

DEPARTMENT OF DEFENSE APPROPRIATIONS  
FOR 2020

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HEARINGS  
BEFORE A  
SUBCOMMITTEE OF THE  
COMMITTEE ON APPROPRIATIONS  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED SIXTEENTH CONGRESS  
FIRST SESSION

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SUBCOMMITTEE ON DEFENSE

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# DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 2020

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WEDNESDAY, FEBRUARY 13, 2019.

## UNITED STATES MILITARY ACADEMIES OVERVIEW

### WITNESSES

LIEUTENANT GENERAL DARRYL A. WILLIAMS, SUPERINTENDENT,  
UNITED STATES MILITARY ACADEMY

VICE ADMIRAL WALTER E. "TED" CARTER JR., SUPERINTENDENT,  
UNITED STATES NAVAL ACADEMY

LIEUTENANT GENERAL JAY B. SILVERIA, SUPERINTENDENT, UNITED  
STATES AIR FORCE ACADEMY

### OPENING STATEMENT OF CHAIRMAN VISCLOSKY

Mr. VISCLOSKY. The Subcommittee on Defense will come to order. This morning the subcommittee will receive testimony and an update on the military service academies.

We welcome our three witnesses; Lieutenant General Darryl Williams, Superintendent of West Point; Vice Admiral Ted Carter, Superintendent of the Naval Academy; and Lieutenant General Jay Silveria, Superintendent of the Air Force Academy.

Gentlemen, thank you very much for appearing today. We appreciate you being able to share the current state of the military academies. Additionally, on behalf of all the members I want to thank you for changing the date of your testimony given the cancellation of votes yesterday. We do appreciate very much you staying over.

Some of the topics for today's hearing that I hope we can hear more about include the mission structure and academics at each of the service academies and how our academies are reflecting the national defense strategy. A discussion of maintenance and restoration efforts of buildings and facilities at each location, West Point and the Naval Academy that have buildings over 100 years old and the Air Force Academy whose buildings are all roughly the same age as the institution. And some of the social issues each academy is dealing with, notably sexual assault and harassment and what way is forward.

We also look forward to hearing what more we as members of Congress can do to help the service academies in the nomination process.

With that, again, I thank you again for appearing before the committee today to discuss these issues, and now I would like to recognize my friend and distinguished ranking member, Mr. Calvert, for any comments he has.

## OPENING REMARKS OF MR. CALVERT

Mr. CALVERT. Thank you, Chairman Visclosky, and welcome to our witnesses. I look forward to hearing from each of you. As you know, every Member of Congress has the ability to nominate promising young men and women to each of your academies. It is an honor to be accepted to your institutions. Each has a long and honorable history of graduates who go on to serve our country with distinction.

I take my responsibility in the nominating process very seriously and convene a committee of retired service members to interview candidates and assist me in the selection process. One of my West Point appointees was First Lieutenant Todd Bryant. Todd was from Riverside, California, and was 23 when he was killed in action in the Iraq war. He had been there for about 2 months. Todd was married shortly before he shipped out and also interned in my office. He joked he would run for my seat one day. The loss of Todd is a reminder of the solemn duty we have in nominating young people to the academies and providing for them after they graduate and begin service in their respective branch.

The young men and women who attend your institutions are by and large our future leaders. I look forward to hearing about the condition of your facilities, your curriculum to ensure we are training the next generation of officers to meet the national security challenges we face. I also understand we are going to hear from you about the recent report on sexual assaults. The young men and women at your academies are held to high standards, as they should be. I look forward to hearing from you about how you plan to address those concerns.

Again, I appreciate your years of dedicated public service to our Nation, and I look forward to your testimony. I yield back.

Mr. VISCLOSKY. Thank you very much. Gentlemen, your full written testimonies will be placed in the record, and members have copies at their seats. My intention is to allow members multiple rounds for possible questions, and therefore, in the interest of time, I would strongly encourage each of you to keep your summarized statements to about 5 minutes.

I would also strongly encourage you to be complete in your answers but very concise so members can have multiple questions per round. With that, we will begin with General Williams and move from left to right from your shoulders.

## SUMMARY STATEMENT OF GENERAL WILLIAMS

General WILLIAMS. Chairman Visclosky, Ranking Member Calvert, and distinguished members of the subcommittee. Thank you for the opportunity to discuss the state of the United States Military Academy, and on behalf of the entire West Point team, thank you for your support to the academy and our programs.

West Point continues to develop smart and thoughtful leaders of character who will fight and win in the crucible of ground combat, and we are prepared to lead in this complex age of persistent conflict. We expect our graduates to live honorably, lead honorably, and demonstrate excellence.

To move the academy forward in concert with the Army's priorities, we have developed five priorities that focus our efforts and enable us to achieve our mission. Developing leaders of character, strengthening the culture of character, building our team of cadets, staff, faculty, and coaches, modernizing, securing, and reforming West Point, and strengthening our partnerships with the Army, Department of Defense, allies and partners, the civilian sector, academia, and of course, the American people. These efforts posture the academy to best support Army readiness and modernization and enable the long-term development of leaders with the high standards our Nation deserves from the profession of arms.

While the vast majority of our cadets and graduates exemplify true leaders of character, recent survey results on sexual assault and sexual harassment remind us that our work will never truly be completed. I can assure you that we are determined, vigilant, and committed to addressing this problem and to meeting the American public's expectations for honorable service. We must eradicate sexual assault and sexual harassment at West Point.

Critical to our success in achieving these efforts are the academy's three greatest strengths: The outstanding young men and women who comprise the corps of cadets, the dedicated and talented military and civilian professionals who make up our team of staff, faculty, and coaches, and most importantly, our Army values and the West Point ideals of duty, honor, and country.

We are confident that we are on the right path to best support the Army and the national defense strategies by graduating the leaders of character who are comfortable with complexity and who are ready to deploy, fight, and win when and where required. Of course, we continue to measure our success in the thousands of West Point graduates who serve and lead with distinction in the Army, industry, and government throughout the Nation.

Thank you for the opportunity to speak with you today. I invite you to visit West Point to see firsthand our amazing cadets, staff, faculty, and coaches. I look forward to your questions.

[The written statement of Lieutenant General Williams follows:]

RECORD VERSION

STATEMENT OF  
LIEUTENANT GENERAL DARRYL A. WILLIAMS, USA  
SUPERINTENDENT OF THE UNITED STATES MILITARY ACADEMY

BEFORE THE

SUBCOMMITTEE ON DEFENSE  
COMMITTEE ON APPROPRIATIONS  
UNITED STATES HOUSE OF REPRESENTATIVES

FIRST SESSION, 116TH CONGRESS

UPDATE ON THE STATE OF THE UNITED STATES MILITARY ACADEMY  
AT WEST POINT

FEBRUARY 13, 2019

NOT FOR PUBLICATION UNTIL RELEASED BY THE  
APPROPRIATIONS COMMITTEE

Chairman Visclosky, Ranking Member Calvert, and distinguished members of the subcommittee, thank you for the opportunity to be here today to discuss the state of the United States Military Academy at West Point, and thank you for your support of the Military Academy and our programs. In 1778, George Washington called West Point, "the key to America," for its critical geographic and strategic significance to the war. In 2019, I believe that West Point is still the key to America, but for a different reason. West Point produces the future strategic leaders for the Army and for the Nation. As the 60th Superintendent, I assure you that "your Military Academy" has achieved and continues to achieve its mission with distinction. However, we are not content with the status quo, and are continuously seeking ways to become more effective and efficient. This often requires innovation in both curriculum and resourcing. So, what follows is my current assessment of the Academy and our priorities moving forward.

The mission of the United States Military Academy is to educate, train, and inspire the Corps of Cadets so that each graduate is a leader of character committed to the values of Duty, Honor, Country, and prepared for a career of professional excellence and service to the Nation as an officer in the United States Army. When our cadets graduate, they must be ready for the crucible of ground combat, where they will fight and win. They must also be leaders of character who treat everyone with dignity and respect. This mission, fully nested in the Army's Strategy and Vision for 2028, permeates, guides, and directs everything we do at West Point and provides the primary metric to measure success.

Our vision, to be the preeminent leader development institution in the world, sets us on the right azimuth to achieve our mission and in developing the highest-quality, character-driven leaders. That is what the Nation expects of its Army's leaders; it is therefore incumbent that West Point provide those leaders to the Army.

Through our mission, I see West Point significantly contributing to the Army's top priority of readiness on three horizons. The first, and most important horizon is immediate: our graduates, the core of every annual cohort of new Army officers, lead platoons across the Army in every branch and in every corner of the world. In addition, our rotating staff and faculty leave West Point to lead battalions across the Army. The second horizon is

10-20 years from now when today's graduates will lead battalions and brigades and today's rotating staff and faculty will lead the Army. Finally, the third horizon is 30-40 years from now, when our current cadets will be leading our Army – and perhaps leading our nation. Clearly, our focus is on the immediate horizon, but if we are doing our job right by producing high-quality leaders of character, then the second and third horizons become second and third-order impacts on our Army. As I see it, the Army's current level of investment in West Point is testimony that it recognizes and values West Point's contribution to Army readiness.

### **The Academy**

We must always consider the Academy's dual-nature as both a military organization and an institution of higher education. As a military organization that reports directly to the Secretary and Chief of Staff of the Army, West Point is subject to federal laws and regulations, Army policy, and public accountability. Our planning, policies, and procedures must always address the regulatory environment and senior leader guidance that governs decision making authority, resource management, and personnel policies. As an institution of higher education, we are also subject to federal and state regulations to maintain accreditation standards that enable us to award Bachelor of Science degrees. Additionally, the Academy competes in an educational market with other top-tier universities. Changing demographic trends demand constant awareness to maintain a diverse student body that reflects the Nation. To successfully compete in this market and continue to attract the best and brightest who will be future Army leaders, we must continue to attract the students of America who are leaders, scholars, and athletes. We do this by maintaining a high-quality faculty, modern infrastructure, cutting edge technology, and diverse curriculum offerings, thus supporting our institutional requirements and program accreditations.

The Army vision calls for developing, "smart, thoughtful and innovative leaders of character who are comfortable with complexity and capable of operating from the tactical to the strategic level." At West Point, we are educating, training, and inspiring the approximately 4,400 members of the Corps of Cadets to serve as those leaders of character our Army requires, prepared to lead in a complex and continuously changing



environment, across the full spectrum of conflict. We accomplish our mission using a 47-month purposeful integration of individual leader development and leadership development experiences within a culture of character growth. The individual development includes education, mentorship, and training in the knowledge and skills across four developmental pillars: academic, military, physical, and character. Leadership development provides cadets with the necessary opportunities to practice both followership and leadership. All of this is done within a culture of character growth, so that upon graduation, they are prepared to live honorably, lead honorably, and demonstrate excellence.

Our academic program, with a robust curriculum that blends arts and humanities and the STEM disciplines, enhances critical and creative thinking. Our curriculum is adaptive to meet the needs of the Army, and, combined with a host of enrichment activities such as conferences and summer academic internships, develops the intellectual agility and adaptability necessary for our graduates to lead in a 21st Century Army.

