOPMENT AND ACQUISITION, DEPARTMENT OF THE NAVY; ACCOMPANIED BY LTGEN MARK WISE, USMC, DEPUTY COMMANDANT FOR AVIATION, HEADQUARTERS, U.S. MARINE CORPS, AND RADM ANDREW LOISELLE, USN, DIRECTOR, AIR WARFARE DIVISION, N98, OFFICE OF THE CHIEF OF NAVAL OPERATIONS

Mr. STEFANY. Thank you. Chairman Norcross, Ranking Member Hartzler, distinguished members of the subcommittee, on behalf of myself, Lieutenant General Mark Wise, the Deputy Commandant for Aviation, and Rear Admiral Andrew Loiselle, Director of Air Warfare, thank you for the opportunity to appear before you today to address the Department of the Navy's 2022 budget request for rotary aviation. We are pleased to testify alongside our Department of Army and Department of Air Force colleagues.

Navy and Marine Corps forces operate forward and conduct a broad range of military missions in support of the joint force. The Department rotary craft capability is a key enabler of our naval mobility. When coupled with air-capable ships, these aircraft provide speed, range, and flexibility to give our Nation unmatched global reach and expeditionary agility. Their versatility is unmatched. Rotorcraft transport Marines, sailors, equipment, and supplies from ships and land bases to amphibious assault and for operations ashore. Rotorcraft pilots make up more than 50 percent of our naval aviators, and, support a broad range of mission from anti-submarine warfare to humanitarian assistance and disaster relief. Our rotorcraft are ready to fight tonight, and going forward, they will remain the workhorses of the future naval force. Over the past year, we took delivery of 33 new rotary aircraft, and we procured 56 more aircraft during the year. We also completed, just recently, the initial operational testing of the VH–92 Alpha Presidential helicopter.

To continue this progress toward the Commandant's Force Design 2030 initiative, as well as the Chief of Naval Operation's vision for distributed maritime operations, the fiscal year 2022 budget request funds for the procurement of 53 new manned rotorcraft. While supporting the initial production of [CH–]53 Kilo King Stallion helicopters, it also prioritizes recapitalization of the helicopter training fleet through continued procurement of the TH–73 Alpha training aircraft. The Department is scheduled to take delivery of our very first TH–73 Alpha later this week, and a total of 52 of those aircraft are planned for delivery by the end of 2021.

The fiscal year 2022 budget also continues investment in modernization and service life extensions for our MH–60 and H–1 fleets that are foundational to the Navy and Marine Corps helicopter concept of operations. Modernization programs for these platforms are focused on survivability and sensor networks and communication that will keep the platforms technically relevant as we look to develop the future of vertical lift systems that will replace them.

Overall, this budget represents the deliberate, informed development of a modernized, integrated, and all-domain naval force for the future fight. It requires us to think differently, move faster, and prioritize each dollar to meet an uncertain environment. As we focus on building this all-domain naval force to address our pacing threat presented by our strategic competitors, we thank the Congress and this subcommittee for your continued leadership and support. And with that, we look forward to your questions. Thank you.

[The joint prepared statement of Mr. Stefany, General Wise, and Admiral Loiselle can be found in the Appendix on page 41.]

Mr. NORCROSS. Thank you.

Ms. Costello, please.

STATEMENT OF DARLENE COSTELLO, ACTING ASSISTANT SECRETARY OF THE AIR FORCE FOR ACQUISITION, TECHNOLOGY AND LOGISTICS, DEPARTMENT OF THE AIR FORCE; ACCOMPANIED BY MAJ GEN RICHARD G. MOORE, JR., USAF, DIRECTOR OF PROGRAMS, OFFICE OF THE DEPUTY CHIEF OF STAFF FOR PLANS AND PROGRAMS, HEADQUARTERS, U.S. AIR FORCE

Ms. COSTELLO. Can you hear me now?

Mr. NORCROSS. Great. Thank you.

Ms. COSTELLO. Sorry about that.

Chairman Norcross, Ranking Member Hartzler, and distinguished members of the subcommittee, on behalf of myself and Major General Moore, we thank you for having us here today to provide testimony on the Department of the Air Force's fiscal year 2022 rotary wing aviation budget request. Additionally, thank you for your continued leadership and dedication to the United States military, and the Department of the Air Force's 689,000 total force airmen and guardians serving around the world today.

Our Nation faces a complex set of current and future security challenges that require us to think different and act different and with urgency. Our Chief of Staff of the Air Force, General C.Q. Brown, has articulated what is at stake. He has stated that unless we make significant changes to the Air Force's programmed force, we will not meet the pacing threat of China in 2030. And unless something changes, we will not be able to accomplish the Air Force's core missions in the future operating environment.

If we are to modernize to address the emerging threat, we must efficiently use resources tied to our outdated and underperforming platforms and weapons systems which are decreasing in relevance today and will be irrelevant in the future. We must strike a balance between risk in the near term and risk in the future. The Department of the Air Force rotorcraft are key components of the National Defense Strategy's lethal force modernization effort. Our rotorcraft are integral across a range of operations, including modern and reliable personnel recovery, special operations, nuclear security, and continuity of government.

Thanks to the support of this subcommittee, we have made great strides in our efforts to improve rotorcraft readiness and set the tone for modernization. But there remains work to be done. The fiscal year period 2022 budget continues investment in the Department of the Air Force critical rotorcraft modernization programs. As you are aware, the Department of the Air Force is the only service with a dedicated force organized, trained, and equipped to execute theater-wide personnel recovery.

To accomplish this vital mission, we must continue to sustain, support, and upgrade the aging HH–60G fleet until we can fully recapitalize with the HH–60W Jolly Green II. The HH–60G retirements began this year with the continued retirement timeline that aligns with completion of fielding 105 HH–60W rotorcraft in fiscal year 2027. The first operational unit has already been received. The first production HH–60W was delivered on June 8 of this year. The fiscal year 2022 President's budget request adds 14 HH–60W aircraft to the 51 that are already funded.

The MH–139A program is an element of the Air Force nuclear enterprise reform initiative, and also supports operational airlift within the National Capital Region. The MH–139A offers significant capability increases in areas of speed, range, endurance, payload, and survivability. This program will deliver up to 80 replacement helicopters, training devices, and associated support equipment to replace the legacy UH–1Ns. While technical issues have delayed the FAA [Federal Aviation Administration] certification, we are confident Boeing can make the necessary changes to minimize schedule delays going forward.

To meet the challenges of the highly contested environment, we are also developing the next generation of vertical takeoff and landing platforms. Through AFWERX Agility Prime, we have put more than $100 million on contract with over 20 electric vertical takeoff and landing industry partners to move toward fielding this transformative commercial technology for distributed logistics and personnel transport. Early investment in this technology will allow us to influence system design, foster industry growth, and accelerate fielding.

We thank you for your leadership and support, and are eager to work with this subcommittee to secure our Nation's vital interests. We look forward to your questions.

[The joint prepared statement of Ms. Costello and General Moore can be found in the Appendix on page 51.]

Mr. NORCROSS. Thank you for your testimony, each of you. Very much appreciate it. We are going to work through, again, the votes here, and we are going to take whatever time is necessary. We value what you do each and every day and your time. And certainly our TAL [Tactical Air and Land Forces Subcommittee] staff, who do such a wonderful job keeping us informed, are focused on this, and please do not take the little bit of disruption in any way diminishing what you do each and every day. And, with that, I would like to start out with questions myself, Mrs. Hartzler, and then we will go to both the remote and here.

Mr. Bush, we have had conversation literally over the years concerning the Chinook, and again, this year, some of the deferments that were going on versus the original vision of the Block II upgrades. We had the previous discussion about the heavy lift for the Army and when that decision was to be made. Let's make sure that we clear it up on the record. The decision for what you are going to do is in the year 2023, because this is—we had the conversation, and we had much discussion. I just want to make sure we are clear on this.

Mr. BUSH. Sir, my—yes. My understanding of the Army's previous decision that still holds is that that was a calendar year 2023 decision.

Mr. NORCROSS. Calendar year versus budget year. And forgive us for throwing that off.

Obviously, developing two new programs at one time is challenging at best, or trying to minimize that, and what you have done preparing for it is truly noteworthy. However, the timeframe going on is you potentially could have three going on which could present some challenges. When you expect to get the funding for

2021, the authorization, you expect to put those under contract by the end of this fiscal year, or this calendar year?

Mr. BUSH. This fiscal year, sir.

Mr. NORCROSS. Okay. It makes a difference. If you are listening to this, it gets confusing, but it is incredibly important we start looking at that. Thank you. Really appreciate that.

What I am going to do is try to get everybody in at least for one, and we are going to go multiple rounds. This way, we can have some more continuity.

Mrs. Hartzler.

Mrs. HARTZLER. Yes. Thank you.

Lieutenant General Peterson, I am interested in the status of the UH–60M upgrade program. As you know, Whiteman Air Force Base currently has UH–60Ls and have been promised the delivery of UH–60Ms in fiscal year 2023 to replace its aging fleet. So can you assure me that the decrease in procurement of UH–60Ms in the fiscal year 2022 budget will not impact this fielding strategy and timeline?

General PETERSON. I am struggling with the systems here.

Ranking Member, thank you for that question. And the—first, to the 135th as well as the third—the 238th with the HH–60 medevac variants, are still on track for their fiscal year 2023–2024 fieldings, phased fieldings, consistent with our continued investment in the Mike model program, two very distinguished units. I had the pleasure of actually serving with and helping mobilize portions of those in my previous assignment. So we are not relenting from our commitments, particularly with our National Guard units, to stay on track with our modernization efforts, and our chief has been very emphatic about that. So we are maintaining that momentum and focus.

Mrs. HARTZLER. Great. That is great news. Thank you very much.

Mr. NORCROSS. Mr. Kahele, you are recognized for 5 minutes.

Mr. KAHELE. Thank you so much, Mr. Chairman, and thank you, everyone, for participating today. I have a general question to start with, and I guess it would be directed to General Wise. You know, in previous committee hearings, especially with fixed wing and the different components, we have heard of the concerns of a decrease in the number of, I guess, pilots that are graduating from our pilot programs, and a shortage of pilots to fly our fixed wing aircraft and the projected recruitment and successful graduation of pilots to fly those aircraft.

Looking at the overall, you know, rotary wing request in this budget, is there any concerns about producing enough rotary pilots coming out of our training locations to fly these new rotary wing aircraft that we want to procure?

General WISE. Sure. Thank you for the question. The short answer to your question for rotary wing pilots is we are actually in pretty good shape with regard to rotary wing. I would say that our current manning is within the squadron's ranges for all of our type model series from 96 percent manned to 86 percent at the low end, and we consider healthy at 85. So we are healthy in all regards, but that is, as you indicate, not something you want to rest on.

Mr. KAHELE. Sure.

General WISE. So we spend a lot of time with our training folks, CNATRA [Chief of Naval Air Training], that works with Admiral Loiselle, and we watch our production rates to ensure that we are meeting our goals to make sure that we don't drop any lower, or we see leading indicators that are coming. And right now, we are still producing at a rate that we should stay healthy for the foreseeable future on the rotary wing side.

Mr. KAHELE. Great.

General WISE. Sure.

Mr. KAHELE. Thank you.

Let me shift. I represent Hawaii, and, of course, INDOPACOM [U.S. Indo-Pacific Command], and looking at—and this could be a question for anyone on the committee. But looking at Admiral Aquilino and previously Admiral Davidson and the Pacific Deterrence Initiative and the, you know, rapidly building Chinese military and what they are doing out in the western Pacific, how do we see this budget request for the modernization and the future investment of vertical lift capability new and the replacement of our aging rotary fleet to play into the Pacific Deterrence Initiative, and how we would fight a war in the western Pacific that is largely, you know, geographically challenged with, you know, vast oceans and areas that we need to travel? How do you foresee that playing out in these investments that we are making with rotary wing aircraft that could have air refueling capability, could have the capability for multiple crews so that they can extend their ranges and their distances, and some of those challenges as we take those rotary aircraft into the, you know, areas of vulnerability based on the defensive systems and the weapons that China has?

General PETERSON. I would be happy to take a crack at that.

Mr. KAHELE. Yes, sir. Go ahead.

General PETERSON. Thank you very much for that question and the insights associated with that. From the Army's perspective, FLRAA and FARA, our FVL signature initiatives, are tailor-made for the extended ranges and the dynamics and the threat of that emergent fight. Both FLRAA and FARA are absolutely vital to our modernization efforts. FARA is fulfilling the number one gap in the Army aviation capability with a dedicated purpose-built armed reconnaissance aircraft.