Each year, our cadets compete for prestigious post-graduate scholarships. While it is still early in the process, we already have six cadets who have been awarded scholarships—3 Marshall Scholarships, 2 Schwarzman Scholarships, and 1 Churchill Scholarship. Following graduate school, these cadets will attend their officer basic course in their respective branch, and then report to their first unit of assignment.

Our military and physical programs provide the professional foundation and leadership training to prepare cadets for their future roles as Army officers and members of the Profession of Arms. Our summer training develops basic Soldier skills and gives cadets opportunities to serve in leadership positions as well as attend military schools such as Airborne, Air Assault, and the Sapper Leader Course. Our physical program, which focuses on preparing cadets for the physically demanding requirements of an Army officer, develops the ability to maintain personal and unit fitness, fosters the warrior spirit, builds appreciation for teamwork, and inspires the will to win.

While winning the commander's in chief trophy two years in a row in football was a great tribute to the hard-work and winning attitude of our football team, we have many

examples of cadets demonstrating excellence in all aspects of cadet life. Cadet Kate Sanborn had a superb performance in her marathon debut, earning a bronze medal finish at the 2018 Richmond Marathon while also qualifying her for the 2020 Olympic Trials. She accomplished this while achieving a 3.7 GPA. Cadet Kenneth Brinson, a member of our football team was 1 of 13 finalists for the most prestigious and desirable “academic” award in college football. The Campbell trophy recognizes an individual as the absolute best in the country for his academic success, football performance, and exemplary leadership. Both of these cadets embody the true meaning of cadet-athlete, working hard on the field or track, while also excelling the classroom.

Developing character is the most important component of our leader development model. West Point graduates may be gifted thinkers, excellent tacticians, and physically fit athletes, but only if they also demonstrate strong character, will they earn and maintain the trust of the American people and the Soldiers they lead as while serving as stewards of the Army Profession. With the Honor Code as its foundation, the goal of our character development program, which encompasses everything we do here, is for graduates to live honorably 24 hours a day, seven days per week and to internalize our Army Values as well as our motto of Duty, Honor, and Country.

### **Academy Priorities**

Since assuming command as the Superintendent of the United States Military Academy and West Point in July 2018, I have engaged with my team, supporting commands on West Point, HQDA staff, adjacent commands, the Academy’s Board of Visitors, and Members of Congress. These engagements, coupled with my personal observations, have allowed me to gain understanding and develop a comprehensive assessment of the state of the Academy with which to gauge West Point’s ability to accomplish its core mission, consistent with the Army Strategy and National Defense Strategy.

To move the Academy forward during this “Army Renaissance,” in an age of persistent conflict, we have developed five priorities to focus our efforts and enable us to achieve our mission: we must (1) **develop** leaders of character; (2) **strengthen the** culture of character; (3) **build** the team of cadets, staff, faculty, and coaches; (4) **modernize**,

**secure**, and **reform** West Point; and (5) **strengthen** our partnership with the Army, our international partners, academia, our alumni, and America.

**(1) Develop Leaders of Character.** As the core of the Army's annual cohort of accessed second lieutenants, our graduates are expected to be combined arms, joint, coalition fighters, and leaders, who are intellectually adept and physically fit, immediately upon entry into the force. Pursuant to this expectation, West Point's 47-month course of instruction allows us to develop the team in four critical domains: academic, military, physical, and character development. Holistically, I am firmly satisfied that our programmatic efforts in these domains reflect what anyone would expect from the world's preeminent leader development institution. As evidenced by our accreditation efforts, feedback from Army units, and the top rankings bestowed on West Point by numerous sources, they are all top-tier programs and performing exceptionally well. Additionally, they are all forward-looking to ensure West Point's leader development efforts evolve with the Army's future demands. However, we must continuously ensure that we remain connected to the Army and higher education to provide the most current, state of the art curriculum necessary to develop future leaders.

**(2) Strengthen the Culture of Character.** As the Superintendent of the United States Military Academy, I am personally responsible for creating a safe and secure environment that enables our cadets' personal and professional growth as leaders of character. I am concerned about the *prevalence of sexual assault and harassment*. Cadets internalize the Army Values through rigorous and challenging experiences tailored to their individual developmental needs. This system would not work without the leadership and mentorship – a community of support - that is vital to character growth. We are committed to empowering our people and revamping our programs to foster a community-wide culture that works to prevent sexual assault and harassment. We are committed to ensuring that our programming impacts the cultures and values of all 4,400 cadets as well as the thousands more that constitute the West Point community. It is paramount, today more than ever, to ensure that our policies, programs, and personnel develop and reinforce these outcomes in our graduates.

Culture change does not occur overnight, but I am heartened that we are moving in the right direction given some of the more recent changes we have made.

**(3) Build the Team.** Our team is made up of cadets, staff, and faculty. Included in the staff are coaches, tactical officers, NCOs, and DA Civilians. We seek diversity in all areas of the corps of cadets as it strengthens the organization and the Army. West Point has made and continues to make enormous strides on this front and is leading the Army in many regards. We are in a good place, but it must be sustained – and there is always room to improve. In the end, all cadets here are measured on their talent, performance, and potential to serve as an officer in the United States Army.

Staff and faculty members with diverse perspectives from all backgrounds promote a culture of excellence at West Point that reflects the diversity in our Army and contributes to the collective strength of the Academy as well. Preeminent leadership development begins with attracting, recruiting, and hiring exceptional, high-potential, and diverse professionals from the military, government, industry, and academia, to serve as staff and faculty. I am satisfied with the extent to which West Point continues to draw only the highest quality military and civilian talent for its staff and faculty and enables their professional development while assigned here. I am confident West Point will continue to lead the Army in this domain.

**(4) Modernize, Secure, and Reform.** Our ability to draw the most qualified cadets, faculty, and staff is significantly influenced by the quality and condition of the facilities and capabilities that comprise the cadet development environment. To date, USMA has been resourced very well. Aligned with the Army's modernization priority, we have developed and are executing a holistic modernization plan that the Army has supported with two major upgrade programs and MILCON projects, for which we are immensely grateful. These efforts go far to reinforce our mission execution and maintain our competitive edge in attracting the best and brightest cadet and faculty talent. This current investment in our barracks and academic facilities will go far to set West Point on the right trajectory for the future.

As part of our barracks upgrade program, we recently completed the newest barracks building (the first since 1964), Davis Barracks named after Gen Benjamin O. Davis, a

1936 graduate of USMA. Despite being silenced during his four years at West Point, where no cadets, faculty or staff members befriended or spoke to him except on an official basis, he persevered to become the fourth African-American to graduate from West Point, ranking 35th in his class of 276. He had the grit and determination to persevere through a challenging cadet experience and achieve a storied military career. His dedicated service included command of the all-black 332nd Fighter Group, "Red Tails," and becoming the first black general of the Air Force. He retired as a three-star general in 1970 and was awarded a fourth star in 1998 by President Bill Clinton. It was very fitting to name our newest barracks Davis Barracks, as Gen Davis Jr. exemplifies the West Point values of Duty, Honor, and Country, and he exemplifies what it means to be a leader of character.

In any given year, millions of visitors – Americans and non-Americans alike – pass through West Point's gates to experience its historic past and to see and be inspired by what it is preparing for the future in our Cadets. Force protection here is particularly critical given the continuous tradeoffs we face between being accessible to the public and sustaining safety and security for our cadets, staff, and faculty. From my position, the force protection risks to the institution are real and numerous, and they necessitate operating within the prescribed regulatory framework and a constant focus from all on the individual and organizational responsibilities to prevent, protect and respond.

Between our garrison service providers and our mission directorates, our annual budgets have provided sufficient levels of resources, and the Army and Congress have done much to invest in West Point's future. We must sustain this over the next 15-17 years to ensure we remain postured to provide the Army with the highest quality officers.

**(5) *Strengthen Partnerships.*** As both a military command and an academy, West Point is a unique institution of higher education that can meet the Army's intellectual needs and effectively contribute to the Nation's ability to sustain its position as a global leader. As such, West Point connects, collaborates, and contributes to partnerships at home and abroad to develop the requisite skills and abilities of our cadets, leverage the institution's intellectual capital, exchange knowledge with others, and remain connected

to the higher education community. Close connection to the Army ensures that West Point continues to align with both current and future needs, not only by commissioning graduates, but also by serving as an intellectual and research focal point for the future. Synchronizing our engagement efforts ensures stakeholders are well informed of major, positive changes at West Point in all domains that reflect adaptation, innovation, and a culture of excellence and winning.

West Point develops appropriate synergistic partnerships across the Army, the Department of Defense, with allies and partners, the civilian sector, and with academe. Partnerships provide an innovative approach that West Point leverages to allow agility in providing preeminent educational opportunities for our cadets and faculty in an era of fiscal uncertainty. The faculty and staff leverage these partnerships to enhance cadet education and faculty development by providing relevant, project-based educational opportunities within the current curriculum that add intellectual capital back to the Army and the Nation. Our international partnerships provide cadets and faculty with the cultural exposure and immersion opportunities that foster the collaborative advancement of interoperability within a dynamic international operating environment.

Our partnerships also facilitate the exposure and immersion of cadets and faculty into the intellectual and technological challenges that our Army and Nation face as we modernize both equipment and doctrine to support the future fight. These educational opportunities are developing the intellectual readiness our graduates and rotating faculty require to lead and win in the complexity, ambiguity, and isolation associated with tomorrow's battlefield. Moving forward, I envision the intentional leveraging of these partnerships in an effort to strengthen our contributions to the Army profession and amplify the educational collaborative potential of West Point. The facility modernization efforts I previously described will enable the long-term viability of our partnerships by providing the educational infrastructure necessary to continue adding value to the Army and our partners.

## Conclusion

For over 217 years, West Point graduates have honorably and courageously led Soldiers in the defense of our great Nation. Through the years, despite the challenges and the scale of the threat to our country, they have led with distinction and overcome the crucible of ground combat. They have demonstrated cultural competence, professionalism, and mission command leadership while partnering with our allies, host nation armies, government officials, non-governmental organizations, and local leaders. They have lead units that conduct missions spanning the spectrum of conflict including defeating adversaries in high intensity combat, conducting irregular warfare, providing stability and security operations, supporting humanitarian assistance, integrating new warfighting technologies, and addressing emerging cyber threats. I am fully confident that we are preparing our cadets for all of the challenges they will face in the near and distant future. In 2018, our Chief of Staff stated that "Readiness means we have the right people who are psychologically and intellectually prepared to outthink, outfox and outlast our enemies with rapidly adaptive organizations and tactics....it means we are physically hardened to endure unspeakable stress and hardship under the most brutal conditions, day after day, month after month." I can assure you that the developmental experience at West Point empowers cadets to further develop their character, presence and intellect, and their ability to lead, develop, and accomplish any mission.

I invite each of you to West Point to see first-hand our greatest strength, the Corps of Cadets. You will see first-hand the 47-month immersive experience that makes this place unique. We are excited about the future of the Academy and hope the Army and Congress continue to see West Point as a strategic asset and to value our critical contribution to future readiness of the Army.

Mr. VISCLOSKY. Thank you very much.

#### SUMMARY STATEMENT OF ADMIRAL CARTER

Admiral CARTER. Chairman Visclosky, Ranking Member Calvert, and distinguished members of the subcommittee, thank you for the opportunity to appear before you today on behalf of the United States Naval Academy. Our mission is to develop midshipmen morally, mentally, and physically and to imbue them with the highest ideals of duty, honor, and loyalty. I am pleased to report to you that the Naval Academy is succeeding in its mission and in no small part due to the support of Congress.

This past summer, we graduated over 1,000 members of the class of 2018. Seventy-five percent were commissioned into the United States Navy as Ensigns where the vast majority will serve as surface warfare officers, submariners, aviators, Navy SEALs, and explosive ordnance disposal officers. Twenty-five percent were commissioned as Second Lieutenants in the Marine Corps. Feedback from the fleet as in past years is that the Naval Academy is producing junior officers with the skills necessary to successfully lead Sailors and Marines.

Thanks to the dedicated admissions outreach efforts and your support, the Brigade consists of midshipmen from every state and every district in our union, increasingly representing the nation it has sworn to protect and defend. Moreover, the Brigade of Midshipmen is comprised of 28 percent female and 36 percent minority midshipmen. The Brigade is the most diverse it has been in the Naval Academy's 173-year history, and they are excelling with a record high 90 percent of the original class of 2019 on track to graduate this May.

The Naval Academy's rigorous academic program ranks as one of the best undergraduate programs in the country due largely to an incredible faculty that continues to innovate their curricula to better prepare our future war fighters. This past summer, our two most recently added majors, nuclear engineering and cyber operations, were fully accredited, with cyber as one of only four accredited programs in the entire Nation.

While I am proud of the accomplishments of our faculty, staff, coaches, and most importantly, the Brigade of Midshipmen, I do have concerns. Despite dedicated efforts by Naval Academy leadership and the Brigade, we continue to experience incidents of unwanted sexual contact within our ranks. I and the rest of my leadership team have actively sought out professional advice from the experts on the best strategies to reduce this scourge within our student body, and we have implemented initiatives to drive improvements. We must do better.

I am also troubled with the current state of the Naval Academy's infrastructure. Stemming from highly pressurized budgets as a result of the 2013 sequestration, the Department of the Navy has taken risks by underfunding capital investments in installation operations in order to fund other critical war fighting readiness and modernization requirements. Fortunately, the Naval Academy has recently experienced increased levels of funding for infrastructure sustainment and modernization which are providing welcome relief.



While I am concerned with the ability to maintain this national historic landmark, I am committed to ensuring that the safety, security, and quality of the working, learning, and living environment is sustained well into the future. Thank you for your time today. I am prepared to address your questions.

[The written statement of Vice Admiral Carter follows:]

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DEFENSE

STATEMENT OF  
VICE ADMIRAL WALTER E. CARTER JR, USN,  
SUPERINTENDENT OF THE UNITED STATES NAVAL ACADEMY  
BEFORE THE  
HOUSE SUBCOMMITTEE  
ON  
DEFENSE  
FEBRUARY 12, 2019

NOT FOR PUBLICATION  
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HOUSE APPROPRIATIONS COMMITTEE  
SUBCOMMITTEE ON DEFENSE

Overview

Chairman Visclosky, Ranking Member Calvert, and distinguished members of the Subcommittee, thank you for the opportunity to appear before you today on behalf of the United States Naval Academy (USNA). The Naval Academy's mission is to develop midshipmen morally, mentally and physically and to imbue them with the highest ideals of duty, honor and loyalty in order to graduate leaders who are dedicated to a career of naval service. I am pleased to report to you today that USNA is succeeding in its mission, in no small part due to the support of Congress and this year's on-time appropriation, thanks to the hard work of the members and staff of this very subcommittee. Notably, in 2017 Forbes Magazine listed the Naval Academy as America's top public college, while in 2018 USNA ranked fourth, behind UC Berkeley, the University of Michigan, and the United States Military Academy. Highlights from the recently graduated Class of 2018:

- An overall graduation rate of 87.9%, well above the DoD requirement of 75%, the third highest in USNA history. Both male and female graduation rates exceeded 86% and for the first time in USNA history, the minority graduation rate exceeded the caucasian graduation rate. Furthermore, each of the major demographic groups (gender, race, ethnicity) graduated at rates exceeding 85%. I believe these statistics speak not only to the quality of USNA's incoming midshipmen, but also to the hard work of our faculty, staff and coaches, and the inclusive environment in which we work, educate and train.
- Varsity athletes graduated at a 90.2% rate, over 3% higher than non-varsity athletes, and one of the highest in the country – a testament to USNA's commitment to the full development of student-athletes.

- 76% of the Class of 2018's newly commissioned ensigns graduated with Science, Technology, Engineering and Math (STEM) degrees, exceeding the Chief of Naval Operations' requirement of 65%.
- Within the Class of 2018, we had one Rhodes, one Marshall, one Knight Hennessey (Stanford), one Schwartzman, and 15 other prestigious scholarship winners.

The Naval Academy assesses these graduation trends as positive, and attributes them to the effective developmental programs and processes that stem from the initial admissions process and continue through the 47-month education and leadership development experience.

#### Admissions/Diversity

Building a diverse and successful Brigade of Midshipmen depends on an active strategic outreach program. By far, the largest factor that leads to candidate interest in the Naval Academy is exposure. Many qualified candidates nation-wide do not realize that the Military Service Academies are an available option or even appropriate for them until they see a family member or a friend from high school attend, or they meet a midshipman to whom they can relate. In 2018, USNA conducted more than 3,500 outreach events, reaching more than 50,000 students. The Naval Academy hosted numerous programs on campus as well, to include the Summer STEM program, targeting rising 9<sup>th</sup>-11<sup>th</sup> graders, accommodating 842 students in 2018 from a pool of 4,982 applicants that represented all 50 states and several U.S. territories. The Naval Academy Summer Seminar also continued to attract students from across the Nation with 7,469 applications received, from which 2,558 students attended. Summer Seminar promotional efforts were focused in underrepresented Congressional Districts to increase exposure and promote geographical diversity.

The results of USNA Admissions' outreach efforts have been very positive. In addition to drawing over 16,000 applications annually over the last ten years, USNA has sustained in excess of 3,000 fully qualified candidates per year since 2012, allowing for increased selectivity in attempting to admit the best and brightest to the Naval Academy. Additionally, the Naval Academy possesses the Nation's highest overall yield rate in the nation, with over 88% of candidates accepting their offers of appointment over the past two years. The Naval Academy's admissions efforts have resulted in entering freshmen classes of diverse geographical, cultural, racial and ethnic backgrounds, and unusual life experiences and language fluency. The most recently admitted Class of 2022 included 28% female representation (the highest in Naval Academy history), 36.9% minority representation (the second highest in Naval Academy history), and the highest combined SAT/ACT scores in Naval Academy history. Other notable Class of 2022 statistics include: 69% of the Class was ranked in the top 10% of their high school graduating class, 11% were first generation American, 19% were students whose primary language in the home was not English, and 13% were first generation college students.

### Academics

The Brigade of Midshipmen continues to be challenged by a robust academic curriculum, a liberal arts program with a strong emphasis on STEM disciplines and ethical leadership development. The 2018 U.S. News and World Report ranked the Naval Academy as the #5 Best Undergraduate Engineering Program, while Forbes Magazine ranked it as the #5 STEM school in the country. Among all four-year colleges and universities – public and private – that graduate at least 100 students per year and with at least 50% of those graduates majoring in a STEM field, the Naval Academy once again recorded the highest four-year graduation rate in the Nation. The Naval Academy has led the Nation in this ranking for six of the last seven years.

Much of this success is attributable to a strong student-body, an accomplished and devoted faculty, superb student resources, and an ever-increasing emphasis on project-based learning.

There is an increasing demand in the Navy and Marine Corps for officers with a robust understanding of cyber warfare, and the Naval Academy has adjusted its curriculum accordingly. All Naval Academy graduates successfully complete at least two cyber security courses, and in 2018, the Naval Academy graduated its third class of midshipmen with a Bachelor's of Science degree in Cyber Operations. This major has grown in interest with 46 members of the Class of 2019 majoring in the discipline, along with 66 juniors and 100 sophomores, making it the 5th most popular of 25 majors available. In July 2018, the Cyber Operations major (along with the recently introduced Nuclear Engineering major) was formally accredited, and stands today as one of only four of its kind in the nation. Starting in 2020, midshipmen majoring in Cyber Operations and related disciplines will be housed in the future Hopper Hall, funded through a 2016 MILCON appropriation, whose construction is well underway with the steel frame completed in November 2018.

#### Physical Mission

The Naval Academy strives to provide exemplary programs of athletic competition and physical challenge that foster decisive leadership, teamwork, character, a passion for "winning," and to promote lifelong physical fitness. The Brigade of Midshipmen continues to excel in physical mission achievement. Despite physical fitness standards that far exceed Navy-wide standards, the Naval Academy's five-year average attrition attributable to physical readiness is less than 0.6% per class.

With 33 varsity sports, the third most of any college or university in the Nation, approximately 30% of the Brigade benefits from the challenges of these intercollegiate competitions. This past academic year, Navy's varsity sports teams won 68% of their head-to-head competitions...an all-time USNA record. Additionally, with the majority of the Naval Academy's varsity sports competing in the Patriot League, Navy won the Presidents' Cup, awarded to the member institution with the highest cumulative sports point total for their league standings in men's and women's sports, for the fifth consecutive year. The "will to win" is an important attribute for all Naval Academy graduates.

### Infrastructure

While the campus evolves with the construction of Hopper Hall, the Naval Academy is challenged with maintaining the remainder of its infrastructure, much of it well over 100 years old. Stemming from highly pressurized budgets as a result of the 2013 sequestration, the Department of the Navy has taken risk by underfunding capital investments and installation operations to fund other critical warfighting, readiness, and modernization requirements. In 2016, after two years of significantly reduced infrastructure funding levels and resultant increase in deferred maintenance, the Naval Academy formally highlighted these challenges and associated risks to Navy leadership, which prompted sustainment and recapitalization funding relief. The Naval Audit Service's report of June 2018 validated the challenges and risks the Naval Academy identified as part of its annual Risk and Opportunity Assessment. While there were no inaccuracies with the Naval Audit Service's report, it should be noted that the Naval Academy is fully meeting its mission while providing a safe and supportive environment for midshipmen to develop as future commissioned officers of our Navy and Marine Corps team.

Since 2016, the Naval Academy has experienced increased levels of sustainment, readiness, and modernization funding for infrastructure. Rickover Hall, the primary academic facility for engineering disciplines, is currently undergoing a major renovation that will vastly improve the learning environment and alleviate associated accreditation concerns. Three other buildings are either undergoing or are funded to undergo significant maintenance efforts that will address leaks highlighted in the Naval Audit Service report. Additionally, the Navy has committed to dedicating renovation and modernization funding in the future (starting in 2020), which the Naval Academy has earmarked to address issues in Nimitz Library and elsewhere across the campus.

While I am concerned with the ability to maintain this national historic landmark, I and the Naval Academy leadership are committed to ensuring that the safety, security and quality of the working, learning and living environment for our faculty, staff, coaches, and most importantly, the Brigade of Midshipmen, is sustained well into the future.