The key points to be made with FLRAA and FARA is they both extend our reach with absolutely unprecedented speed, range, endurance, and equally as important, the effects of long-range precision munitions and other air-launched effects. And these capabilities, combined with a networked kill chain, a joint kill chain, will allow us to project capability from unprecedented standoff and deliver stand-in effects. Those will present multiple dilemmas to our foes, and they are going to provide exceptional options to our joint force commanders.

The high-fidelity modeling that we have done and could share in another forum with you clearly and empirically demonstrates the value of these capabilities against near-peer threats and in the specific areas that you referenced. So, thank you.

Mr. KAHELE. Thank you, General.

Mr. NORCROSS. We have 6 minutes and 50 seconds. Do you want to go for it, or do you want to come back?

Dr. DESJARLAIS. Yeah. I will go ahead and ask one question.

Mr. NORCROSS. Okay. Then we recognize you for 5 minutes.

Dr. DESJARLAIS. Yeah. Okay.

Well, General Peterson, I actually was just about to ask you that same question, so thank you. But I did want to pass along, General Holmes from Tennessee sent me a note to send his regards, and, I know, a good friend of both of ours.

So I will move to Ms. Costello and Major General Moore. It has been very interesting to watch the work that the Air Force has done with the Agility Prime program. Can you give the committee a brief description of what Agility Prime is, as well as some of the results that have been produced by the program?

Ms. COSTELLO. Can you hear me? Agility Prime is a way that we use our S&T [science and technology] money, our small business money, to get industry that is out there investing their own money on new technologies, and especially in this case, with the electric lift capabilities, that they might be investing in for other reasons, and seeing where that can benefit our military. So if they found a way for electric battery life to last longer, that would be beneficial for us. If they found a better way to sustain and support and have lower cost for sustainment, that is something we are looking at.

So there have been multiple companies that we have invested, given money to, allowed them to use our ranges, and go off and demonstrate their capability, work on getting certifications for airworthiness, and with the expectation that there will be uses for that capability in the future. And we are working with our operators to see where there are good matches, if you will, for that. And it has proven to be very interesting, and industry is quite interested in participating in that, because they would like to be able to help the Department of Defense in the future, and they do see that.

Dr. DESJARLAIS. Okay. I would like to just put in a plug for the University of Tennessee Space Institute. I know they are working on some of the problems with battery and power source issues, so we are glad to help out.

Do you want to stop there?

Mr. NORCROSS. Yeah. We are going to have to recess. We are going to take two votes.

Just to bring it to your attention, we were just told that former Defense Secretary Donald Rumsfeld passed away, certainly somebody who gave very much to this country.

With that, we will recess, and we will be back in a short while.

[Recess.]

Mr. NORCROSS. We will call this committee hearing back to order.

We understand Mr. Horsford is on Webex. Can you hear me, Steve? Steve. Going once. Going twice. And you will get back to us. Obviously, people are in between votes, and we appreciate, again, your indulgence. So that it is—it is back to me. Thank you.

A number of things that have gone on, and I want to go to you, Mr. Bush, and talk about the multiyear request, and why is this important? Obviously, timing, complexity, but generally, cost is a big factor. Why is this important, these programs that you indicated that we go for multiyear on that?

Mr. BUSH. So, thanks, Mr. Chairman. So one reason, of course, is cost savings. So the Army's current estimate that delivered to the committee for Black Hawk and Apache combined is half a billion dollars, but could be over the 5 years of the—sorry, sir, over the 5 years of the multiyears. So that is one reason. And we would——

Mr. NORCROSS. That is a big one.

Mr. BUSH. Yes. And possibly, hopefully be able to keep that and invest it in other aviation.

The second reason is industrial-based stability and predictability. It is a—which is where you get the cost savings. They are able to do long-term contracts for things and get discount prices. It also ensures the Army has those production lines running. And then we have a known—two known production lines that will be firm.

Mr. NORCROSS. Thank you. And, actually, that leads right into my second question about our industrial base. We are always going through changes, evaluating new technologies coming before us. But at the end of the day, having the industrial base within the control of the United States, and that has an asterisk next to it, because, you know, this is incredibly important. We found out about the supply chain and vulnerabilities, but I wanted to talk to you about the industrial partners, particularly on our Future Vertical Lift.

There are some major contractors, obviously, who are doing very well, but when we shift away from some of the—and I don't like using the term legacy, but platforms that have been used for a while, sometimes we get down to one supplier for a critical part. We don't do this alone. We do it with our industrial partners. When we look at Future Vertical Lift, it is a program that you are reducing risk. We have had some great demonstrators.

Talk to me about the industrial base, if you would, General, and how important that is, particularly when we look at developing that next generation of workforce who hears the same narrative day in and day out. To make it in America, you have got to go to college. But you know what? That is great, but somebody has got to build the things. That is where it comes back to the industrial base. Would you shed some light on our industrial partners?

General PETERSON. Thanks very much, Chairman, for that question. First, the necessity and the vitality of our industrial base directly influences our enduring readiness. We don't build our own parts, for the most part. We don't have the sustainability and repair on our own without our industrial partners, our industry partners. So it is absolutely vital across our enduring fleet, and that is the term that we are using for those aircraft that we may not be modernizing substantially, but we know that we are going to retain them in our fleet for a substantial amount of time, and they have an important contribution to make. The Apache, the Black Hawk, the Chinook, they are part of our enduring fleet.

We are not divesting comprehensively of those. They have a place. And we need to maintain those aircraft ready and have part streams and repair parts for those for the foreseeable future. We work very closely with our teammates in ASA(ALT) [Assistant Secretary of the Army for Acquisition, Logistics and Technology] as

well as Army Materiel Command to ensure that we have viability in the industrial base to include suppliers for those.

With respect to the workforce, I have had the pleasure of visiting locations at all of our major manufacturers, and meet the craftsmen and women on the floor who provide us with these incredible, world-class capabilities that we have taken to combat and brought home again, and thanked them for their contributions, their commitment, and their part that they play in our national defense. So the workforce in our industry partners are an absolute vital portion of our overall efforts. Thank you.

Mr. NORCROSS. Thank you. And, certainly, it should certainly be noted that during COVID, obviously, the service men and women never got a break. But for those in our industrial base who went to work every day, particularly early on when they had little knowledge of how it was spreading, we thank them also because we would not be here today if somehow this industrial base stopped. And we really appreciate all those who put themselves out there.

Just want to shift quickly over to Ms. Costello. The subcommittee obviously has been supportive of the Army and SOCOM [U.S. Special Operations Command]-led efforts for the Degraded Visual Environment or the DVE system for helicopters, and we are really pleased that the Air Force joined the effort. And I talked about how we can work together, and budgeted the system for the current HH–60G helicopter.

Now, in the 2022 request, it is canceled. Can you share with us the thought process on that, that we geared up and now we are gearing down, or quite frankly, stopping? Give me a little bit of history of why we are where we are today.

Ms. COSTELLO. So as the timeline for the aircraft moved out to the right, and the timeline for an integration of that, basically, the return on investment of when we would be able to install it before we would be, you know, removing the aircraft from our inventory became part of the equation. And that led to, you know, assessing the risk of what we were going to fund and not fund. And, therefore, our combatant commander looked at that and decided to not fund at this point for that, for that particular aircraft.

I don't know if you would like to add anything more relative to the divestiture because that does have part to do with the equation.

General MOORE. Yes, ma'am. Thank you.

So, as we changed the divestiture profile for the HH–60G and compared that, as Ms. Costello said, to the install timeline and the amount of investment, it just did not appear to be a good use of taxpayer dollars. It doesn't mean we don't believe in the system, and it doesn't mean we don't believe that it is very productive for the pilots and very helpful for them. It just didn't make sense in this particular case for this particular aircraft. But we do share, Mr. Chairman, your thoughts that it is a significant enhancement for the pilots, and we will continue to look as we go forward with new fleets at incorporating that into either the baseline configuration or into a modification later on.

Mr. NORCROSS. So the dollars that were expended, they just don't get lost. That technology is being forwarded to the newer platform?

General MOORE. So we have the opportunity to incorporate that into the new aircraft. It is not a part of the baseline, to my knowledge, but we do have the opportunity to incorporate it. And as we are able with available funds, that is something that we will certainly look at, because as I said, Mr. Chairman, we do share your sense that it is something that is helpful.

We have funded the HH–60W to what we believe is the minimum combat configuration. There are additional modifications that could go onto the airplane, but at this point, with the resources that we have, not all of the modifications that were originally planned for the HH–60W are included in the current aircraft.

Mr. NORCROSS. So I understand the timeline, but how does it become less of a safety issue that you wouldn't incorporate it?

General MOORE. Mr. Chairman, I don't know that I would say that—first of all, I don't know that I would say that it is a requirement for a safe aircraft. It is an enhancement to the aircraft that does improve safety, but we don't believe it is a safety of flight issue to not have it on the aircraft. And as I mentioned, that technology will be available for the HH–60W, but as we accelerated the timeline for the G model, compared to the installation timeline, it just didn't seem to make fiscal—it didn't seem to be fiscally responsible.

Mr. NORCROSS. Okay. That, I understand. Let me hold up on that and defer to Mrs. Hartzler.

Mrs. HARTZLER. Thank you.

Lieutenant General Wise, I would like to discuss the CH–53K heavy-lift helicopter program and how the Marine Corps plans to control costs now and through the life cycle of the program. Right now, we are buying a helicopter with a higher unit cost than the F–35. CH–53K costs were hovering around $125 million a copy in fiscal year 2021. Costs should decrease once the program gets to full-rate production, but now I see that the Marine Corps plans to procure only 9 aircraft this year, down from the 11 projected in fiscal year 2021 FYDP [Future Years Defense Program].

Decreasing procurement numbers has become a trend over the past few years. Combined with the Marine Corps current plan to reduce from 8 to 5 squadrons, is it also the Marine Corps plan to truncate the CH–53K procurement at a number below the current requirement for 200 aircraft? And, if so, how will this impact that current unit cost per aircraft?

General WISE. Senior Ranking Member, I very much appreciate the question. For the control cost piece of it, I mean, that is—as you know, we have attacked that in two directions. One is trying to drive down the unit cost, which is worthy of discussion. The unit cost on lot 5 which was this year is $97 million per copy. Where we are going in 2022, it appears it is going to be about $94 million, so it is on the way down. And at this point, it is down below the cost of an F–35 and trending in the right direction.

So, a lot of the reductions in numbers over recent history really had to do with trying to do risk-reduction initiatives to get through some of the challenges. But right now, we have actually had great success in getting through those challenges, like engine gas reingestion has been—we are actually past that now.

So, as we get ready to start into IOT&E [initial operational test and evaluation], so operational tests, we are actually starting next month, we are seeing some fairly impressive readiness rates for the test birds that are going to be doing that operational test.

So there are some good-news stories as we have done the risk reduction initiatives and help driven down costs for procurement. It also goes into the sustainment side of the house, things like performance-based logistics, starting early with that platform to get some of those parts into performance-based logistics contracts to keep driving down the cost and incentivize industry to drive down the costs. So there's a lot of good things happening right there.

As far as the force design question and reduction, the original requirement was about 220 aircraft. It was reduced to 200 in order to meet affordability. So as we look at force design and how that will affect that program, if there is a reduction, it will probably be less than we would normally think, had we actually bought the program of record that was the requirement to begin with.

But as we get to determining what that number is, any reduction would not happen until the end of the life cycle or the end of the program buy. So that would, working with industry, reduce the likelihood that costs would rise depending on the last lot buys.

Mrs. HARTZLER. So you are saying you haven't decided yet whether you are going to go below 200, and that will be determined in the future, and if so, it will be the last lot that gets cut?

General WISE. Yes, ma'am. If we do, and it is possible, absolutely. It just won't be as low as you might think if you did, like, the straight math for it, because of the requirement being 220 initially. And part of that was also based on an attrition rate that had not been updated to current models. So it could go below 200, and it may, but I am not sure it is going to go grossly below.

Mrs. HARTZLER. You are not sure it will go closely below?

General WISE. Grossly below. I don't think it is going to go——

Mrs. HARTZLER. Grossly below. Clear as mud, all of this general terms here. Okay. So, thank you.

The last question, Mr. Bush. It is my understanding that the Army and the contractor on the Improved Turbine Engine Program, the ITEP, have worked through the manufacturing difficulties posed in the last year by COVID to keep ITEP on schedule. However, previous year plans to accelerate the schedule have now been ruled infeasible.

How confident are you that ITEP can remain on schedule for integration onto the Future Attack and Reconnaissance Aircraft, the FARA? And what risk do you see for the program in fiscal year 2022 funding if it is not provided at the requested levels? And what risk would a CR [continuing resolution] pose to the program timelines?

Mr. BUSH. Thanks for the question, ma'am. So a couple of those, I am going to have to get back to you on, but let me see the best I can do here.