#### Sexual Assault Prevention and Response Program

The Naval Academy also continues to face challenges with Sexual Harassment and Sexual Assault. The 2018 Service Academy Gender Relations (SAGR) survey, taken by the Brigade of Midshipmen in April of 2018, indicates that the prevalence of unwanted sexual contact experienced by Naval Academy female midshipmen trended upward slightly when compared to rates measured in 2016. Given our extensive Sexual Assault Prevention and Response Program, this is certainly not the result we were striving to achieve. I have been at the helm of this institution for almost five years. I, and the rest of the Naval Academy leadership team, have actively sought out professional advice from the experts, both inside and outside the



Department, on the best strategies and tactics to employ to reduce this scourge within our student body. We have made some productive improvements, but *we must do better*.

Based on the results of past SAGR surveys, assistance from experts in the field, best practices of other colleges and universities, and feedback from the Brigade of Midshipmen, we have recently implemented several changes to our prevention program that we hope will provide improved results. Our strategies and tactics going forward focus on continuing our pre-admission screening process, revisions to our training and education program, several new initiatives to promote responsible alcohol choices, and a continued emphasis on holding perpetrators appropriately accountable. We feel more responsible than ever not only to ensure that every member of the Brigade of Midshipmen can flourish in an environment of dignity and respect, but to prepare them to better lead sailors and marines in the fleet that come directly from that society we are entrusted to protect.

### Conclusion

Established by Congress in 1845, the Naval Academy has developed into a four-year, total immersion program designed to instill professional, physical, and academic excellence required to develop leaders of character for careers in the Naval Service. This program is designed to produce graduates nurtured in the basic core values and traditions of the Naval Service. The very nature of the Naval Academy affords every midshipman the opportunity to develop character and employ leadership skills in an environment designed to be a leadership laboratory.

The Naval Academy produces approximately one-third of the Navy's Unrestricted Line Officers every year – a critical mass. And as Admiral Larson, the only two-time Naval Academy Superintendent often said, "if we at the Naval Academy do our job right, we can be the custodian

of the core values of the Navy. We can set a standard for professionalism, for honor, for integrity. If we do it right, our graduates go out to the fleet and lead by example.”

I would offer that the Naval Academy is in fact, doing it right. Approximately 95% of our graduates remain in service past their initial 5-year commitment, 55% past 10 years, and approximately one-third past 20 years. Naval Academy graduates often excel at all levels of command, rising to the top of the Navy’s leadership, as evidenced by seven of the Navy’s eight current four-star admirals starting their careers as Naval Academy midshipmen.

Thank you again for the opportunity to appear before you today on behalf of the United States Naval Academy. While I know many esteemed leaders in Congress often visit the Naval Academy to meet with their constituents, I want to be sure this Subcommittee understands they are invited to visit our campus at any time. We would be happy and honored to support you or your staff for a tour and visit and/or lunch with midshipmen, as your schedules permit. I look forward to your questions.

Mr. VISCLOSKY. Thank you very much.  
General Silveria, please.

#### SUMMARY STATEMENT OF GENERAL SILVERIA

General SILVERIA. Chairman Visclosky, Ranking Member Calvert, and other distinguished members of the committee, thank you for this opportunity to provide updates on the current events, successes, and challenges at the United States Air Force Academy. I appreciate your interest in the military service academies, institutions I am confident all three superintendents here would agree play a vital role in reinforcing the strength and effectiveness of our services and in shaping the future of our military and the modern profession of arms.

As superintendent of the Air Force Academy, I am here on behalf of our 4,281 cadets and 203 preparatory school cadet candidates as well as the faculty and staff that are developing them into the future leaders of our Air Force.

I tell our cadets that they will soon graduate and stand beside me in uniform, and before long, they will replace me. It will be their responsibility to guide our Air Force and make it their own. We need our cadets to be more creative, innovative, and inquisitive than ever before.

We need them to look at the application of air power differently and to broaden that consideration of capability with their rapidly advancing knowledge in space, cyber remotely piloted aircraft, and beyond. Through that lens, our service academies are an incredibly important investment in the future of our national security.

In the more than 33 years I have had the privilege to wear this uniform since my graduation, our academy and our military have changed quite a bit, but our mission has not, and neither has our enduring dedication to our core values. My priority as superintendent, reinforce the dedication as we prepare agile leaders for a rapidly changing future. To that end, our priority must be to develop leaders of airmen who are innovative, who are rooted in a warrior ethos, and possess impeccable character. A culture of dignity and respect is foundational to the priorities I have just mentioned and everything we do at our academy.

In this hearing, we will discuss areas of misconduct that demonstrate a severe lack of dignity and respect and have no place at our academies and in our military; sexual harassment and sexual assault. We are committed to addressing these issues head on to be an example for our Air Force, Department of Defense, and society. In short, we must do more.

Our society is changing swiftly, and we must lead these developments. Our newest class at the academy included our highest percentage of women applicants, and we expect the class of 2023 to be even higher. This year we accepted the highest number of minorities into the class of 2022 in our history. We are not done on this front, and we will continually strive to improve these numbers so that our academy more closely reflects the society it serves and possesses the greatest strengths of the diversity of that society.

In nearly every interaction I have with our cadets, I am struck by their ambition, their intellect, their drive to become outstanding leaders. They are participating in a program built on four pillars

of academics, military training, athletics, and character development. This year we have two Rhodes Scholars. Our research programs continue to be among the top in the country. Our cadets fly airplanes, operate remotely piloted aircraft, they operate satellites, and they operate in cyberspace.

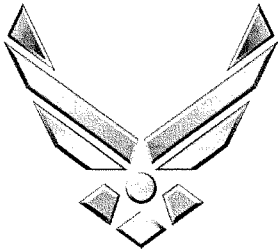
Our military training program is a rigorous 47-month experience that prepares cadets to be leaders of airmen. Every one of our cadets is an athlete. One quarter compete against the best in the country in Division I athletics. Through character development, they are building a foundation of moral excellence that will guide them throughout their careers.

I can tell you from my personal experience that modern combat is rapidly changing and will continue to be more complex. But one of the privileges of this role is that I get to see the future of our Air Force in our cadets. I encourage each of you to visit our academy, and I am confident that you will agree that these cadets are nothing short of incredible. They are up to this task, and it is our responsibility as leaders to ensure they are prepared to actively shape that future. The national security of our next generation depends on the investment we are making in these promising young leaders now. Thank you for the opportunity to speak today, and I look forward to your questions.

[The written statement of Lieutenant General Silveria follows:]

# United States Air Force

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Presentation

Before the House Appropriations  
Committee, Subcommittee Defense

## ***U.S. Military Service Academies Overview***

Witness Statement of  
Lieutenant General Jay Silveria  
Superintendent  
United States Air Force Academy

February 13, 2019

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Not for publication until released by the House Appropriations  
Committee, Subcommittee on Defense

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## U.S. Military Service Academies Overview

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### Introduction

Mr. Chairman, Ranking Member Calvert, and other distinguished members of the committee, thank you for the opportunity today to provide you all with some updates on the current events, successes and challenges at the United States Air Force Academy. I appreciate your interest in our Military Service Academies – institutions that I think all three of the Superintendents here today would agree play a vital role in reinforcing the strength and effectiveness of our respective services, and in shaping the future of our military and the modern profession of arms.

As the Superintendent of the United States Air Force Academy, I appear before you today on behalf of our 4,281 cadets and 203 Preparatory School cadet candidates, as well as the faculty and staff that are working hard to develop them into a new generation of high-character leaders and innovative warrior-scholars. As a 1985 graduate of the Academy, it is truly an honor to now lead my alma mater. In the more than 33 years I have had the privilege to wear this uniform since my graduation, our Academy and our military have changed quite a bit. We are now training to fight different enemies and employing transformed technologies in a rapidly changing geopolitical landscape that is completely different and vastly more complex than when I was a cadet. Back then, cyberspace as a defense concern was more the stuff of science fiction than today's current reality. Space hadn't yet evolved into the crucial strategic warfighting domain that it has become. I spent much of my career as a pilot in the F-15, an incredibly powerful and capable aircraft. But more recently, I've had the opportunity to qualify in the F-35, a flying information platform, revolutionary in how it makes us think differently about employing data to our missions and battlespaces. In the differences between these aircraft I see an analogy for the passing of the torch between generations: from the F-15, a product of the late industrial age, to the F-35, a machine entirely of the information age. I can tell you from firsthand experience – as both a father of two and as the Superintendent of the Air Force Academy – that developing this generation does not come without its challenges. But on the whole I am incredibly impressed by our cadets on a daily basis. Like the F-35, they are capable of processing incredible amounts of information. They think differently, they learn differently, and they represent a generation that can take our Air Force to even greater heights of discovery and accomplishment.

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I tell our cadets that we don't need them to be a better F-15 pilot than I ever was. Instead, we need them to be more creative, innovative and inquisitive leaders of character and leaders of Airmen than those that came before them. We need them to look at the application of airpower differently, and to broaden that consideration of capability with their rapidly advancing knowledge in space operations, cyber operations, remotely piloted aircraft, and beyond. In the near future they will graduate and stand beside my peers and me in uniform, but soon they will replace us, and it will be their responsibility to guide our Air Force into an uncertain future. It is our responsibility – the dedicated leaders, faculty and staff at the Academy – to prepare them. Through that lens, I believe what we do at our service academies is an incredibly important investment in the future of our national security.

### Successes

In nearly every interaction I have with our cadets, I am struck by their ambition, their intellect, and their drive to become outstanding leaders. I would encourage each of you to visit our Air Force Academy. I am confident you will find that you agree they are nothing short of incredible – truly some of the most promising young scholars, athletes and leaders our nation has to offer. I'd like to share a few examples with you:

Just several months ago, we learned that two of our cadets were chosen as this year's recipients of the prestigious Rhodes Scholarship, among 32 scholars selected nationwide. Following our 39th last year, they make our 40th and 41st cadets to receive this honor:

- Cadet Madison Tung, from Santa Monica, California, majors in mathematics and humanities and with a minor in Chinese. She conducts research in the use of artificial intelligence and mathematical techniques to develop tools for decision makers. She is a six-time All-American, a high school national champion in women's wrestling, and holds a black belt in hapkido. At Oxford, Cadet Tung intends to pursue a master's degrees in computer science.
- Cadet James Brahm, from Huntsville, Alabama, majors in computer science, with minors in Chinese as well as nuclear weapons and strategy. He conducts research at the intersection of cybersecurity and computer science, and has a computer science-related

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patent pending with the U.S. Patent Office. He commands the Wing Information Services Team, which is responsible for ensuring IT support to over 4,000 cadets, and has worked extensively in cybersecurity, including as an intern at the National Security Agency where he engineered reusable software to support U.S. intelligence efforts. At Oxford, he will pursue a master's degree in computer science.

Another of our young leaders, Cadet Kyle Haak, is a two-time Academic All American, and is one of the captains of our highly successful hockey team. He majors in physics with a minor in nuclear weapons and strategy, and is currently our number one ranked cadet in overall academic performance. His research is in energy and desalinization, and he was just honored as the U.S. Air Force Cadet of the Year for 2018, an honor given to one cadet among the Academy, Air Force Reserve Officer Training Corps and Officer Training School cadets nationwide. These cadets I've mentioned are certainly exceptional, but at our Academy they're not unusual – I could go on talking about our cadets all day.

I recently attended our undergraduate research awards where cadets and faculty were honored for their accomplishments in some of the impressive research they are doing. We are the number one funded undergraduate research institution in the country, and our cadets are conducting research at an undergraduate level that is unmatched at most other institutions at the graduate and postdoctoral level. This not only provides practical value to our Air Force and the Department of Defense in the research they provide, it sends these future officers out into our Air Force with the valuable and uncommon experience derived from hands-on participation in cutting edge research.

We put great stock in giving our cadets experiences that can't be found at any other institution in the country. In our program, our cadets design, build, test, and fly operational satellites. This past December, our FalconSAT-6 was successfully launched aboard a Space X rocket. Our cadets jumped right into action, commissioning the satellite and bringing it into normal operations in the following weeks. It was joined on the launch by an Academy-developed science sensor, flying as a payload on the Space Test Program (STP-5) satellite. By next year,



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two more academy satellites will join a growing collection of Academy space assets, and our Air Force Academy will have more operational satellites in orbit than most countries.

When they're not flying satellites, our cadets are participating in other clubs and activities, often competing at the national and international levels. Over the holiday break our forensics team was in South Africa competing in the world championships, and our Wings of Blue parachute team competed in the intercollegiate championships, where they took 14 medals in 8 events. Over the past year our mock trial team has won consistently in both individual and team competitions at events across the country. We don't have a law school, or any other graduate degree programs, but these cadets are regularly competing against and beating students from some of the best law schools in the country.

Every cadet at the United States Air Force Academy is an athlete. Whether they are a member of one of our 27 division one intercollegiate athletic teams or our 19 competitive club sports, or they participate in intramurals, athletics are a crucial part of their officer development. The improvement of physical fitness, the lessons learned from competition, and the tenacity developed by taking part in competitive athletics are all integral facets in the training and education of warrior leaders.

Roughly one quarter of our entire cadet population competes in division one athletics – and they hold their own quite well against some of the best athletes in the country. With 17 wins this year, our men's soccer team had its most successful season in program history, boasting two All-Americans on the roster and notching a win in the first round of the NCAA tournament. Our rifle team recently secured a conference championship and our women's tennis team is off to an undefeated, 8-0 start to the season.

### **Infrastructure**

While we are the youngest of the service academies, a good portion of our infrastructure at the Air Force Academy is original and was built more than fifty years ago, and is now all showing its age at the same time. This, as you can imagine, presents a number of challenges for our engineers, facilities managers, and cadets who enjoy hot showers and internet service. A few

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of our more recent, ongoing and soon-to-begin projects fall into this category of overdue infrastructure repairs and updates, and I'll cover two this morning.

Our Cadet Chapel was constructed in 1962 and is the most visited man-made tourist attraction in Colorado with more than 1 million visitors annually. The chapel serves as an all-faith center for worship and can hold services in all of its five worship areas at one time. Unfortunately, "value engineering" during its construction deleted designed interior flashings in favor of 32 miles of caulk that fill and waterproof the seams connecting 100 aluminum tetrahedrons. Over the years, extreme temperature fluctuations and high winds allowed failures in the caulking resulting in extensive damage over time to the interior envelope, organs, and pews. The repairs to the chapel will require complete disassembly of the exterior structure, install a new water diversion system, abate and dispose of hazardous materials, replicate or replace the historical colored glass, replace interior lighting and controls, disassemble and restore pipe organs and pews, and update the fire protection system. This project is expected to take nearly four years to complete.

Similar to our chapel, the IT infrastructure on our campus has been neglected. During the past 10 years, we have invested minimally in our IT infrastructure resulting in a severely antiquated capability – a capability that is of critical mission importance on a college campus. Recent activities to recover from this neglect include an upgraded backbone with 20-times faster performance and multiple redundant paths, activation of a commercial internet circuit, and design of a new "Mission Net" designed to specifically address the IT needs of a college campus.

Sijan Hall, our newest cadet dormitory, was built in 1968 and houses approximately 1,500 cadets in 900 rooms and associated support spaces in 625,000 square feet. The facility serves as the cadets home and 'work space'. Over the years, we have maintained the facility but have never completely restored its infrastructure and systems. Roof leaks and significant wear and tear on mechanical, electrical, and plumbing systems impact cadets and their quality of life. The heating system in the building will typically experience several outages during the year due to failures in heat exchangers tubes. The window wall system in cadet rooms is single pane glass, making it even more difficult to maintain temperatures in the rooms during the winter. The fire

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protection, energy management, and communication systems are outdated and need to be upgraded to modern standards.

In combination with government funding, we have been incredibly privileged to have private donors generously contribute to a number of transformative projects across our campus. This partnership has allowed us to achieve a level of excellence that is directly improving the training and education experience of our cadets. Polaris Hall is the new home of our Center for Character and Leadership Development. It is a \$40 million, 46,500-square-foot building that has been awarded more than 20 national and international architecture awards since its opening in 2016.

We are also set to begin construction on a new Cyber Innovation Center that will support both the Academy and the Air Force with novel cyber research needs. Improvements to our Falcon Football Stadium bring the facilities on par with other Division I athletic facilities. All of these enhancements to our campus directly impact the quality of officer development at our Academy.

### **Mission and Priorities**

I've talked a bit about change and improvements this morning, but our mission has not changed, and neither has our enduring dedication to our core values. Our mission at the Air Force Academy is to educate, train, and inspire men and women to become leaders of character, motivated to lead the United States Air Force in service to our nation. Foundational to the Academy experience, cadets remain guided by the Air Force's core values of Integrity First, Service Before Self, and Excellence in All We Do. My priorities as Superintendent reflect a dedication to that mission and our core values, while also acknowledging the need for agility and change. To that end, it must be our priority across the Academy to develop leaders who are innovative, who are rooted in a warrior ethos, and who possess impeccable character. To accomplish this, I have identified three Academy-wide cultural priorities to ensure our mission success:

- 1) A culture of innovation: from how we develop and employ our curriculum, to what we emphasize in research and the infrastructure projects we prioritize. We need every last

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one of our cadets, faculty, staff and leaders to be invested in a culture of innovation. More than anything else, constant innovation is what will keep us a step ahead of our adversaries.

2) A culture of honest and open assessment and feedback: As leaders with a mission to train the next generation of leaders, we must be modeling proper communication and leadership development at all levels. A key part of this is not being afraid to look in the mirror. Creating a culture of honest and open assessment and feedback is crucial to a healthy leadership climate of constant improvement. We have to listen to our people, both up and down the chain of command, and take their feedback to heart.

3) A culture of respect and dignity: And finally, since my first day as Superintendent, I have made it clear that fostering a culture of respect and dignity for everyone on campus is foundational to everything we do at our Academy. In a hearing shortly following this one, we will be discussing some areas of misconduct – sexual harassment and sexual assault – that demonstrate a severe lack of respect and dignity that have no place at our Academies or in our military. As I will elaborate in this afternoon’s hearing, we are committed to addressing these issues head-on across our Academy, and to be the example for the Air Force, the Department of Defense, and society.

Top to bottom, left to right, and regardless of rank, position or job title, we will treat one another with respect and dignity no matter a person’s race, gender, age, religion, ethnicity or sexual orientation. Diversity increases our effectiveness and fighting capability by providing a wealth of perspectives, skills and talents, derived from different backgrounds, experiences and upbringings. By contrast, treating one another with a lack of dignity and respect disables our effectiveness, and destroys our morale. Our society is changing swiftly, and our Academy and military must lead these developments. Our newest class at the Air Force Academy included our highest percentage of women applicants (30.3%), and we expect the Class of 2023 to be even higher. Additionally, this year we accepted the highest number of minority cadets in our history (more than 33.3%) and our junior class includes the highest percentage of women in our Academy’s history (29.9%). We are not done on this front, and will continue to strive to improve these numbers so that our Academy more closely reflects the society it serves and possesses the greatest strengths of that society.

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### **Conclusion**

Our nation has high expectations of our military, our Air Force, and our Air Force Academy. They expect us to succeed in our mission to fight and win in Air, Space and Cyberspace. And they should – a great deal of time, energy and tax dollars are invested in ensuring our success. I came to this role directly from supporting our ongoing operations in the Middle East, where I was commanding the air war against ISIS. I know what an incredibly difficult and complex battlespace our service members operate in, and what will be required of our cadets on day one when they leave our Academy. That is the prism I view my leadership through. I can tell you from personal experience that modern combat is rapidly changing, and will only continue to get more complex. But one of the great privileges of this role I'm in is that I get to see into the future, and I see the future of our Air Force, and our military, in our cadets. They are up to the task, but it is our responsibility to them as leaders – everywhere from our Academies to congressional committees like this – to ensure they are prepared to actively shape that future. The national security of our next generation depends on the investment we are making in these promising young leaders now.

Once again, thank you for the opportunity to speak before this committee, and I look forward to answering any questions you might have.

Mr. VISCLOSKY. General, thank you very much. I want to thank each of your testimony and also for setting a wonderful precedent for all our future witnesses for the next 2 years.

Before I turn to Mr. Calvert for any questions he may have, I will thank Mr. Womack because we are a collegial body, and it was Mr. Womack's suggestion that we hold this hearing today, and I thank him for that very good idea.

With that, I will turn to Mr. Calvert.

#### NATIONAL DEFENSE STRATEGY

Mr. CALVERT. Thank you, Mr. Chairman, and thank you for giving me the opportunity to make a statement and ask a question.

I would like to say a quick note on the issue of sexual harassment, sexual assault at the academies. I know several of my colleagues will be covering this topic in their questions, and I want to give them the opportunity to do that. I would just like to say that we hold our public institutions, especially the military, to higher standards. All cadets, especially female cadets, must be made to feel safe and free from any kind of harassment or assault. And I certainly appreciate all of you sharing your thoughts and action plans with both myself and Chairman Visclosky prior to these hearings.

For the well being of our young people at the academies, we will hold you to your word, to continue to account for the problem and find solutions.

However, the question I would like you to address is how the national defense strategy which calls for a shift away from counter-insurgency to focus more on China and Russia has impacted your training and education curriculum. As our adversaries become more adept at operating in the gray zone, cyber attacks, proxy wars, information warfare, how are we preparing our future leaders to fight and win in this new type of conflict?

General WILLIAMS. Ranking Member, thank you very much for your question. The defense strategy, and the Secretary of Defense asked us to have a more lethal force, and my Army leadership has asked me to focus on readiness. So readiness is the number one priority of the United States Military Academy, and we do that through our leadership development strategy. We get at that through living honorably, leading honorably, and demonstrate excellence.

So the cadets—my friends talked about the different pillars. Those same pillars exist at West Point. We have an academic pillar, a military pillar, a physical pillar, but the most importantly piece as was mentioned earlier was character, and so all four of those pillars work together. Our cadets in their curriculum are allowed to travel and see the environments they are potentially going to be in.

We have an academic enrichment program where cadets can travel abroad and understand future environments, understand future allies that we are going to partner with. We also have a variety of languages that we speak, that we teach at West Point, whether that be from Portuguese to Russian where cadets are exposed firsthand to the environment they are going to be in.

I would also say that cyber is a very important future aspect of this new environment, this multi domain operation battlefield that we are going to fight in, so we have a real strong effort in cyber operations. We have 25 cadets who will branch this year, both male and female cadets, into cyber operations.

Admiral CARTER. Sir I will echo some of the comments from my colleague from West Point in that we have international programs, and we are creating leaders of character that will make a difference for our Navy and Marine Corps.