So, of course, the engine is vital for the Apache and Black Hawk future, as well as the FARA, so it is a program the Army is committed to. As you know, we went through many years with two vendors, and now we have one that did encounter COVID-related, in their case, difficulties. I think any reduction from the 2022 re-

quest would put our current plan at risk. But insofar as a detailed estimate regarding potential additional delays, I would have to get back to you on that, ma'am.

[The information referred to can be found in the Appendix on page 63.]

Mrs. HARTZLER. Okay. Thank you very much.

I yield back.

Mr. NORCROSS. Thank you.

I understand we have Mr. Horsford, the gentleman from Nevada.

Mr. HORSFORD. Thank you. Thank you very much, Mr. Chairman——

Mr. NORCROSS. You are recognized for 5 minutes.

Mr. HORSFORD [continuing]. And the Ranking Member. Thank you as well to our witnesses for your service and testimony today.

Army National Guard aviators in my home State of Nevada play an important role in protecting the communities in my district from the ever-increasing threat posed by wildfires. I am very proud of the work done every year by both our Army National Guard UH–60 Black Hawk and CH–47 Chinook aircrews, as well as the C–130 pilots of the Nevada Air National Guard.

Aerial firefighting provides the Nevada Division of Forestry and the U.S. Forest Service with an important resource that can protect firefighters on the ground by making precise drops that often prove critical in shaping the fight against wildfires. While it is not their primary purpose, the aerial firefighting missions conducted by the Nevada National Guard are some of the most dangerous missions they fly, to include flying in combat. For that reason, I think it is vital that the crews flying these dangerous missions have access to the most capable platforms and modern systems available, both in my State and across the West.

So, Mr. Bush and General Peterson, how does the Army factor in missions like aerial firefighting into basing decisions for upgraded UH–60s, given the consistent increase in demand for these types of missions and the extreme risks that they pose to aircrews?

General PETERSON. Thank you very much for that question. First, I would like to share your enthusiastic support and appreciation for the role that our Army National Guard and our Army Reserve units play in the defense of our homeland, and in vital civil support missions.

With respect to specific prioritization for fielding of modernization capabilities, those fielding decisions within the Army National Guard are prioritized by the Army Guard and the Guard Bureau with consultation and cooperation with the Army Staff, but primarily based on the contributions they will make to our wartime missions. For those combat aircraft, that is their primary contribution. Although their day-in, day-out mission is very vital and is clearly recognized, the modernization priorities for our combat platforms is largely based on the wartime traces, the contributions that those organizations will make in a large-scale combat operation fight.

Mr. HORSFORD. Thank you. On a similar note, it is my understanding that Special Operations Command will soon complete the integration of the Degraded Visual Environment pilotage system, or the DVE. Given the similar issues around the risk of brownout,

or otherwise severely degraded visual environments faced by aircrews conducting aerial firefighting missions, I am curious if the Army have considered building the systems to National Guard crews tasked with this mission. Does the Army currently intend to procure additional DVE systems for National Guard aviation units who frequently conduct aerial firefighting missions?

General PETERSON. That is another great question. With respect to our DVE investments right now and our developmental program, we currently have 15 of the developmental systems fielded on HH–60 medevac Black Hawks, and 25 fielded with our special operations forces.

Interestingly, my most recent actual flight in an aircraft, just a few months ago, was in a DVE-equipped MH–47G at Fort Campbell, and the contribution of that system to a combat profile, as well as enhancing safety, is substantial and is very relevant.

We are using these initial prototype or developmental fieldings to inform a long-term strategy and long-term requirements, and we have an additional initial requirements document currently in staffing that will inform longer term Army strategy and investments. I do not believe that we have openly discussed and considered the contribution this could make in aerial firefighting, but we will certainly take that for consideration. Thank you.

Mr. HORSFORD. Thank you very much. I look forward to working with you and the committee to improve the safety of the crews flying these dangerous missions.

Thank you, Mr. Chairman, and Madam Ranking Member, and I yield back.

Mr. NORCROSS. Thank you, Steve. Appreciate those questions.

Firefighting things that get smoke, unfamiliar areas, it certainly reminds us of a couple of the accidents, I know the one in Iraq, and certainly at our base in Afghanistan with the cable going up, and incredibly important.

So, Mrs. Hartzler doesn't have any other questions. I have one, and this is sort of a—I don't want to say a slow pitch, but certainly to get your feedback on that. When we look at the innovation and technology upgrades on many of what we are looking for in the future in the rotary wing, incorporating capabilities like unmanned flight on major new platforms, and some are much more focused than others, but in any of these, it is—the complexity is something that is all balanced with the risk, the time, the cost on these platforms.

Would each of the services discuss what innovation your services expect out of these future systems, and how far along you are in the research, development, and what degree you think unmanned capabilities will be part of your future fleet? Let's start with the Army.

Mr. BUSH. Mr. Chairman, I will start, and if I could turn to General Peterson on the requirements.

So the Army does have multiple unmanned aircraft programs underway. The overall—if I could describe it this way, is more of thinking of them as like part of a team with manned aircraft. So they are not operating completely independently in most cases, but teamed with manned aircraft, including even small UAS [unmanned aerial systems] that are launched through, for example,

the air-launched effects S&T and experimentation efforts that can possibly do different missions for us.

So, I think moving along those lines to where we can get better teaming between manned and unmanned aircraft I think is still the Army's overall plan, while other efforts are underway, and I would turn to General Peterson to talk about requirements.

General PETERSON. Specifically, some of the baseline technologies that are already being explored and demonstrated in both FLRAA and FARA will provide a foundation for us to move forward with either optionally manned, partially manned, or advanced elements of manned-unmanned teaming. Fly-by-wire technology with our flight controls, the digital backbone, the modular open system architecture that allows us to integrate emergent capabilities in our aircraft for the future will all provide a foundation and a launching point for these options or opportunities.

Additionally, the Army's continued investment in AI [artificial intelligence] and machine learning will provide us the technological foundation for the decision making, or the automation, that will allow these capabilities to move forward, not only in our rotor wing platforms, but in other aspects of our advanced combat capabilities and modernization priorities.

Mr. NORCROSS. You will be ready for it, and the technology will be there in an appropriate way and at appropriate cost?

Mr. PETERS. We are absolutely investing in it and making progress. I would hesitate to give a date-time group for integration or implementation of these capabilities, but they are clearly a priority for our continued research and development.

Mr. NORCROSS. Thank you. Our Navy, Marines.

Mr. STEFANY. Yes, sir. Again, I will start and pass it to my service brethren.

As I think where we have a Department of Navy unmanned campaign plan that lays out those technologies and road maps to get us to the place where, like our Army counterparts, we have that manned-unmanned teaming of the future, a little different maybe in our case, manned and unmanned aircraft but also, unmanned with ships, amphibious ships, even submarines, that connection of unmanned aircraft with both manned aircraft and ships.

So with that introduction, I will pass it over to General Wise.

General WISE. I would say for the Marine Corps the amount of investment into unmanned systems is increasing clearly for us. We are going into the MQ–9A roles now, but the other areas that we are going to are not just ISR [intelligence, surveillance and reconnaissance]. So a lot of the work that is being done by General Peterson's team—and actually I spend quite a bit of time with General Berry as well on development of things that are going to have logistics applications because, as we look at the vastness of the Pacific and trying to do distributed operations with, you know, capacity constraints, can we do it with more unmanned opportunities?

But part of the constraint there is not that we don't want to do it. It is there are some of the technology limitations that General Peterson was talking to, like the things that make it truly autonomous. Can I not just get there, but can I sense the zone and clear the zone and set down so that I can, you know, get rid of the payload and go back and do it again?

So, a lot of opportunities coming. It is just maturing things to a point where we can invest with a reasonable certainty of success, but we are going in that direction.

Admiral LOISELLE. So, Mr. Chairman, from the Navy's side, we are already implementing our Fire Scout plan. So we have got rotary wing unmanned already in the B and the C version. The C is really about the size of a Bell 407 helicopter, so it is large. You get some decent range out of it utilizing the systems to do surveillance and that type of stuff.

It is also part of our replacement plan for the MH–53, and utilizing the minehunting capabilities of the Fire Scout system. So that is a lead-in to an overall family of unmanned systems.

I had the pleasure of commanding the USS *George H.W. Bush* when we got the very first arrested landing of a fixed-wing airplane unmanned, and now we have just had our first plug of an F–18 into an unmanned aerial refueling tanker. And so, we are making some good progress. I am very pleased with the way we are going and CNO [Chief of Naval Operations] is all in with our unmanned campaign plan and so we see a significant amount of development in our future.

Mr. NORCROSS. Thank you.

General MOORE. Mr. Chairman, thank you for your question. There are some use cases in the Air Force for unmanned aircraft of a rotary wing nature. Agility Prime is looking at eVTOL [electric vertical takeoff and landing], for example, and there are some great use cases for that. As just a quick example, if you think about the range at Nellis and the need to resupply or move things around on that range and you can do it very inexpensively with something like eVTOL, most of the use cases that we have, however, are not in the rotary wing world.

But we are exploring obviously both autonomous aircraft and manned-unmanned teaming. I think the XQ–58 is probably the most powerful example that we have. It is already flying and what it tends to do really, really well is perform as a node in the airborne, in the Advanced Battle Management System. A communications relay, a sensor, and as we look to a future is that enabled by a sensing grid, many of the parts of that grid will likely be formed by autonomous aircraft. So we certainly are invested in this area and it is something that we are paying attention to. It is something that is important with us.

The rotary wing aspect of it is not quite the heart of the use case that we have but we do have some examples and Ms. Costello has a recent one of those. I will pass to her, pending any questions you have, Mr. Chairman.

Mr. NORCROSS. Thank you.

Ms. COSTELLO. And specifically within our Agility Prime program, they are looking at autonomy as one of the areas of interest. So with all of the companies that they are working, autonomy is a focus area.

Since December of 2020, the Kitty Hawk example, autonomy-for-medevac exercise, they actually matured and optimized the Heaviside prototype with autonomous flight and demonstrated the first medical evacuation by an electric aircraft. That is the sort of thing they are investing in, and we hope to mature it and be able to le-

verage it in the future. And, of course, we are looking at an area of interest of unmanned, cargo-type capability also. And so, those are the areas Agility Prime is working. Thank you.

Mr. NORCROSS. Mrs. Hartzler, I have to go vote but I understand my colleague from Hawaii has a question.

So I want to thank you in advance for your cooperation and working with us.

But Mr. Kahele will be wrapping it up and, again, I appreciate what each of you are doing and who you represent to keep our Nation safe. Thank you.

Mr. KAHELE. All right. Ms.—Mr. Chair, mahalo for giving this opportunity to ask a few more questions that I had, and then we will wrap it up. I will start with General Peterson. Actually let me go back to first question I have for General Wise.

Sir, you know, I live on the island of Hawaii, but I represent Hawaii's Second Congressional District, and this is not an issue that is just unique to Hawaii, and that is helicopter noise, especially around Kaneohe Marine Corps Base. And as someone who in a previous life operated C–17s out of K-Bay for quite a while, I know those noise complaints from our communities out there.

But as—you know, we are looking at the future of Kaneohe Marine Corps Base, especially during weekend and nighttime training which is required to maintain readiness, the aircraft and helicopter flights can be loud and, you know, the base is great. They are trying to do things out there to mitigate that.

But I just wanted to ask on behalf of the community organizations and the neighborhood boards that represent the windward side of the island of Oahu, are you committed to working with those organizations, those neighborhood boards, or at least through the base commanders at Kaneohe Marine Corps Base, to address their concerns about noise and safety? And if there is anything you want to add to that, I am sure they would appreciate hearing it from you.

General WISE. Sir, I appreciate the question.

And I do assure you that the longstanding relationship we have had with the community has, I think, been very positive and for all the right reasons. And I would also say that from a course rules perspective, as you are well aware, trying to make sure that we minimize the opportunity to create challenges with the community. We always try to avoid that, and sometimes we don't, but the commitment is still there to look at every opportunity to make sure that we are good partners and good community partners, because we do enjoy our relationship very much there, and we will continue to work with them.

Mr. KAHELE. Thank you for that. And as someone who represents the windward side, I know that they appreciate Kaneohe Marine Corps Base and our military friends and families that live on the island of Oahu. Thank you.

Okay. Over to General Peterson, the Army has consistently discussed the need for speed and range, as well as survivability, when it comes to Future Vertical Lift aircraft. Could you explain to the committee why speed and range are so critical to the Future Long Range Assault Aircraft and how this new technology will enable the Army to leverage that aircraft as a power projection platform,

and then how will this capability assist the Army with its strategy in the Indo-Pacific theater and that great power competition?

General PETERSON. Thank you for that question.

Essentially in basic terms what we are striving to accomplish is doubling the performance of what we have appreciated and has been exceptionally relevant for decades. Speed and range will give us an absolutely unprecedented capability, one that we have never experienced before, to disaggregate, aggregate, operate from relative sanctuary, and then project effects, as well as forces, at distances that our enemies will not be able to predict, and not be able to counter when we do this en masse in the face of that determined adversity.

The speed allows us to close with our objectives at a rate where we get inside of our foes' decision cycles, and gives us the opportunity to concentrate those effects at the place of our choosing. The ranges in the Indo-Pacific region are obviously vast, and it adds to our relevance and our contribution in that area as well.

Mr. KAHELE. What is the impact on that mode of speed and range on the medevac mission where we need to, you know, get wounded soldiers to critical care as quickly, as early, as safely as possible?

General PETERSON. It is absolutely game-changing. It gives us the opportunity to extract wounded soldiers much more quickly, and get them to the higher levels of care. It gives us also much more reach without support, sustainment, and exposure of others to extend those legs as we have had to do in other theaters in recent years. So that extended reach, again, gets the wounded soldier to the competent medical care much more quickly, but also reduces the logistical burden for those extended ranges to provide that capability.

Mr. KAHELE. Okay. Thank you for that.

General PETERSON. And if I may, please, Mr. Bush has one brief comment, as well, he would like to follow up on.

Mr. BUSH. Sir, if I may, I did want to second everything that you just heard, but also mention I was remiss in my previous answer in not mentioning the tremendous innovation in the commercial sector in unmanned aircraft that the Army and the other services, I am sure, are drawing on. There is just as much R&D [research and development] out there as there is in the DOD [Department of Defense], and the Army Futures Command, in particular, I think is doing a very good job of finding things and experimenting with things in the commercial sector for unmanned aircraft, rather than us developing things from scratch, which I think, given the investments that are in the private sector, is a really good approach.

Mr. KAHELE. Okay. Thank you.

Let me jump over, last question, for the Air Force.

Ms. Costello and General Moore, earlier this month, General Hinote testified before the Seapower and Projection Forces Subcommittee that the Air Force is considering a vertical lift platform to replace the C–130 as it seeks to move away from fixed runway requirements. The general also said the Air Force is watching the Army Future Vertical Lift program when it comes to the development of vertical lift transport technology.

How would the on-time fielding of an Army Future Vertical Lift transport aircraft such as the Future Long Range Assault Aircraft benefit the Air Force as it looks to develop the next-generation concepts, and when possibly would we see a potential vertical lift C–130 replacement fielded?

General MOORE. Well, thank you for the question. It certainly—if you—as you spoke before about the distances in the Pacific, one of the things that we think will be a part of the need to perform well in the Pacific is the ability to move around between different places, according to a concept we call agile combat employment. And if you accept that fixed runways are easy to find and, therefore, easy to target—particularly in the first and second island chain, they are all within range of Chinese ballistic missiles—the ability to operate in a runway-independent way makes a great deal of sense and is an important use case, and I am sure that is what General Hinote talked about.

We are watching the Army Future Vertical Lift program very carefully because it could provide the mechanics behind how we could do this. As to when it would be fielded, I think that would depend on what its actual range and payload capabilities would be and when it delivers. But if you—if you consider what the C–130, particularly the C–130H, can do in the Pacific, you would certainly want to look to the next generation of lift capability if you want to perform an agile combat employment type of operation. Does that get to your question, sir?

Mr. KAHELE. It does and, you know, I get excited about it as somebody who has about 1,000 hours in the C–130, the H–2 and the H–3, and, as you know, we have C–130s out in Yokota. We could possibly look at other locations like Andersen for a potential unit. But, you know, is this type of aircraft that you see would potentially replace those older Hs that we are looking at retiring, or how would that complement the J models that we are investing in?

Of course, you know, newer C–130s that we are basing in the Pacific, is this the type of aircraft that would be potentially looked at in that first, second island chain, Yokota, Andersen, maybe some other areas?

General MOORE. Yes, sir. I think that would probably be the most powerful use case and if you do consider a doubling of performance, now you have—now you potentially have an aircraft that can operate over the distances and therefore with the speed required to actually become agile in the Pacific, and I think that is what is going to be required if you consider the capabilities that China has to target fixed locations. And as well as speed and range performance, you really have to be able to get away from a runway if you are going execute a concept like that successfully.

So we are watching this closely and look forward to being able to leverage what the Army develops. I would see it as a complement to the J model. I would see that there still are use cases for the Js, as well as for C–17s. Commercial partners play in that space, as well, up to a certain point, but I would see this as a complement that could add, or augment, the capabilities that we already have in terms of strategic and tactical lift.

Mr. KAHELE. This would be something that would be really totally new for the Air Force as well, having vertical lift with, you

know, these types of aircraft, you know, and a whole new training program that would be incorporated into, you know, those different Little Rock and Altus and the different bases where we haven't even—not even doing any of these things, and would have to incorporate that into those new programs.

General MOORE. It would, yes, sir, and I would expect it, if we were going to do that, we would leverage our experience with the CV–22, as well as the experience that the Army has as they field a system like this, because it would—particularly, the tactics and the techniques and procedures but just the basic airmanship would be different than what we do today.

Mr. KAHELE. Thank you.

Okay. Well, on behalf of the chair and the full committee, we want to thank you for your testimony, your discussion that you provided the committee today. It has been a very dynamic day here on the Hill with having to step in and out of votes. But we sincerely appreciate your time, the attentiveness, your work you put into your testimony.

So, with that being said, this committee stands adjourned and aloha.

[Whereupon, at 5:05 p.m., the subcommittee was adjourned.]

A P P E N D I X

JUNE 30, 2021

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

JUNE 30, 2021

Statement of the Honorable Donald Norcross
Chairman, Subcommittee on Tactical Air and Land Forces
"FY2022 Rotary Wing Aviation Budget Request"
June 30, 2021

The hearing will come to order.

I want to welcome everyone to the Tactical Air and Land Forces subcommittee hearing on the military services' Fiscal Year 2022 budget request for rotary wing aviation programs.

We have lifted most COVID restrictions here in the House, but this is still a hybrid hearing and we will have a few Members participating remotely today.

I would like to welcome the members who are joining today's joint hearing remotely. Members who are participating remotely must be visible on-screen for the purposes of identity verification, establishing and maintaining a quorum, participating in the proceeding, and voting. Remote attending Members must continue to use the software platform's video function the entire time while in attendance, unless they experience connectivity issues or other technical problems that render them unable to participate on camera. If a Member experiences technical difficulties, they should contact the committee's staff for assistance.

Video of Members' participation will be broadcast in the room and via the television and internet feeds. Members participating remotely must seek recognition verbally, and they are asked to mute their microphones when they are not speaking.

Remote Members may leave and rejoin the proceeding. However, if remote Members depart our hearing for a short while, for reasons other than joining a different proceeding, they should leave the video function on. If Members will be absent for a significant period, or depart to join a different proceeding, they should exit the software platform entirely and then re-join it when they return. Members may use the software platform's chat feature to communicate with staff regarding only technical or logistical support issues.

I have designated a committee staff member to, if necessary, mute unrecognized Members' microphones to cancel any inadvertent background noise that may disrupt the proceeding.

With that, I will now give my opening statement.

We have a large and distinguished panel of witnesses testifying today, and I thank them for making the time to come before us to discuss the status of their service's rotary wing aviation programs, and the progress and challenges we need to be aware of before we mark up the Fiscal Year 2022 National Defense Authorization Act.

Rotary wing aircraft serve diverse and unique purposes across each of the military branches, and each service is currently in a different stage of modernization of its helicopter fleet. Successful modernization and sustainment of rotary wing aircraft will lay a solid foundation for the Joint Force of the future.

The Army is embarking on an ambitious modernization effort, Future Vertical Lift, aimed at developing and fielding two new major rotary platforms at the same time—the Future Attack and Reconnaissance Aircraft and the Future Long Range Assault Aircraft.

Without Future Years Defense Program information in this year's budget request, it's difficult to assess the adequacy of the FVL funding profile. However, it is the subcommittee's understanding that the funding plan for FLRAA was never revised in the out-years after the decision was made to accelerate the program schedule by four years. Given the concurrent acquisitions of FARA and FLRAA, the Army should explain how these programs will be appropriately resourced and what actions are being taken to manage risk within Future Vertical Lift.

As in last year's budget request, the Army did not include procurement funding for the CH-47F Block II Chinook; only the new Special Operation Forces aircraft are funded. The Chinook program is conducting additional testing on the advanced rotor blade now and should have sufficient data collected and analyzed for a production decision by the end of Fiscal Year 21. We are interested in discussing the way ahead on Chinook F Block II.

Within the Department of the Navy, the Navy has completed acquisition of its fleet workhorse, the MH-60, and is beginning to plan for a service life extension program to keep these aircraft relevant into the next decade, while the Marine Corps is in the testing phase on two new aircraft, the CH-53K heavy-lift helicopter and VH-92A, the replacement presidential helicopter program.

After 15 years of development, the CH-53K program is still discovering new technical and operational deficiencies that need to be corrected. Granted, this is the purpose of the acquisition system's test programs, to wring out the problems before fielding systems, but the CH-53K program should be beyond the point of major problem discoveries. I expect the Marine Corps to explain how they anticipate controlling risk and cost on this program.

The Air Force is on the cusp of transitioning to a new combat rescue helicopter, the HH-60 "Whiskey", and a replacement helicopter for nuclear security missions, the MH-139 Grey Wolf. I expect the Air Force witnesses to provide updates on how these programs are progressing and to justify the requests – or in the case of the Grey Wolf, the lack of one – for Fiscal Year 22.

Finally, I am interested in what each service is doing to increase survivability for their rotary wing fleet, and if and how they are working together to leverage research and investment in aircraft survivability equipment for the common benefit. Our helicopter pilots and crews deserve the best self-protection and safety systems available.

With that, I now recognize our Ranking Member of Tactical Air and Land Forces, Mrs. Hartzler.

RECORD VERSION

STATEMENT BY

MR. DOUGLAS R. BUSH
ACTING ASSISTANT SECRETARY OF THE ARMY
(ACQUISITION, LOGISTICS AND TECHNOLOGY)

AND

LIEUTENANT GENERAL ERIK PETERSON
DEPUTY CHIEF OF STAFF OF THE ARMY, G-8

BEFORE THE

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES

ON

DEPARTMENT OF DEFENSE ROTARY AIRCRAFT ACQUISITION AND MODERNIZATION PROGRAMS IN THE FISCAL YEAR 2022 PRESIDENT'S BUDGET REQUEST

FIRST SESSION, 117TH CONGRESS

JUNE 30, 2021

NOT FOR PUBLICATION UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES

Introduction

Chairman Norcross, Ranking Member Hartzler, and distinguished Members of the Subcommittee on Tactical Air and Land Forces, thank you for this opportunity to discuss the Fiscal Year 2022 (FY22) President's Budget request for Army Rotary Aircraft Acquisition and Modernization Programs. On behalf of the Secretary of the Army, the Honorable Christine E. Wormuth, and the Chief of Staff of the Army, General James C. McConville, we thank you for the invitation to join you today and look forward to a productive discussion.

Aviation is an important element of the Joint, inter-organizational, and multi-national team. Aviation provides significant capabilities to maintain superiority over our adversaries by increasing lethality and survivability of the force, providing enhanced mobility into and within the theater of operations, and enabling unprecedented situational awareness and battlespace integration.

Aligned with the President's Interim National Security Guidance, the Army's modernization efforts contribute to the Nation's enduring elements of power advantage over new threats created by changes in global power distribution. In order to maintain standoff and overmatch against near-peer competitors, we must continue to develop new capabilities. The Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT), including Program Executive Office Aviation, Program Executive Office Missiles and Space, and Army Futures Command, including the Future Vertical Lift (FVL) Cross-Functional Team (CFT), are working together to rapidly develop capability to support Multi-Domain Operations (MDO) and Joint All Domain Operations (JADO).

Aviation modernization priorities are aligned under four Signature Modernization Efforts (SMEs), formerly referred to as Lines of Effort, to provide capability for the Army of 2028: the Future Attack Reconnaissance Aircraft (FARA); the Future Long-Range Assault Aircraft (FLRAA); the Future Unmanned Aircraft System (FUAS), comprising Future Tactical UAS, Air Launched Effects (ALE) and Scalable Control Interface (SCI);

and Modular Open System Approach (MOSA). While modernizing, we must balance our investments in future capabilities with the readiness and targeted relevance of our current Black Hawk, Apache, and Chinook fleets.