A couple of additional points. The academic curricula that we have at the Naval Academy is developed based on the needs of the fleet. Now, when we graduate our young men and women that go into the Navy at 75 percent, 25 percent in the Marine Corps, as you heard me say in my opening statement, they go into war-fighting roles.

Roughly 95 percent of our graduates are in those war fighter roles. However, in this developing need, especially in the cyber sphere and intelligence, our number of commissioned officers have grown in that community. This year we will commission 49 Ensigns into the information warfare community, 24 of whom will be cryptologic warfare or cyber warriors. This is a shift based on the needs of the Navy, and it is also reflective of the curricula that we have at the Naval Academy.

I mentioned the development of a cyber operations major, the development of a nuclear engineering major, operations research, an economics major that had been part of our liberal arts portion of our academy, now it is a STEM-based major. So with 25 different academic majors to offer, 20 of them are in the STEM field, and we feel that is the type of technological background and engineering background that our young men and women will need to lead, fight, and win in the future.

General SILVERIA. Sir, thank you for the question and the opportunity. I will add that the Air Force Academy, similar to the other two academies, very robust in our international programs. We think that that cultural awareness as in the national defense strategy, the importance of partnerships and alliances, is crucial. And so we all have very robust international programs that can develop on that cultural awareness and the language awareness.

I think for us in the area of technology advancement, we are consistently among the top research institutions in the country, and when you consider that we are an undergrad only institution, we recently had six cadets that were awarded patents for their work and one recently in the area of cyber. We focused a lot of our cadet for seniors in their curriculum in the area of research, so they have an experiential program. I point that out because that is where we get the innovative critical thinking skills to take on the national defense strategy and take on future conflicts that we are going to need.

In the area of cyber and artificial intelligence, our cadets continue to do research and continue to stretch those technologies, but just as my colleagues have mentioned, we also this year have the highest number of cadets that are graduating into our space field, into our cyber field, and into our remotely piloted aircraft field

than we have ever had in the past. That really shows the leading edge of technology and what we will need in modern combat.

#### PATENTS

Mr. CALVERT. Thank you. Just a real quick follow up because you brought that up. When a student files a patent, does that accrue to the benefit of the student, or does that accrue to the benefit of the institution?

General SILVERIA. Sir, the ones we have now are intellectual property that the cadets have earned. We had a cadet just earn one in the area of cyber, but it is his intellectual property.

Mr. VISLOSKY. Ms. McCollum.

#### SEXUAL ASSAULT

Ms. MCCOLLUM. Thank you, Mr. Chair. I want to touch on—because I think we are going to have another round of questions on the sexual assault. The report that just came out, and I looked at it again last night, and I have it in front of me, the Department of Sexual Assault Prevention and Response Office, indicated nearly a 50 percent increase in unwanted sexual contact across the academies since 2016.

So I am going to ask you a couple of questions, but I want to take a couple of words right out of the report. One thing that—and these are not your words, gentlemen. These are from—I am trying to read and talk at the same time.

This is from the executive summary of the report. It is from page 5. And the second to the last paragraph disturbs me with the choosing of the words of the Pentagon in this report. Fewer cadets and midshipmen chose, chose, to make sexual harassment complaints this year than last. Chose.

That means they decided to do or not to do. This shouldn't be a choice. This should be something that is reported when it happens because when I read the word choose, that means someone still might be out there worried about a black mark, a stain on their record, not being taken seriously and that, but these were not your words, gentlemen. These were the words of the Pentagon. So I am going to follow up with why they chose that word because I find that very interesting, and words are very powerful. And when people write executive summaries, to drill down on this word again, they choose their words very carefully.

The other thing that is in the report, and we talked about it a little bit, and sir, I am sorry I didn't get to hear directly from the Air Force. It was no one's fault. It was weather. But in our conversations, you touched on alcohol, and one of the things in the report says U.S. Military Academy.

Alcohol is estimated to be involved in over half of the unwanted sexual contact events specifically. 52 percent events described by female cadets, 59 by male cadets.

The Naval Academy. Alcohol is estimated to be involved in over half of the unwanted sexual contacts, specifically 72 percent of the described by female shipmen, 49 by male shipmen.

The Air Force Academy. The same number, same thing again on alcohol, 65 percent described by female cadets. I think that is supposed to say doolies, or is that just first term.



General SILVERIA. That is just the first term.

Ms. MCCOLLUM. That is just the first term cadets and 62 percent by male cadets. So we did talk a little bit about cultural, character, and alcohol, and some of the training that is been going on. Seeing the alcohol numbers, especially the number for the Navy, I have to say is fairly alarming. And we discussed it briefly.

So I am going to ask you to kind of tell us what tools that you need to put in your toolbox or what kind of things that you expect will be happening to address these alarming trends and reports that continue to have numbers that are fairly active, and you know, what are you going to do to address some of the root causes?

We are seeing alcohol is definitely one of them for sexual contact and harassment in the academies. You know, I know that these are young adults. I know that this happens on our college campuses, but we all talked about the character and the future leaders that these people are going to be or have expressed an interest in become. Could you maybe just give us some thoughts on that? Thank you.

Admiral CARTER. Ma'am, I am the longest serving superintendent here on this panel, so I will go first. I would like to just briefly mention this key word that you hit on which is chose in the reporting part. For us at the Naval Academy, if we were to look at these surveys that have been going on for well over a decade. From 2005 to—excuse me, 2007 to 2015, our reporting had shown a steady increase which is something that we saw as a positive, that we would see more of our survivors coming forward. We cannot force them to report. It is a voluntary thing that they will report. Our job is to set the culture and the conditions so they feel very comfortable and safe in reporting without any retaliation or any other pressures. We have done a significant amount of work to try to ease that burden. We have moved the response coordinators and the victim counselors away from the dorm rooms or Bancroft Hall where all the midshipmen live so they can feel the sense that they can go somewhere to have that talk.

They also know of other resources on the Naval Academy to help advise and assist them from our chaplains to a place that is called the Midshipmen Development Center for Mental Health. And this is really about getting people to make that report. As you know, there are two types of report, a restricted report where somebody files that report to get that type of service available to them where there is no names involved and then an unrestricted report. So these are the DOD rules that we operate within, and this is part of the challenge of holding people accountable.

It is difficult to hold anybody accountable when a victim chooses not to participate in an investigation or move through the entire UCMJ process or file a report at all. As you also know, unwanted sexual contact is not always a physical assault. It is a wide range of that type of behavior.

Ms. MCCOLLUM. I don't mean to be rude. I know the definitions well.

Admiral CARTER. Yes, ma'am.

Ms. MCCOLLUM. My question is especially laying out the case for alcohol.

Admiral CARTER. Right.

Ms. MCCOLLUM. What are you going to do?

Admiral CARTER. So alcohol for us at the Naval Academy I view as one of the principal root causes of the elements of sexual assault. As you mentioned, 72 percent of our unwanted sexual contacts had alcohol involved. We have been working on this for a year, more so than we ever have in the past. We stood up a task force that went after this directly.

The senior class, the class of 2019, has also taken this on in developing a guardian angel program that is out in town with the midshipmen. For many of the other Members, you know the city of Annapolis and our Naval Academy are cojoined, so midshipmen walk directly into town. And getting after this is the most important part. We have gone after this with significant effort this year. We have seen a 49 percent reduction in alcohol related incidents in just this year with some of these programs.

And of course, holding the Naval Academy midshipmen accountable for misuse and abuse of alcohol. So all of that is part of getting after that, to reduce alcohol use and misuse. That is part of the campaign to reduce the scourge.

General SILVERIA. Ma'am, I will add from the Air Force Academy some specific steps that we have taken in the area of alcohol. Watching this last year, we also added some increased supervision, and we have also added very similar programs as Admiral Carter mentioned, the guardian angels where the cadets are responsible and also participating in the supervision. And then our AOCs, our commanders that are with the cadets—they are also—we have increased the supervision in areas where there is alcohol so that it is more visible.

And then most directly, what we have initiated is an education program for all of our third classmen which is the second year. As they approach drinking age mostly in that year, we initiated an education program that is a lot more focused on the prevention aspect and the effects of alcohol on the prevention.

So those are two specific things that we have done directly at the Air Force Academy recently.

General WILLIAMS. Ma'am, we have 273 young men and women who had the courage to come forward and talk to me and say I was sexually abused in this space. We take that seriously. This is our family. These are our sons and daughters. And so with respect to alcohol, your specific question, we are doing a lot, but we have not done enough.

On the 25th of this month, we are doing a stand down across our academy. There will be no classes. There will be no sports. The entire community will come together and revisit where we are. Right now my Commandant as I am here is reviewing all of our policies. We are reviewing how long we keep places where cadets can have access to alcohol. Is that too much? My sense is that it is, and so we are reviewing everything we are doing in this space.

There are current policies and procedures, but they are not working, so we need to fix it, and we will. Starting on the 25th with a stand down, coaches, instructors, tactical officers, cadets will come together and talk about how we are going to go forward in this space.

Ms. MCCOLLUM. Well, thank you. Mr. Chair, I think we need to request what the alcohol policies and disciplines are for all three academies. It should be the same across all three, in my opinion. And you know, what really are the consequences because all of you also mentioned you are collegiate athletic programs too, and we know that our colleges, some of them have taken drug and alcohol abuse very, very seriously for scholarships.

So I would like to know what is happening in that realm. Thank you, Mr. Chair.

Mr. VISCLOSKY. Thank you.

Mr. Womack is next, but if I could, if there is other members that have a question on this area, my suggestion is that we stay focused, and I would be happy to recognize people who have questions in the area. And Steve, if you do. Judge?

#### STANDARD OF CONDUCT

Mr. CARTER of Texas. I am from a time when I went to school, men and women didn't live in the same dormitories. We had curfews at the school I went to.

The studies show that the highest consumption of alcohol for any age group is college-aged kids. I don't think anybody will argue with that. In fact, binge drinking originates in colleges and universities.

You each have an honor system which is something to be extremely proud of because part of our military is their honor. We as a general public couldn't pledge our lives, our fortunes, and our sacred honor because we don't—there is a whole lot of us in the civilian world that don't have a sacred honor, but you do. That is the standard, I think, we are trying to reach is that sacred honor.

But I also know if anybody knows what the reporting from, pick one, the University of Texas at Austin or Texas Tech University in Lubbock, I went to both schools, what the reporting of sexual assault and sexual abuse and sexual violations are at civilian schools versus military schools. So the use of the word choose. I can understand the attitude should be everybody should be reporting all this stuff, and officers should be in charge.

But out in the real world, I talked to my Army fellow, and I am talking about West Point now, but I assume you are all the same. You house by company level, right? Men and women are in the company, and you have commanders which we have people at the Captain level, basically, that oversee these people in the Army. But they are not there 24 hours a day. In fact, you don't want them there 24 hours a day. But when they are there, cadets are not going to behave because it is a military environment when the officer is there like they would behave whether the officer is not there.

So you can't be laying it off on the Captain in charge of the company. He may be seeing perfect behavior while he is there because he is the man in charge or the woman in charge.