Our focus on modernization comprises two parallel lanes of execution– modernization through new platforms and targeted modernization efforts for the current fleet. Characteristics that originate from the FVL CFT are key efforts that have priority in both funding and staffing. Aviation modernization efforts will provide the necessary standoff, overmatch, and decision dominance against near-peer competitors through the tenets of transformational Reach (speed, range, and endurance), Lethality, Survivability, and Affordability. Concurrently, the Army continues to refine the highest priority requirements for MDO that drive incremental modernization updates into the current fleet, which enable FVL and are synchronized and coordinated throughout the Army Aviation Enterprise.

Resourcing Army Modernization

Major investments in new airframes and technology are necessary to achieve standoff, overmatch, and decision dominance against near-peer competitors. However, fiscal and technological realities require incremental modernization of the current fleet, which will result in varied fleet configuration and capability. As such, the current fleet's role in MDO may be limited in scale.

In FY22, the President's Budget request totals $34.1 billion for the Army's Research, Development, and Acquisition (RDA) program, which includes $21.3 billion for Procurement and $12.8 billion for Research, Development, Test and Evaluation (RDT&E). Aviation RDA includes $2.8 billion for Procurement and $1.8 billion for RDT&E. These resources are balanced between investment for FVL modernization capabilities, ongoing production, and targeted modernization of the current fleet.

FY22 Aviation Key Investments

Army aviation investments include required capability in the reconnaissance, attack, assault, unmanned systems, utility, cargo, fixed wing, and aviation enabler systems mission profiles. Specific investments in this portfolio include the following:

FARA. FARA is a key aviation modernization priority and is integral to dominate the lower tier of the air domain (≤300') and effectively penetrate and dis-integrate adversaries' Integrated Air Defense Systems in JADO. FARA will fill the capability gap for light weight attack/reconnaissance. FARA provides significant advancements in aviation technology over the capability once provided by the OH-58 Kiowa. It will provide Combatant Commanders with greater tactical, operational, and strategic capabilities through significantly increased speed, range, endurance, low latent decision dominance, survivability, and lethality. As part of the current FARA Competitive Prototyping (FARA CP) effort, two vendors are approximately half way through air vehicle development and are on track to fly in FY23. Weapons system design efforts are occurring in parallel, and the initial design review will occur in late FY22.

FLRAA. FLRAA will provide power projection from relative sanctuary with significantly increased and transformational range, speed, mobility, and payload over current Army and U.S. Special Operations Command (SOCOM) aircraft. FLRAA remains on schedule and is maintaining competition between the two Project Agreement Holders (PAHs) through extended Competitive Demonstration and Risk Reduction (CD&RR) activities. The use of the Other Transaction Authority (OTA) has enabled consistent open communications through continuous dialogue and requirements-sharing between the PAHs and PM FLRAA, enabling both cost and schedule efficiencies to maintain momentum. The preponderance of CD&RR is associated with digital engineering and model-based systems engineering, leveraging data from Phase I and Joint Multi-Role Technical Demonstrator (JMR-TD) flight tests. FLRAA is using the adaptive acquisition framework authorities (Middle Tier of Acquisition (MTA) transitioning to Major Capability Acquisition) to deliver FLRAA on an accelerated schedule with appropriate acquisition oversight. The program continues to refine affordability and MOSA, develop the Contract Requirements Package, and

initiate the Source Selection Evaluation Board to support an FY22 MTA contract award.

FUAS. FUAS funding supports the prototyping and development efforts on ALE and FTUAS. ALE are a central component of the FVL ecosystem providing forward stand-in lethal and non-lethal effects through advanced teaming of manned and unmanned platforms. ALE improves operational reach, survivability, and lethality for both the enduring and future platforms. Funding also supports the development of the expeditionary and runway-independent FTUAS platform, which will replace Shadow within Brigade Combat Teams. This follows a highly successful year-long demonstration period including multiple Soldier touchpoints that influenced our "Buy, Try and Inform" strategy to support a successful Army Requirements Oversight Council for an Abbreviated-Capabilities Development Document.

Aviation Munitions. FY22 funding appropriately balances modernization efforts and acceptable risk in ongoing production rates. Aviation munitions funding supports fulfillment of the interim Long Range Precision Munition (Spike NLOS) as a limited fielding directed requirement, initiates the enduring Long Range Precision Munition, and continues production of HELLFIRE, JAGM, and Hydra rockets (guided and unguided).

Apache. The Army will continue to explore ways to achieve cost avoidance and efficiencies for the AH-64 Apache, while completing the AH-64E Apache Remanufacture Program. This program is designed to renew the current Apache fleet by incorporating current technologies and a new airframe to extend the aircraft's useful life and make it the most technologically advanced weapon systems on the battlefield.

Black Hawk. The UH-60 Black Hawk continues to be the largest fleet of helicopters in the Army's inventory and an aviation workhorse on the battlefield. H-60M Black Hawk efforts focus on the continued procurement and fielding of the UH-60M aircraft as well as managing obsolescence efforts. Additionally, H-60 Black Hawk

continues to be focused on completing qualification of the H-60V, recapitalization (RECAP) of UH-60L aircraft into the UH-60V aircraft with a digital cockpit, and continuing divestment of legacy aircraft. The divesture of H-60As will be complete from the National Guard by the end of FY22 and from the Active Component by the end of FY24.

Lakota. The UH-72A Lakota continues to be fielded to the Army National Guard (ARNG) and the United States Army Aviation Center of Excellence (USAACE), Fort Rucker, Alabama, to conduct training operations. The procurement of additional aircraft will be complete by the end of FY21.

ITEP. The Improved Turbine Engine Program (ITEP) will power the FARA and is key to improving Black Hawk and Apache range, payload, and loiter time over the current 701D engine. ITEP increases lethality with the capability to operate with full mission payloads in high altitudes and hot temperatures (6k/95 degrees), reduces fuel consumption, and improves reliability/maintainability. FY22 funding continues Engineering and Manufacturing Development (EMD) including testing, airframe integration design reviews, and live fire planning.

Chinook. The Army completed fielding all CH-47F Block I units in FY20. The remaining CH-47F Block I production units will be delivered as Repair Cycle Floats. The CH-47F fleet is one of the Army's youngest and most modern fleets. The Army is investing in the CH-47F Block II EMD program and ongoing MH-47G Block II production for our Special Operations Aviation Forces. The Army remains committed to working with our allies and partners to pursue opportunities to maintain the health of the Chinook industrial base. The Army expects to make a decision on its heavy lift platforms for the future in 2023.

Aviation Mission System and Architecture (AMSA). The Aviation Mission System and Architecture Project Office within PEO Aviation is advancing open system architecture to support rapid introduction/updates of capabilities, enable interoperability, enhance aircrew safety, increase battlefield lethality, improve aircraft

survivability, and provide cross-platform portability. This provides Army aviation a scalable digital backbone with distributive processing and aligns to MOSA standards, allowing Air-to-Air and Air-to-Ground convergence and the rapid integration of evolving technologies. In addition, PM AMSA continues to develop the Assured Position Navigation and Timing (APNT) capability that will enable M-code and allow Army Aviation to fight and win in a highly contested or denied environment. Finally, in support of the Degraded Visual Environment (DVE) Directed Requirement, PM AMSA completed the integration of the first 15 DVE capable aircraft. This capability will undergo an operational assessment that will inform the Army's future DVE strategy.

Survivability. Aircraft survivability is critical to Army modernization and readiness efforts to equip the force and maintain dominance. The Aircraft Survivability Portfolio provides advanced sensor detect capabilities with the Limited Interim Missile Warning System (LIMWS) and advanced laser defeat capabilities with the Common Infrared Countermeasure (CIRCM) system. Designed for rotary wing, tilt-rotor, and small fixed-wing platforms, these capabilities ensure Army aviation is able to dominate a complex and continuously changing environment to pace the threat.

Reform. The Army is validating MDO concepts with the use of high fidelity modeling and simulation and then conducting increasingly complex Joint experimental and demonstration events, Experimental Demonstration Gateway Event (EDGE) and Project Convergence (PC). In FY22, the Army builds upon lessons learned from PC20 and EDGE21, which included Soldier touchpoints for early opportunities to validate technologies and requirement concepts as well as progressive efforts connecting Joint All Domain Command and Control (JADC2) to the lower tier of the air domain by extending the reach and lethality of the Future Attack Reconnaissance Aircraft (FARA) ecosystem to accelerate joint kill chains in all-domain operations.

Army aviation is instrumental in implementing the Army's new intellectual property (IP) policy (Army Directive 2018-26, "Enabling Modernization through Management of Intellectual Property"). The Army's IP Policy stresses identifying and planning for IP needs early in the lifecycle of any system. It includes IP requirements, strategy,

licensing considerations, and open communication with industry. PEO Aviation is also participating in the Program Management Resource Tools (PMRT) pilot program. PMRT is designed to capture and manage program data across the enterprise to enable real-time analysis and data-driven decisions. This effort will help to ensure senior Army leadership has the information necessary to make informed decisions across Army programs, while providing a modern management tool for programs.

Conclusion

It is clear that the security challenges of tomorrow will be met with the Rotary Aircraft Acquisition and Modernization Programs we develop, improve, and procure today. Because our adversaries will continue to invest in technology to counter or evade U.S. strengths and exploit vulnerabilities, it is critical that the Army Rotorcraft portfolio receive timely, adequate, predictable, and sustained funding to maintain overmatch.

We can assure you that the Army's senior leaders are working hard to address current challenges, as well as the needs of Army aviation in the future. We are doing so with affordability as our watchword, meeting the equipping needs of our Soldiers while we endeavor to remain good stewards of our Nation's resources.

Mr. Chairman and distinguished Members of this Subcommittee, thank you for your steadfast and strong support of our outstanding uniformed service members, our Army Civilians, and Army Families.

Mr. Douglas R. Bush
Acting Assistant Secretary of the Army for Acquisition, Logistics and Technology and Army Acquisition Executive

Mr. Douglas R. Bush is currently designated as the Acting Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA)ALT)) following his appointment as the Principal Deputy Assistant Secretary of the Army for Acquisition, Logistics and Technology on March 8, 2021. As the Acting ASA (ALT), Mr. Bush also serves as the Army Acquisition Executive and the Senior Procurement Executive.

From 2019-2020, Mr. Bush served as the Deputy Staff Director of the House Armed Services Committee (HASC). In this position, he managed all aspects of HASC administrative and legislative operations, including committee personnel and operations, emergency and safety procedures, the committee's budget, member and staff travel, and classified information management. He oversaw operations of 70 members of House Armed Services Committee staff working in support of 57 members of Congress serving on committee responsible for oversight of the Department of Defense.

From 2007-2019, as a Professional Staff Member of the HASC, Mr. Bush was the lead staff member responsible for analysis and oversight of a wide range of Army, Marine Corps, Air Force, and Navy combat system acquisition programs, with a focus on minimizing cost growth, delays, and shortfalls in delivered capability. Aviation programs overseen included fighter and reconnaissance aircraft, unmanned aerial systems, and air-launched missiles and munitions. Ground systems overseen included tanks, infantry fighting vehicles, amphibious systems, ammunition, small arms, and communications/network equipment programs.

CAREER CHRONOLOGY:
2005-2007, Legislative Director, Office of Congressman Neil Abercrombie, Washington, DC
2003-2005, Military Legislative Assistant, Office of Congressman Jim Cooper, Washington, DC
2002-2003, Legislative Correspondent, Office of Senator Bill Nelson, Washington, DC
2001-2002, National Security Analyst, Association of the United States Army, Arlington, VA
1993-1998, Officer, United States Army, 24th and 3rd Infantry Divisions, Fort Stewart, GA

COLLEGE:
MA, National Security Studies, Georgetown University, Washington, DC, 2002
BS, Political Science (American Politics), U.S. Military Academy, West Point, New York, 1993

Lieutenant General Erik C. Peterson
Deputy Chief of Staff, G-8

Lieutenant General Peterson received his Army commission in 1986 as a Distinguished Military Graduate of the University of Idaho's Chrisman Battalion, Army Reserve Officer Training Corps program. He was assigned to the Aviation Branch and completed flight school in 1987.

LTG Peterson's key command and leadership assignments include: four tours with the 160th Special Operations Aviation Regiment (Airborne), Director, Flight Concepts Division, Fort Eustis, VA; Brigade Commander, 10th Combat Aviation Brigade and the Chief of Staff, 10th Mountain Division (Light Infantry), Fort Drum, NY; Deputy Commanding General, U.S. Army Cadet Command, Fort Knox, KY; Commanding General of U.S. Army Special Operations Aviation Command (Airborne), Fort Bragg, NC; Director of Army Aviation on the Army staff at the Pentagon; Division West of First U.S. Army Commander, consisting of five brigades and two mobilization sites arrayed across the country; and the Director, Force Development, in G-8, where he served as the principal advisor to the Deputy Chief of Staff, G-8; the Vice Chief of Staff, Army; and the Chief of Staff, Army on all Army-wide equipping programs and resources.

LTG Peterson's education include: Bachelor of Science Degrees in Geography and Cartography from the University of Idaho's College of Mines and Earth Resources; and Master's Degrees in Business Administration (MBA) and National Security Strategy. Other professional military education includes the Aviation Officer Advanced Course, Combined Arms Service Staff School, Command and General Staff College, and the National War College.

His military awards and decorations include: Distinguished Service Medal (3 OCL), Legions of Merit (3 OCL), Bronze Star Medal (5 OLC), Meritorious Service Medal (4 OCL), the Air Medal with valor device and numeral 5, the NATO Meritorious Service Medal, the Combat Action Badge, the Master Aviator Badge, the Master Parachutist Badge, and the Air Assault Badge. His foreign military awards include: the Kuwait Liberation Medal - Government of Kuwait, Kuwait Liberation Medal - Saudi Arabia, Republic of Korea Order of National Security Merit – Cheonsu Medal, Australian Parachutist Badge, honorary Republic of Korea Master Aviator Badge, and honorary Swedish Parachutist Badge. The U.S Committee of the Blue Shield's first recipient of the Award for Meritorious Military Service in Protection of Cultural Property (2014); inducted into the U.S. Army Reserve Officer Training Corps Hall of Fame (2016); and received an honorary Ph.D. from University of Idaho (2018).

Lieutenant General Erik Peterson became the Deputy Chief of Staff, G-8, on 2 June 2021.

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

STATEMENT OF

FREDERICK J. STEFANY
ACTING ASSISTANT SECRETARY OF THE NAVY
RESEARCH, DEVELOPMENT AND ACQUISITION ASN(RD&A)

AND

LIEUTENANT GENERAL MARK R. WISE
DEPUTY COMMANDANT FOR AVIATION

AND

REAR ADMIRAL ANDREW LOISELLE
DIRECTOR AIR WARFARE

BEFORE THE

TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

DEPARTMENT OF THE NAVY ROTARY AVIATION PROGRAMS

JUNE 30, 2021

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

Chairman Norcross, Ranking Member Hartzler and distinguished members of the Subcommittee, thank you for the opportunity to appear before you today to discuss the Department of the Navy's (DON) Fiscal Year (FY) 2022 budget request for rotary aviation. Rotorcraft are essential to a full range of Navy and Marine Corps operations, and we thank Congress and this Committee for your support of these programs in the FY 2021 Authorization and Appropriation Acts.

In an interconnected and interdependent world, a dominant naval force and a strong maritime strategy are critical to the security of the Nation. The global security environment is increasingly influenced by our competitors; requiring the Navy and Marine Corps team to operate continually to provide credible combat power forward and a ready response force to global crises and disasters. As our national security posture evolves to confront new challenges, the DON continues to invest in key capabilities that maximize our naval power contribution to the Joint Force and ensure a proper balance of readiness, capability, and capacity within the limits of available resources.

The Department's rotorcraft capability is a key enabler of the Navy and Marine Corps ability to operate forward and conduct a broad range of military missions in support of the Joint Force. When coupled with air-capable ships, vertical lift aircraft provide speed, range and flexibility to give our Nation unmatched global reach and expeditionary agility. The versatility of these aircraft is unparalleled. Rotorcraft airframes can transport troops, equipment, and supplies from ships and land bases for amphibious assault and operations ashore. Encompassing over fifty percent of Naval Aviators, rotary pilots fly these aircraft to support a broad depth of missions, to include Anti-Submarine Warfare, Anti-Surface Warfare, Surveillance, Combat Search and Rescue, Humanitarian and Disaster Assistance, and organic Airborne Mine Countermeasures missions. They can fly these missions from practically anywhere, including ship decks, open water, unimproved landing sites, roof tops, and the White House lawn.

The Fiscal Year 2022 President's Budget Request

The President's FY 2022 budget advances key DON priorities to defend the nation, innovate and modernize the Department, increase resilience and readiness, and build a workforce to compete and win. It balances the urgent readiness needs of our force today with investments,

and reflects hard decisions to divest of less capable platforms and systems, freeing resources to invest in a future force that can deliver greater efficiency and effectiveness.

The Department will increase the lethality and capability of our aviation portfolio through leading edge technology development and platform modernization. The FY 2022 budget continues investments in key Navy and Marine Corps developmental programs, including prioritization of force design and delivery of Naval Expeditionary forces capable of imposing costs on global competitors.

The FY 2022 budget requests funding for 53 manned rotorcraft including the planned ramp-up of CH-53K King Stallion helicopter production. The budget prioritizes recapitalization of the Helicopter Training Fleet through procurement of the TH-73A. As part of the Advanced Helicopter Training System (AHTS), these aircraft will be vital to training future generations of rotary and tilt-rotor pilots for the Navy and Marine Corps.

This budget continues Research, Development, Test and Evaluation (RDT&E) investments in aviation enhancements and recapitalization efforts, such as Future Vertical Lift (FVL). The Department is working with our Service partners to support the FVL Family of Systems, including Navy's FVL Maritime Strike (MS) and the Marine Corps' FVL Attack Utility Replacement Aircraft (AURA). FVL (MS) and AURA will close key warfighting gaps and recapitalize capabilities lost when legacy rotary wing platforms reach service-life limits beginning in the late 2020's. In addition, the FY 2022 budget increases the overall Flying Hour Program to enable pilots to execute more of their training matrix. These increased investments in Aviation Training restore pilot production to meet Fleet needs, leading to improved pilot proficiency and safety.

Summary

The Department of the Navy continues to deliver aviation platforms with the capability we need to address today's maritime challenges while looking ahead to tomorrow's evolving security environment. With Congress' continued support, we will provide the Nation with the Integrated All-Domain Naval Power for the Joint Force required to win today and tomorrow.

Programmatic details regarding Navy and Marine Corps capabilities are summarized in the following section.

ASSAULT SUPPORT AND LOGISTICS SUPPORT AIRCRAFT

CH-53K Heavy Lift Replacement Program

As the only fully marinized heavy lift helicopter in the DoD, the CH-53K provides agile maritime logistical connectors with greater payloads and speed than any current or emerging rotorcraft. The CH-53K contributes to a more lethal joint force by enabling forces to rapidly transition from contact to blunt layer activities -- and back again. In the past year, the CH-53K program has demonstrated significant progress in executing development and flight test activities. To date, the CH-53K has flown nearly 2,300 developmental flight test hours and is nearing completion of all test activities in support of operational testing. Notably, the fire suppression system uses a more ecologically friendly HFC-125 suppressant, a technical milestone only a few other DON platforms have achieved. The Marine Corps Operational Test and Evaluation Squadron (VMX-1) received their first aircraft in October of 2020 and received two additional aircraft in March 2021. As of June 2021, VMX-1 has flown over 200 training hours in preparatio for Initial Operational Test and Evaluation (IOT&E), which is expected to begin this summer. During FY 2022, the program will complete IOT&E and Live Fire Testing, continue to expand the CH-53K's envelope through ground and flight testing and analysis, and procure the sixth Low Rat Initial Production Lot.

The FY 2022 President's Budget requests $256.9 million in RDT&E to continue the CH-53K development and test, and $1.6 billion in APN for procurement of nine low rate initial production aircraft, including advanced procurement and initial spares.

CH/MH-53E

Operational demand for CH-53E, the DoD's only current heavy lift assault support aircraft, remains high. Continued execution of the H-53 Reset Initiative has mitigated challenges to the material condition of CH-53E from increased operations. To date, 44 aircraft have completed reset and accumulated approximately 26,300 flight hours. Reset returns fully mission capable aircraft to the fleet and recovers platform readiness, reducing both the cost per flight hour and maintenance man-hours per flight hour as the H-53 approaches 30 plus years of service. Continued reset and sustainment initiatives are critical to the success of the CH-53E until its replacement, the CH-53K, is delivered to the fleet.

The MH-53E continues to perform its primary mission of airborne Mine Countermeasures (AMCM), as well as transport of cargo and personnel. As the Navy modernizes its AMCM mission, the airborne capabilities have been fielded within the MH-60S helicopter and MQ-8 Fire Scout programs of record since 2017 and are fully operational.

To keep the CH-53E and MH-53E viable through their remaining services lives, the FY 2022 budget requests $84.4 million in APN and $2.9 million in RDT&E. This provides continued funding for T-64 engine reliability improvements, Integrated Vehicle Monitoring Unit upgrades enabling Condition Based Maintenance, cockpit upgrades, engine fire prevention upgrades, and survivability upgrades. These safety and avionics upgrades are essential to address obsolescence issues within the cockpit, increase overall situational awareness, expand digital interoperability capabilities, and maintain mission effectiveness.

ATTACK AND UTILITY AIRCRAFT

AH-1Z/UH-1Y

The AH-1Z and UH-1Y provide attack and utility support to the MAGTF, deploying globally with Marine Expeditionary Units. The final AH-1Zs will be delivered in FY 2022, fulfilling the Marine Corps' Program of Record of 349 H-1 aircraft. H-1 aircraft have maintained combat relevance through capability improvements in line with Marine Corps' top priorities of digital interoperability (DI), survivability and lethality. Readiness improvements, through a comprehensive strategic recovery plan, are providing the highest mission capable readiness rates H-1s have seen in recent times that pace Marine Corps aviation platforms.

The FY 2022 President's Budget requests $124.2 million in APN and $50.2 million in RDT&E. APN funding focuses on DI, Survivability, Lethality, Position/Navigation/Timing, and Sensing. RDT&E funding continues efforts developing DI, aircraft safety and survivability, and air vehicle improvements to increase capability, mission flexibility, aircraft range and weapons employment. These systems and developments will serve as a stepping stone to capability with Future Vertical Lift. In addition, in order to accomplish the Commandant of the Marine Corps' Force Design divestments of two Marine Light Attack Helicopter Squadrons by the end of FY 2023, efforts to right size the H-1 fleet have started. A previously planned program attrition reserve is being placed in storage for the program of record in FY 2021 and FY 2022, and a disposition plan for excess aircraft is being created while the divestment continues.

MH-60R/S

The MH-60 R/S continue to be the foundation of the Navy's helicopter concept of operations, providing multi-mission support including Anti-Submarine Warfare, Anti-Surface Warfare, AMCM, Personnel Recovery, Special Operations Support, and Combat Logistics among a variety of other missions.

The FY 2022 President's Budget requests $94.8 million in APN and $46.4 million in RDT&E. APN funding supports safety related systems improvements, corrections of deficiencies, warfighter upgrades, and obsolescence issues. RDT&E funding reflects a ramp up of integrating transformational technology including the Minotaur Family of Systems, and modernized tactical datalinks to include Multifunctional Information Distribution System, Joint Tactical Radio System, and Concurrent Multinetting-4. Funding is also requested to support bi-annual System Configuration releases including Common Aircraft Survivability Equipment, as well as addressing Diminishing Manufacturing Sources and Material Shortages, engineering and developmental activities keeping the MH-60 operationally relevant.

EXECUTIVE SUPPORT AIRCRAFT

VH-92A Presidential Helicopter Replacement Aircraft

The FY 2022 President's Budget requests $45.9 million in RDT&E and $40.3 million of APN for the VH-92A Presidential Helicopter Replacement Aircraft. The first year of procuremen for this aircraft was FY 2019 and the Department completed procurement in FY 2021 with a total of 17 aircraft. FY 2022 RDT&E funding is required for Follow-On Test and Evaluation activities and improvements. These efforts include Mission Communications System upgrades (both software and hardware), enhancements to required Wide Band Line Of Sight capabilities, component reliability, shipboard interoperability, maintaining test aircraft and facilities; as well as initiates test and evaluation efforts for distributed network communications, and vehicle performance enhancements. APN in the amount of $40.3 million is required for retrofit modifications for the incorporation of the of the Federal Aviation Administration mandated Automatic Dependent Surveillance Broadcast Out system capability, upgrades to the Mission Communication System servers, and shipboard interoperability.

TRAINING AIRCRAFT

Advanced Helicopter Training System / TH-73A

The Advanced Helicopter Training System (AHTS) is the DON's new system-of-systems to meet advanced rotary wing and intermediate tilt-rotor training requirements for the Navy, Marine Corps, Coast Guard and allied partners through 2050. AHTS includes aircrew training services that provide new flight training simulators, a modernized curriculum and contractor logistics support for the maintenance and flight line support requirements of the new helicopter. Using a skills-based approach to training, with just-in-time methodology, AHTS will ensure highe quality rotary wing aviators are produced more efficiently and are ready to meet the challenges they will face in the fleet.