So how do you get around the culture of the military because we would assume, like if I was in dorm, we had a—I won't use the term we had for the guy who checked on us as a freshman and sophomore, and we behaved when he was around, and we didn't behave when he was not around, and I will confess to that. How do we fix that in the military because you can't lay the blame on the

officer. He won't see these things happening while he is there. They will happen while he is not there.

So I guess that is confusing, but I just—there is so much goes on on college campuses right now, it is unbelievable. But yet we are holding you to a standard of honor, and how do we reach that? I don't know the answer.

General SILVERIA. Sir, thank you. First, I would say that all three of us feel the same way, that we don't know the same kind of numbers as presented in the report that is referenced at other universities. I mean, no one else is taking the time to be as open and transparent and is surveying as specifically at other universities as we are, and we proudly do that, and we want to be open and transparent about it. But at the same time, the reason is because we hold ourselves to that higher standard that you mentioned.

So we are not exactly sure what other universities see, but frankly, sir, we are going to continue to hold ourselves to the highest of standards because the Nation expects that, and you expect that of us. Our responsibility that we have to do more of is work on that culture of accountability. So that we all have leadership laboratories. The idea that that senior, that first classmen that is about to be a Lieutenant in the United States Air Force is responsible for what is going on in that space, in that company, in that squadron so we need to work on a culture of accountability.

And I will give you one specific at the United States Air Force Academy that my responsibility, first and foremost, is the safety and security of these young men and women, my responsibility to you, the Nation, to their parents and to them. So we have installed thousands of closed circuit TV cameras throughout our dorms for safety and security. As we know, there have been a number of incidents at other universities, and we need to protect them. So that is one direct action that we have taken lately.

Mr. CARTER of Texas. Thank you.

Admiral CARTER. Sir, women have been at the Naval Academy since 1976 as they have been at all of our service academies. And from day one we are in Bancroft Hall where all the Brigade of Midshipmen live. We have been intermingled in other words meaning from one room to another, it could be a woman's room or a man's room. The culture of how we live inside Bancroft Hall today actually through this anonymous survey says that the problems of assault are not occurring inside Bancroft Hall. And I would like to think that we have created that culture in there that is similar to being on a Navy ship which is a very enclosed small space where you have men and women now working together.

But this, to your point, keeping the eye on Midshipmen so they understand that their life and their daily work when they are in uniform which happens, you know, from very early in the morning until Taps at night, doesn't end. They are also Midshipmen when they are on liberty, they are on overseas travel, or doing summer training, and that has been a theme that we have to constantly work on because for us at the Naval Academy, that is where the majority of these unwanted sexual contact events have occurred.

Mr. CARTER of Texas. Thank you.

General WILLIAMS. Congressman, there are two chains of command in the barracks, as you accurately depicted. It is the company commander who has returned, we send them to a college so they get a degree in organizational theory, and they practice the skills they learned, both practitioner from being a combat infantryman, and then they have the theoretical skills to use in action.

My expectation is that when these company tactical officers, and there is also a great non-commissioned officer with these company TACs that the cadet chain of command take charge at night, and they hold each other accountable in that space until that Captain or Sergeant are there.

So it is two chains of commands that own this. It is just not the TACs, as you accurately depicted. I expect the cadets to hold each other accountable—it is called stewardship. I expect them to own this along with their TACs, and if they have questions, that is what I expect out of our cadets.

Mr. VISCLOSKY. Mr. Ruppertsberger.

Mr. RUPPERSBERGER. Just quickly, it is kind of more of a statement. I served on the Naval Academy board for at least 12 years, and I know that Mr. Womack is on the West Point board, and from the time I got on that board, this was always an issue. Every year the board would get—and I appreciate the openness to the board, but there would be an instance involving sexual harassment or sexual assault, and then we would get reports on our board meetings about what we were doing about it.

I will say each superintendent tried to do the best, but I think Admiral Carter has been extremely aggressive, and it is not only about, you know, dealing with it after it happens, it is trying to set the culture before it even happens. And I think that culture—and you talked about Bancroft Hall where you have men and women, the whole—everyone lives in that that one hall, and there haven't been that many incidents there.

So it is something we are going to continue to deal with. You have young, immature students that come in in their first year, and every college has them, but we are training our future leaders of tomorrow. We are the strongest country in the world, I believe. One of the reasons is because of our military academies, so we have to have honor, we have to have discipline, and I think part of it too is not just leadership, you doing it, but the people, the 4-year students that go through that have to create that culture and work with the freshmen, especially, as they come in. I don't need an answer.

#### LIKELY TO REPORT

Mr. VISCLOSKY. If I could, just two quick points. I want to get to Mr. Womack. One, General Silveria, when we talked, you mentioned that for cadets who bring forth a complaint, you have a personal conversation with them after the fact, and I found it interesting that all of you have referred to culture. Of course, we have a societal culture.

You indicated the act itself, obviously, is horrific, but it is jokes, it is the innuendo, it is the other stuff that I assume as you proceed, that is part of that education. Listen. We have got to respect each other. We can't do that any more. I appreciate you do that.

A quick question, just kind of yes and no. In the conversations Mr. Calvert and I had with you before, it appears that the military academy, sophomore women and men, are more likely to report. In the Navy, sophomore women and men more likely. Air Force, sophomore and junior women more likely. Is there that bulge, and do the complaints recede in that junior and senior year from your experience? Just kind of yes or no.

General WILLIAMS. For the sophomore year, the yearling year for West Point, yes. Yes, sir. There is more—that is—of the 4-year experience, the sophomores seem to be reporting more and be more at risk in the space, yes.

Admiral CARTER. Same at Navy.

General SILVERIA. Sir, that is normally the case. In this year's survey at the Air Force Academy, we saw the increase in what was then the junior class that was taken when the survey was taken which is now our senior class, the class of 2019. So when the survey was taken, they were juniors, and that was where we saw the biggest increase.

Mr. VISCLOSKY. Mr. Womack.

#### GENDER AND MINORITY INTEGRATION

Mr. WOMACK. Thank you, Mr. Chairman, and thank you for holding the hearing. As I have told my colleagues around this dais that I think because we have—all of us have vetting processes of some type to send our best and brightest young men and women to these academies, a very prestigious honor, that it deserves to have the superintendents of these institutions down here at least on an every other year basis so that we can have this interaction.

And my question is more of a help us help you sort of question, and it is related primarily in part to the fact that we have had much more gender integration in the last several years, and there has been an increasing need to try to match the leadership of our institutions with the rank-and-file on the enlisted side, and I think we still have a ways to go to be able to make sure that we have got that proper mix.

Now, that doesn't mean that everybody here, all these Members of Congress who have an bazillion other things going on, have to take time out to roam these halls of these high schools to try to figure out who these people are. But General Silveria, you said, and I know because of my relationship to West Point that this past year, class of 2022, we had I think the highest—I will get these mixed up, but either the highest percentage of African Americans in that class on one hand and maybe the second highest of females, and I may have those reversed, but very, very high percentages, and you had indicated the same.

How are we doing, and what can we do better to make sure that we are filling the needs of our services from this gender and minority integration standpoint? And I will give each one of you a chance to respond.

Admiral CARTER. Sir, thank you for the question. The first thing I would tell you is in our application process, we are seeing a rise in female applications even though we are at the highest percentage we have ever been at 28 percent, and minority applications. As I mentioned, we are at 36 percent minorities at the Naval Academy

today, and that happens because of our outreach. But there is no question it happens because of the work of you and your staffs who help us and direct us to those locations within your districts to where we can get into the high schools and have our midshipmen visit them which we do.

We touched over 50,000 high schoolers and youths last year through our outreach program where we have midshipmen visit various high schools. But maybe more to the point is how well these cohorts are doing, whether it be through the women being at the Naval Academy or the minorities. I have to tell you, we are seeing amazing talent that gets to us. This past year, minorities graduated at a higher rate than their white counterparts for the first time in our 173-year-history.

This year, women will graduate at 92.4 percent, the highest of any cohort of any group within the Naval Academy. With 28 percent of women being at the Naval Academy, they hold 37 percent of the brigade leadership positions, so these are leading indicators that all of these cohorts are not just surviving, they are thriving. And I would just say thank you to all the members for bringing this type of talent to our academy.

General SILVERIA. Sir, thank you for the question. What I think that we need to do is that I think we as superintendents owe you better partnership with your staffs and better partnerships with your district staffs because I think we can do better in outreach and working together to expand that outreach to women and to minority populations.

Since we cannot solve how many women and minorities are in our population in the final admissions decision, we have to do it, as you pointed out, in the outreach. And so we are all seeing increases. We saw, as you pointed out, the class of 2022, highest percentage of women applicants we had ever seen, 30 percent. And then this year for the class of 2023, over 31 percent. So we are seeing those numbers increase. But I think the answer to your question, sir, is that I think we owe you a better partnership to work together in your districts to find those areas.

Some Members, Representative McCollum's district, I know we have 20 cadets from her district. Three of them are going to graduate this year, but there are districts within the House that are not represented near as well, so we need to do that better to partner with members.

Mr. WOMACK. General Williams.

General WILLIAMS. Thank you, Congressman. 21st century operational environments are complex and require diverse solution sets. And I believe at the United States Military Academy, our current—as you accurately depicted, 24.5 percent of our current population are women, 15.4 percent are African American which exceed our Army percentages in officers for the Army.

I absolutely think this is critical, and like my partner from the Naval Academy, they are highly represented, more represented as well in terms of there are only 24.5 percent women at the academy, but they hold 33.6 percent of the chain of command responsibility, so they are integrated. We have also had the opportunity to graduate—11 of the 22 current female Rangers in the United States Army have come from the United States Military Academy. So gen-

der integration is very important to how we are going to solve problems in the future battlefield.

Mr. WOMACK. I will have other questions, but I yield back for the benefit of my colleagues.

#### NUCLEAR ENGINEERING PROGRAM

Mr. KILMER. Thanks, Chairman. I am going to try to cover two topics, if I can, but I want to start with Admiral Carter. I am always amazed whenever I visit the Naval base in my neck of the woods just at the level of complexity, the high technology, not just on the submarines but on all of the platforms that we depend on next generation engineers to work on.

I guess I wanted to get a sense from you how you feel the Naval Academy is positioned to recruit and train those next generation engineers. I also know or I have heard about the new nuclear engineering program, and I thought if you could take a second and talk about why you developed that program and how those graduates will further the mission into the future.

Admiral CARTER. Thank you, Congressman. As you point out, the STEM based academic program at the Naval Academy is what is required to go serve in our complex and technical Navy today. Our Chief of Naval Operations directs us to produce 65 percent of our graduates that go on to be Ensigns in the Navy to come from the STEM fields. We have been exceeding that for the last 5 years across all the Ensigns that graduate. Now, granted, the Naval Academy curriculum is liberal arts based, but it is a minor in engineering for everyone from English majors to Chinese majors to, of course, the mechanical engineers and now our new majors in nuclear engineering.

I would submit that all of our graduates can be ready to go into the nuclear engineering field. It is the strength of the overall curriculum, but the need to have a detail and what we have developed over the last couple of years is not just classroom education but now immersive capstone experiential based learning programs. These are now turning into projects where midshipmen are doing research with faculty members and coming up with new ideas for how to do things.

So we have seen some great success there. I think we are very poised to continue to serve on nuclear powered aircraft carriers and on nuclear powered submarines based on the curriculum that we have. Thank you.