The TH-73A is the aircraft portion of AHTS, replacing the aging TH-57B and TH-57C, which will begin to sundown in FY 2022. The contract for TH-73A aircraft was awarded in January 2020, and the Navy is scheduled to take delivery of the first operational TH-73A helicopter on July 2, 2021. A total of 32 TH-73As are scheduled for delivery this calendar year and 130 total over the contract period. The new TH-73As will be housed in a temporary hangar at Naval Air Station Whiting Field, Florida, with construction scheduled to begin in 2023 on a new helicopter maintenance hangar.

Under the Aircrew Training Systems contract, awarded in August 2020, rotary students will ultimately have availability on 18 Flight Simulation Training Devices, and the Logistics Support contract awarded earlier this year, began full performance on June 1, 2021. The new logistics contract ensures the Navy can successfully maintain the TH-57B/C until the TH-73A is fully operational, and will ensure the Navy has the capacity to train several hundred aviation students per year.

The FY 2022 budget request includes $163.5 million in APN for 36 TH-73As, as the AHTS program continues an aggressive pursuit of fleet introduction and Initial Operating Capability in early FY 2022.

Frederick J. Stefany
Assistant Secretary of the Navy for Research, Development and Acquisition (Acting)

On January 20th 2021, Mr. Frederick J. (Jay) Stefany assumed the duties of Acting Assistant Secretary of the Navy for Research, Development and Acquisition. In October 2019, Mr. Stefany began serving as the Principal Civilian Deputy to the Assistant Secretary of the Navy for Research, Development and Acquisition (ASN RDA). His responsibilities include oversight and policy for Navy and Marine Corps research, development, and acquisition/sustainment programs for shipbuilding, aviation, space, weapon systems, and communication systems. His portfolio includes oversight of more than 100,000 people and an annual budget in excess of $50 billion. Mr. Stefany also leads the Department's Senior Executive Acquisition Corps.

Prior to that he served as the Deputy Assistant Secretary of the Navy for Ship Programs from April 2018 through September 2019. In this role, he was responsible for executive oversight of all naval shipbuilding programs, major ship conversions, and the modernization and disposal of in-service ships. He was also responsible for executive oversight of cost, schedule and performance of surface ship, submarine, and Marine Corps combat systems, electronic warfare systems, shipboard radars, and Navy missile defense programs.

Previously Mr. Stefany served as Executive Director, Amphibious, Auxiliary and Sealift Office, Program Executive Office, Ships. He provided executive leadership to 200 personnel and oversaw one of the broadest acquisition portfolios in the Navy. His responsibilities spanned four major program offices where he oversaw several major shipbuilding programs including LHA 6, LPD 17, EPF, ESB, T-AKE, T-AO(X), and Heavy Icebreaker ship classes, as well as ship-to-shore connectors, landing craft, research ships, service craft & boats, and procurement of vessels for our Foreign Military Sales and other Federal Government partners.

Mr. Stefany entered the Senior Executive Service in March 2012, and has been in civil service for more than 37 years. Serving in a variety of key leadership positions throughout his career, including Program Manager and Deputy Program Manager for the LPD 17 Class Amphibious Transport Dock ship program (2004-2012). During his tenure, the first six ships of the San Antonio Class were delivered; and construction started on four additional hulls. He also assumed responsibilities for management of the initial concept work on a replacement for the Navy's Command & Control Ships and later, the replacement for the LSD 41 and 49 class ships.

Previous assignments include Director of Naval and Commercial Construction (2002-2004), responsible for oversight of the Navy's portfolio of Amphibious, Auxiliary and Special Mission ships and craft for the Assistant Secretary of the Navy for Research, Development and Acquisition (ASN RD&A); Assistant Program Manager in PMS 377 for LCAC and for Amphibious Ship Combat/C4I Systems; and Project Engineer for both the LHD 5-7 and LHD 1-4 ship acquisition programs as PMS 377 delivered LHD 1-6 and LSD 52 to the Fleet.

Mr. Stefany received his bachelor's of science in mechanical engineering from Lehigh University, Bethlehem, Pa., and his master's of science degree in management from the Florida Institute of Technology, Melbourne, Fla. He is also a 1996 graduate of the Defense Systems Management College, Advanced Program Management Course. During his distinguished federal career, Mr. Stefany has received the Presidential Rank Award for Meritorious Service, Navy Civilian Meritorious Service Award and two Navy Civilian Superior Service Awards.

11 Feb 2021

Lieutenant General Mark R. Wise
Deputy Commandant for Aviation

Lieutenant General Mark R. Wise assumed his current position as the Deputy Commandant for Aviation, Headquarters Marine Corps in July 2020.

Lieutenant General (LtGen) Mark R. Wise is a native of Texas, and is a graduate of the University of Washington in Seattle, Washington, and the Naval War College in Newport, RI.

LtGen Wise served as the Commanding Officer of Marine Fighter Attack Squadron (VMFA) 122 Crusaders from 2003 to 2004 during which the squadron deployed in support of the Unit Deployment Program. He commanded Marine Aircraft Group (MAG) 12 from 2008 to 2009 during which he supported numerous exercises throughout the Western Pacific Region. From 2011 to 2013, he served as Commanding General, Marine Corps Warfighting Laboratory aboard Marine Corps Base Quantico, VA. From 2016 to 2018, LtGen Wise served as Commanding General, 3rd Marine Aircraft Wing (MAW) aboard Marine Corps Air Station Miramar.

LtGen Wise's operational tours include service with VMFA-333 during Operation DESERT SHIELD and Operation DESERT STORM; VMFA-312 with Carrier Air Wing (CVW) 8 aboard the USS THEODORE ROOSEVELT during Operation DENY FLIGHT and Operation SOUTHERN WATCH (OSW); the 58th Fighter Squadron during OSW; and VMFA-251 with CVW-1 and the USS GEORGE WASHINGTON in support of OSW.

LtGen Wise's staff tours include various billets with MAG-31 and MAG-12 between 1998 and 2008 as well as assignment to Headquarters Marine Corps, Aviation from 1999 to 2001. In 2009, he deployed to Kabul, Afghanistan, as an individual augment to the International Security Assistance Force. In 2010, LtGen Wise returned to Headquarters Marine Corps and served as the Deputy Branch Head for Aviation Plans, Policies, Budget, and Joint Matters until 2011. From 2011 to 2013, while serving as the Commanding General of the Marine Corps Warfighting Laboratory, he also served as the Vice Chief of Naval Research. In 2013, LtGen Wise was assigned as the Assistant Wing Commander, 3rd MAW and in 2014, he was assigned as the Deputy Commander, United States Forces Japan. From 2018-2020, he served as the Assistant Deputy Commandant for Combat Development & Integration and Deputy Commanding General Marine Corps Combat Development Command. LtGen Wise assumed his current position as the Deputy Commandant for Aviation, Headquarters Marine Corps in July 2020.

LtGen Wise's personal decorations include the Defense Superior Service Medal, Legion of Merit, Bronze Star, Meritorious Service Medal with gold star in lieu of second award, Air Medal - individual action with combat "V", Strike Flight Air Medal eighth award, Joint Commendation Medal, Navy and Marine Corps Commendation Medal with gold star in lieu of second award, and Air Force Commendation Medal. He has more than 3,500 flight hours primarily in the F/A-18 Hornet and F-15C Eagle.

Rear Admiral Andrew Loiselle
Commander, Carrier Strike Group FOUR

Rear Adm. Andrew J. Loiselle is a native of Cranston, Rhode Island and a 1988 graduate of Assumption College with a degree in mathematics. He was commissioned through the Naval Reserve Officers Training Corps program at Holy Cross. He earned his Wings of Gold in January 1991. He earned an Executive Master of Business Administration through the Naval Postgraduate School with a Financial Management subspecialty in 2004 and graduated from the Navy's nuclear power school with honors in 2007.

His tours at sea include Fighter Squadron (VF-142) in the F-14B, Strike Fighter Squadron (VFA-195), and command of VFA-146 in the FA-18C, executive officer of USS Theodore Roosevelt (CVN 71), command of USS Gunston Hall (LSD 44), and USS George H. W. Bush (CVN 77).

Ashore tours include Air Test and Evaluation Squadron Nine (VX-9) in China Lake, VFA-125 in Lemoore, J35 on the Joint Staff and executive assistant to Deputy Chief of Naval Operations for Operations (N3/N5), Plans and Strategy, Office of the Chief of Naval Operations.

Flag tours include deputy director, Future Joint Force Development (J7), Joint Staff, and Commander Carrier Strike Group EIGHT aboard the flag ship USS Harry S. Truman (CVN 75). As of June 2020, he serves as Commander Carrier Strike Group Four.

Loiselle has accumulated more than 3,600 mishap-free fighter flight hours and has more than 875 arrested landings on 10 different aircraft carriers.

His awards include Defense Superior Service Medals, Legion of Merit Medals, Meritorious Service Medals, Air Medals, Navy Commendation Medals (one with Combat V) and numerous unit and campaign citations.

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UNITED STATES HOUSE OF REPRESENTATIVES

PRESENTATION TO THE
HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
UNITED STATES HOUSE OF REPRESENTATIVES

HEARING DATE/TIME: 30 June 2021, 3:00 P.M.

SUBJECT: Department of the Air Force Rotorcraft Acquisition and Modernization Programs in the Fiscal Year 2022 National Defense Authorization President's Budget Request

STATEMENT OF:

Ms. Darlene J. Costello
Acting Assistant Secretary of the Air Force
(Acquisition, Technology & Logistics)

Maj. Gen. Richard G. Moore, Jr., USAF
Director of Programs
(Plans and Programs)

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UNITED STATES HOUSE OF REPRESENTATIVES

Introduction and Strategic Environment

Chairman Norcross, Ranking Member Hartzler, and distinguished members of the subcommittee, thank you for having us here today to provide testimony on Department of the Air Force rotorcraft modernization efforts. Thanks to the support of this subcommittee, we have made great strides in our efforts to improve rotorcraft readiness and set the tone for modernization, but there remains work to be done.

As the nature and sources of conflict throughout the globe have become more diverse and less predictable, our Nation continues to face a complex set of current and future security challenges, including the resurgence of great power competition from China and Russia. It is clear that supremacy in the air and space domains—a given for any U.S. military operation since the end of the Cold War—can no longer be presumed without deliberate action.

Since the publication of the National Defense Strategy in 2018, the Air Force has worked tirelessly to identify new ways of approaching our toughest challenges in a peer fight, to include careful assessment of current and future risks. This year's budget request is another step in the rigbt direction, but our work is far from over. We look forward to working witb this subcommittee and all of our stakeholders as we continue our efforts to build a relevant and ready force for the future.

Current Capacity and Capability

Following the Interim National Security Strategic Guidance of the President, and the National Defense Strategy, the Department of the Air Force seeks to invest in technologies and field systems that are both letbal and survivable against a peer tbreat. As we continue to invest in our future force, it is important to also consider the manpower that is made available througb right-sizing efforts. If we are to modernize to address the emerging threat, we must efficiently

utilize resources tied to our legacy platforms and weapons systems that are decreasing in relevance today and will be irrelevant in the future; we must strike a balance between risk in the near-term and risk in the future.

Rotorcraft

The mission of the United States Air Force is to fly, fight, and win…Airpower anytime, anywhere. Military airpower is global, agile, flexible, rapid, and when necessary, highly destructive. Department of the Air Force rotorcraft are key components of the National Defense Strategy's lethal force modernization effort, providing a modern and more reliable personnel recovery special operations, nuclear security, and continuity of government platforms across the spectrum of military operations.

The Fiscal Year 2022 (FY22) budget continues investment in the Department of the Air Force's critical rotorcraft modernization programs, including the HH-60G Pave Hawk, HH-60W Jolly Green II, and MH-139A Grey Wolf programs.

HH-60G Pave Hawk and HH-60W Jolly Green II

The Department of the Air Force is the only Service with a dedicated force organized, trained, and equipped to execute theater-wide Personnel Recovery. The HH-60G fleet currently accomplishes this mission by conducting day and night Combat Search and Rescue operations to recover isolated personnel in hostile or permissive environments. Due to the increasing age and current attrition rates of the HH-60G, the Department of the Air Force must continue to sustain and support existing HH-60G helicopters to meet Combatant Command requirements until we can fully recapitalize with the HH-60W Jolly Green II. To that end, the Air Force will continue with defensive systems upgrades to ensure that the HH-60G can continue to perform its mission until the last aircraft is retired. HH-60G retirements began this year (FY21) with 34

aircraft and will complete in FY26. This retirement timeline aligns with the completion of fielding 105 HH-60W rotorcraft through FY27. The first operational unit has already begun receiving the first production aircraft. The FY22 budget requests $15.6 million and $996.7 million for the HH-60G and HH-60W programs, respectively. This budget request funds procurement of 14 HH-60W aircraft in FY22 which will bring the total up to 65 aircraft on order. Testing of the new HH-60W Jolly Green II is transitioning from developmental test into operational test with Initial Operational Test and Evaluation (IOT&E) set to start on October 1, 2021.

The FY22 budget continues funding the Capabilities Upgrade program for the HH-60W to bridge the capability gap between the program's 2014 requirements and the current threat environment. The primary upgrade focus for FY22 includes the Distributed Aperture Infrared Countermeasure (DAIRCM) system and security upgrades to the Link-16 datalink system. These are key components to ensure safe and secure operations downrange. Existing survivability systems of the HH-60W include a more advanced radar warning system, defensive crew-served gun systems, ballistic armor, and infrared signature reduction.

The current program is funded to procure 105 aircraft within the FYDP; the FY22 request will bring the total to 65. The Air Force is not currently pursuing funding for the remaining 8 aircraft of the previously planned 113 program of record.

MH-139A Grey Wolf

The MH-139A (formerly UH-1N Replacement) program is an element of the Air Force nuclear enterprise reform initiatives and also supports operational airlift within the National Capital Region. The MH-139A offers significant capability increases in areas of speed, range, endurance, payload, and survivability. This program plans to deliver 80 replacement helicopters,

training devices, and associated support equipment to replace the legacy UH-1Ns. The FY22 budget requests $16 million of RDT&E funding for the MH-139A program, which will fund the continued test and development of the aircraft since the production contract award has been delayed until FY23. The first six EMD aircraft have been delivered and are being utilized to finalize test and development efforts.

The FY22 President's Budget reflects a schedule slip to the MH-139A program, caused by technical issues that will delay Boeing from obtaining full Federal Aviation Administration (FAA) certification. The FAA requires the MH-139A to obtain an updated certification because it is a commercial derivative aircraft with military unique equipment. Technical issues discovered during contractor testing have caused the certification delay.

Conclusion

Thank you again for the opportunity to testify before this Subcommittee. The dialogue we have today will help us design, build, and operate a force capable of fighting and winning now and in the future. Our adversaries are not standing by idle; neither must we.

Darlene Costello

Ms. Darlene Costello, a member of the Senior Exeeutive Service, is the Principal Deputy Assistant Secretary of the Air Force Acquisition, Technology & Logistics. Her duties include providing expert advice and guidance on Air Force acquisition programs and procurements. Ms. Costello is also responsible for the development and execution of policies and procedures in support of the operation and improvement of the Air Force's acquisition system. She oversees an Air Force research and development, test, production and modernization program portfolio of over $40 billion annually.

Ms. Costello has held acquisition positions of increasing responsibility and at all levels of command. Within the Department of the Navy, she held positions as a project engineer, assistant design manager, and program manager. Ms. Costello was then competitively selected for the Commander's Development Program with assignments in the Office of the Secretary of Defense for Naval Warfare, the Office of the Deputy Assistant Secretary of the Nav y (Research, Development, and Acquisition) for Ship Programs, the Office of the Director for Expeditionary Warfare (OPNAV N85) Amphibious Warfare Branch, and the Program Executive Office for Aircraft Carriers.

In 2000, Ms. Costello moved from the Navy to the Office of the Secretary of Defense, as a staff specialist for Naval Warfare, Strategic and Tactical Systems, within the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics. In 2005, she was appointed to the Senior Executive Service and was promoted to the position of Deputy Director for Naval Warfare, responsible for the oversight of all Naval Warfare acquisition programs including 15 major shipbuilding programs and related weapon systems.

In 2011, she assumed the duties of the Principal Director for Strategic and Tactical Systems and Director for Acquisition and Program Management. As Principal Director, she was responsible for direct oversight of Major Defense Acquisition Programs for all strategic and tactical systems including the technical and programmatic evaluation of air, land, naval, strategic and unmanned warfare programs. As Director for Acquisition and Program Management, she was responsible for the program management functional area, including policy formulation and initiatives to improve the qualifications and abilities of Department of Defense program managers. In 2013 she became the Acting Deputy Assistant Secretary of Defense for Strategic and Tactical Systems and in 2014 was promoted to the Principal Deputy Assistant Secretary of Defense for Acquisition in the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics. She advised the Under Secretary of Defense (Acquisition, Technology and Logistics), the Deputy Secretary of Defense, and the Secretary of Defense on matters relating to the Department of Defense acquisition system; Major Defense Acquisition Programs; and strategic, space, intelligence, tactical warfare, command and control, and business system acquisitions.

EDUCATION

1989, Bachelor of Science degree in Mathematics; University of Maryland, University College, College Park

2000, Master of Science degree in Management; Florida Institute of Technology, Melbourne

CAREER CHRONOLOGY

1989 - 1995, Project Engineer, Department of the Navy

1995 - 1998, Assistant Design Manager and Program Manager, Department of the Navy

1998 - 2000, Commander's Development Program: Office of the Secretary of Defense for Naval Warfare; Office of the Deputy Assistant Secretary of the Navy (Research, Development, and Acquisition) Ship Programs; Office of the Director for Expeditionary Warfare (OPNAV N85) Amphibious Warfare Branch; Program Executive Office for Aircraft Carriers (rotational assignments)

2000 - 2005, Office of the Secretary of Defense, Staff Specialist for Naval Warfare, Strategic and Tactical

Systems, within the Office of the USD(AT&L)
2005 - 2011, Deputy Director for Naval Warfare
2011 - 2014, Principal Director for Strategic and Tactical Systems (S&TS) and Director for Acquisition and Program Management
2013 - 2014, Acting Deputy Assistant Secretary of Defense for Strategic and Tactical Systems
2014 - 2016, Principal Deputy Assistant Secretary of Defense for Acquisition in the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics
2016 - present, Principal Deputy Assistant Secretary of the Air Force Acquisition, Technology & Logistics

AWARDS
Defense Distinguished Civilian Service Award
Meritorious Presidential Rank Award
OSD Medals for Exceptional Civilian Service
AF Decoration for Exceptional Civilian Service

(Current as of July 2018)

Major General Richard G. Moore Jr.

Maj. Gen. Richard G. Moore Jr. is the Director of Programs, Office of the Deputy Chief of Staff for Plans and Programs, Headquarters U.S. Air Force, Arlington, Virginia. He leads a staff of military and civilians in the development, integration, evaluation and analysis of the Air Force program across the Future Years Defense Plan and maintains the integrity and discipline of the Air Force corporate structure process.

Maj. Gen. Moore graduated from the U.S. Air Force Academy in 1992 with a Bachelor of Science Degree in Chemistry and subsequently earned a Master of Engineering Management Degree from Washington State University in 1997. During his Air Force career, Maj. Gen. Moore has commanded at the squadron, group and wing level. He is a command pilot with more than 4,000 hours in the KC-135R/T Stratotanker, C-12F Huron, C- 5A/B/M Galaxy, C-17A Globemaster III and C-130J Super Hercules.

Prior to his current position, Maj. Gen. Moore was the Chief of Staff, Headquarters U.S. Air Forces in Europe and Air Forces Africa, Ramstein Air Base, Germany.

EDUCATION

1992 Bachelor of Science, Chemistry, U.S. Air Force Academy, Colorado Springs, Colo.
1997 Master of Engineering Management, Washington State University, Pullman, Wash.
1997 Squadron Officer School, Maxwell Air Force Base, Ala.
2004 Master of Military Operational Art and Science, Air Command and Staff College, Maxwell AFB, Ala.
2010 Master of Science, International Security Studies, Air War College, Maxwell AFB, Ala.
2016 Advanced Senior Leader Development Program, Warrenton, Va.

ASSIGNMENTS

August 1992-December 1993, Student, Euro-NATO Joint Jet Pilot Training, Sheppard Air Force Base, Texas
December 1993-May 1997, KC-135 Aircraft Commander, Fairchild AFB, Wash.
June 1997-July 1998, Air Mobility Command Regional Operations Director, Tanker Airlift Control Center, Scott AFB, Ill.
July 1998-December 1999, Tanker Requirements Program Manager, Headquarters Air Mobility Command Directorate of Plans and Programs, Scott AFB, Ill.
January 2000-July 2003, C-5 Air Refueling Flight Examiner Aircraft Commander; Asst. Wing Executive Officer; Chief, Wing Exercise and Contingency Scheduling, 9th Airlift Squadron, Dover AFB, Del.
July 2003-June 2004, Student, Air Command and Staff College, Maxwell AFB, Ala.
June 2004-September 2005, Chief, Air Refueling Capabilities Branch, Global Mobility Concept of Operations Division, Headquarters U.S. Air Force, the Pentagon, Arlington, Va.
September 2005-August 2007, Aide-de-Camp to the Vice Chairman of the Joint Chiefs of Staff, the Joint Staff, the Pentagon, Arlington, Va.
August 2007-July 2009, Operations Officer and Commander, 437th Operations Support Squadron, Charleston AFB, S.C. (January 2009-May 2009, Commander, 437th Expeditionary Operations Support Squadron, Sather Air Base, Iraq)
July 2009-June 2010, Student, Air War College, Maxwell AFB, Ala.
July 2010-August 2012, Vice Commander, 62nd Airlift Wing, Joint Base Lewis-McChord, Wash.
(December 2011- March 2012, Commander, 385th Air Expeditionary Group, Incirlik AB, Turkey)
August 2012-October 2014, Commander, 436th Airlift Wing, Dover AFB, Del.
October 2014-April 2015, Chief, Force Planning and Global Mobilization Division, Headquarters U.S. Air Force, Arlington, Va.
April 2015-July 2016, Program Integration Division Chief, Office of the Assistant Secretary of the Air Force for Financial Management and Comptroller, Headquarters U.S. Air Force, Arlington, Va.
August 2016-August 2018, Commander, 86th Airlift Wing, Ramstein AB, Germany
August 2018-June 2019, Chief of Staff, U.S. Air Forces in Europe and Air Forces Africa, Ramstein AB, Germany

August 2019-present, Director of Programs, Office of the Deputy Chief of Staff for Plans and Programs, Headquarters U.S. Air Force, Arlington, Va.

SUMMARY OF JOINT ASSIGNMENTS
1. September 2005-April 2007, Aide-de-Camp to the Vice Chairman of the Joint Chiefs of Staff, the Joint Staff, the Pentagon, Arlington, Va., as a major and lieutenant colonel

FLIGHT INFORMATION
Rating: command Pilot
Flight hours: more than 4,000
Aircraft flown: KC-135R/T, C-12F, C-5A/B/M, C-17A, C-130J

MAJOR AWARDS AND DECORATIONS
Legion of Merit with three oak leaf clusters
Defense Meritorious Service Medal
Meritorious Service Medal with four oak leaf clusters
Air Medal with oak leaf cluster
Aerial Achievement Medal with silver oak leaf cluster
Air Force Commendation Medal
Army Commendation Medal

EFFECTIVE DATES OF PROMOTION
Second Lieutenant May 27, 1992
First Lieutenant May 27, 1994
Captain May 27, 1996
Major Nov. 1, 2002
Lieutenant Colonel Dec. 1, 2006
Colonel Oct. 1, 2010
Brigadier General Aug. 5, 2016
Major General Nov. 1, 2019

WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING

JUNE 30, 2021

RESPONSE TO QUESTION SUBMITTED BY MRS. HARTZLER

Mr. BUSH. The impact of the Fiscal Year 2020 (FY20) Appropriations Rescission and FY21 program decrement (a combined decrement of $57.5 million (M)) set the Improved Turbine Engine Program (ITEP) Developmental Testing (DT)/Milestone (MS) C back six months, putting the program at high risk of an Acquisition Program Baseline (APB) schedule breech. FY22 is the last year the program can influence schedule and avoid an APB schedule breech. Currently, the Army is covering part of the program's shortfalls from FY20 and FY21 in the FY22 budget request in the amount of $32.5M. However, ITEP will again be at high risk of an APB schedule breech if the program is not fully funded. Although the funding cuts today do not affect the Future Attack Reconnaissance Aircraft (FARA) Competitive Prototyping (CP) effort, it does affect the FARA Program of Record (PoR). ITEP must achieve MS C, which is baselined to the AH–64/UH–60 programs, to award a Low Rate Initial Production contract to procure engines for not only AH–64 and UH–60 aircraft, but for the FARA PoR as well. The FARA program is scheduled to begin DT during mid-FY25. Any funding cuts will impact ITEP MS C, causing delays to the critical FARA Engineering and Manufacturing Development (EMD) phase, which includes DT. A Continuing Resolution lasting more than six months will prevent the UH–60 Black Hawk A-Kit Phase-2 Flight Tests, Publications and Provisioning Award in March 2022, causing a month-for-month schedule slip to ITEP MS C. This places the program at a high risk for an APB schedule breech and potential delay of Initial Operational Capability. [See page 17.]