#### INTEREST IN SERVING

Mr. KILMER. Thank you. The other thing I wanted to just get a sense from any of you interested in weighing in on this is just getting a sense of what you are seeing in terms of differences between the past generations and the millennial generation. You know, if you are seeing any differences in terms of what makes millennials interested in serving our country, if you observed any differences in what drives a millennial to seek an education at one of the academies, and any differences in terms of how you teach and train millennials.

General SILVERIA. Sir, it is a tough question, but thank you. I will give a couple of thoughts of what we see.



I think what I see among the cadets that I spend time with is this remarkable interest in wanting to serve and wanting to make a difference. And some other indications are not just that these are 17-year-olds that are raising their right hand and showing up at the academies. I mean, we have seen highest numbers of community service hours in our local community that we have ever seen before. They are out and about, really truly wanting to make a difference.

Recently we signed a cadet that is going to show up who happens to be a recruited athlete. And in one of those things out of a 17-year-old that you just always wonder what makes them say that is that this young man was considered to be playing at a number of other universities across the country, and he said it is not about the next 4 years, it is about the next 40 years. I want to serve. And so we see that again and again within this generation.

Admiral CARTER. Sir, I would just say as we are finishing the end of the millennial generation, we are actually now seeing the centennial generation that is in our ranks, and they are even slightly different. And I appreciate Jay's answer here, but this is a generation that values service. They value education. They have never not known anything but the high speed internet. So when you think about that, somebody that is coming into the Naval Academy, West Point, or the Air Force Academy, they are less affected by the events of 9/11 because they might have been only 1 or 2 years old, and they have never not had high speed internet, so they are used to answers at their fingertips. Their thirst for learning and the ability to multi-task is unlike anything we have ever seen.

So regardless of how we want to talk about different generations, this new generation that is now coming into our ranks is exceptional, and it makes me very excited for the future.

Mr. KILMER. That is great.

General WILLIAMS. Thank you, Congressman. I have had the opportunity to not only be a cadet at West Point, but I went back as a Captain. I was walking those halls at 3:00 in the morning watching my company. Then I came back as a Lieutenant Colonel, and now as a superintendent, and I am not so sure I could get in the United States Military Academy now.

But they are fit, they are smart, they want to serve, and I have watched. I have seen changes as was mentioned in an earlier question about the demographic. I have watched the demographic. The complexion of what West Point looks like right now, it looks differently than when I entered there in 1979, 1980. And I think it is because these cadets want to be part of something bigger than themselves, and they want to win.

Mr. KILMER. Terrific. Thanks.

Thank you, Chairman. I yield back.

Mr. VISCLOSKEY. The gentleman from Florida, Mr. Diaz-Balart.

#### COMMUNICATION WITH THE ACADEMIES

Mr. DIAZ-BALART. Chairman, thank you very much. A lot was said about the issue of abuse, and I think that is obviously something that all of us—and I frankly appreciate the fact that you all have shown great commitment to that, and so I appreciate that.

Mr. Chairman, less than a question; really, kind of a comment. So we work really hard, and I have a person on my staff who works year-round to promote the academies, and she goes, and she actually goes into the high schools. And then at SouthCom, we have an academy day, and I will tell you that just for you all to know, the communication that my office has with the academies is phenomenal. I hear that from my folks all the time. The folks that—and we have usually again, you know, a hundred or more folks that come to academy day. But this is the comment I wanted to make.

So I have had the privilege of having even some interns who have then have gone to the academies or folks that I have known, and it is an interesting thing to see. And so the transformation that occurs from—these are bright men and women because for them to get into the academy, they have to have—frankly, they are pretty impressive human beings to start with, but I will just tell you. For you, it is not a surprise, but I will tell you that to me, it is still an amazing thing to see.

When I speak to parents out there as we try to promote the academies, I tell them I don't do this to promote the academies. I do it to promote—to help these individuals and to help the country. But you have these fine, patriotic, good students going to the academies as kids, and when they come out of there, not only are they highly educated and proficient, but you can see the change, and you can see the change immediately in that first year.

So I just wanted to—again, less of a question than a comment, just to let you know that some of us, again, and it is—there is no better—there are no better institutions of learning in the world, but it is beyond just learning. It is this character building that you all do.

So as you heard from Mr. Womack as well, you know, what else can we do because obviously we heard about the effects of sequester that they have had to the academies, and so I am hoping that we have opportunities now to be able to be very, very helpful. I don't think that there is a better investment in taxpayer money for the future of our country, our military, and also, frankly, for these individuals than what you all do. So thank you for what you do.

I yield back, Mr. Chairman.

Mr. VISCLOSKY. Mr. Ruppertsberger.

#### LACK OF FUNDING

Mr. RUPPERSBERGER. Thank you all for being here. I am going to get into some budget issues. I am going to really ask a question of Admiral Carter at this point since I have been on that board, and we do have briefings, and what I have seen in the last maybe 3 or 4 years and probably of lot of it having to do with sequestration that your operating budget has stayed flat, and yet you continue to have more expenses. And sooner or later, something is going to hit, and it is not going to be positive.

And it seems to me—and I am also co-chair of the Army Caucus with Judge Carter, so we deal with General Milley on budgeting issues as far as West Point is concerned. I am sorry I don't deal as much with the Air Force. But getting back to the issue. Could you let us know how the increased costs and lack of funding are

affecting your ability to do your mission and train our future leaders of tomorrow?

Now, I know when you are in the military, it is yes, sir, no, sir, no excuses, sir, and it is difficult for you sometimes to complain when this is—you get your number and that is it, but we are independent. Our job on the board and here is to make sure you get your resources. So let us know at this point where you are, how this lack of funding is affecting you, and how we need to improve it to make sure we continue the proficiency of these institutions. Then I am going to get to capital after this.

Admiral CARTER. Congressman, thanks for the question. As you know, at the Naval Academy, there are kind of two elements to this operating and maintenance budget. The first is what it costs for us to basically operate the Naval Academy, that is to pay for faculty, operate our training craft, and do travel and training for midshipmen. As you stated, we have been flat since really 2012, and sequestration made it difficult, so that is roughly about \$141 million operating budget of which now today nearly 75 percent of that is to take care of our civilian faculty and staff, and that is a workforce of about 2,000 people, military and civilian, that take care of the 4,400 midshipmen.

So these are tough decisions that had to be made, but we are operating at about \$14 million below where we should be.

Mr. RUPPERSBERGER. Fourteen million?

Admiral CARTER. Fourteen million below, and that is to take care of the day-to-day business. We are, quite honestly, our own worst enemy. We have great success in our graduation rate and our reputation, but over time that will become problematic if we continue on that path.

Mr. RUPPERSBERGER. And unfortunately, sometimes your budget coming from the Pentagon or the Naval office, you are the last when you are looking for readiness and all of those issues. How has that impacted your ability to do your job?

Admiral CARTER. The impact has been less people and doing lab technician work certainly less—for example, our library. Our library has become somewhat stagnant. We barely have enough money to do magazine subscriptions and hold the type of quality library that we should have, but mostly it is in the hiring process, you know. We are limited by the number of people we can hire, and we are making it fit. We have added extra programs within that budget to include the cyber operations major which we knew was needed.

The entire sexual assault, sexual harassment team that we have which is a clear priority has also been embedded in that budget. So although it has remained flat, we are still able to do our mission. We have still been successful, but it is going to have further impact down the road. If it is not—

Mr. RUPPERSBERGER. Which is not a positive impact, and I assume the other academies have the same issue and the same problem?

General SILVERIA. Sir, if I could just add one other piece. A lot of times we talk about infrastructure that perhaps that doesn't necessarily reflect one element which is our information technology, the IT infrastructure. For us to deliver higher education in the 21st

century, we have had to make significant investment in our IT infrastructure, and we are still short.

So a lot of times we do talk about the buildings, and that is important in facilities, but the IT infrastructure is how we deliver 21st century—

#### INFRASTRUCTURE PROBLEMS

Mr. RUPPERSBERGER. That is very important. Now, I know at the Naval Academy, you know, around 2005 none of the academies knew anything about cyber, and I think that is when I was on that board, and as a result of at least the Naval Academy, I think, you worked with NSA, your leadership realized and you built a new building.

And it is one of the quickest measures that you have put in place since you have been there, and I assume the same is going on with all three now. But I am going to get into the infrastructure issue real quick. Bancroft Hall as an example. How old is Bancroft Hall?

Admiral CARTER. So Bancroft Hall was built in 1903 as a four-wing dormitory, and it was finished in 1961. An eight-wing dormitory covers 33 acres. All 4,400 midshipmen live there and eat there.

Mr. RUPPERSBERGER. Well, on my role on the board, I have heard of all sorts of issues, health issues, fungi and you know, all those things, and you know, you have got to take care of that, and I understand that that is a big issue too, in a lot of the buildings, even though we have one new cyber building. Could you tell me a little bit about your infrastructure problems and how far you are down on that also? I know you have gotten a little money in the last couple years, but it is not enough. Could you explain that?

Admiral CARTER. Sir, to give you a snapshot quick summary, we had a flagship agreement with the Department of the Navy that funds us through the Naval Facilities Command budget, and that was to fund us for sustainment maintenance as well as restoration maintenance for the infrastructure.

There is another pot of money that takes care of basically mowing the grass and trimming the trees as a historical site that is visited by over 2 million people a year just do look at the Naval Academy.

But since sequestration, the reduction in those cost levels have gone down. Funding since sequestration has been down more than 40 percent.

Mr. RUPPERSBERGER. Forty percent.

Admiral CARTER. Forty percent. So sustainment was reduced from \$36 million to \$26 million, and recapitalization was reduced from \$35 million to \$15 million, and we have gotten some relief. The RM or recapitalization money is now at an every other year of \$15 million, so it gives us some predictability. But if you were to ask me right now what do we need to be whole, to get the Naval Academy, even though I have about \$180 million worth of work between new construction and recapitalization going on today, so there is some relief.

But going forward, that budget line will have to be adjusted by about \$35 million a year to make us okay going forward, and that

is to include how we do maintenance on at least one wing in Bancroft Hall every year.

Mr. RUPPERSBERGER. Well, leadership is extremely important, and I think it is really important for this committee to be aware of these numbers and how it seems you are at the end of the line when it comes to money recently, and I think it is this committee's obligation to really look into these numbers at all three of the academies, whether it is operation or whether it is capital because if we don't have the leadership that is coming out of these academies, we don't take care of it, we are going to suffer.

And you know the threats, the world threats we have, Russia, China and all of these other issues. Thank you.

Mr. VISCLOSKY. Mr. Womack.

#### SUSTAINED PREDICTABLE FUNDING

Mr. WOMACK. I would argue that if the institutions are so incredibly important that people around this dais would nominate their best and brightest young men and women to go there that they deserve to not be neglected from a recapitalization standpoint.

I just wanted to give a quick moment for General Williams because of my relationship to the board there and what I know about a place called Camp Buckner, that if you have never been there, you need to go. I would argue that that is the place where the military component of what we are doing for these young men and women at West Point is actually taking place. Give us a quick depiction of Camp Buckner and why it needs attention?

General WILLIAMS. Congressman, thank you. First, let me thank you for all of the support you provided us in the past. I work very closely with our Army leadership, and what we require is sustained predictable funding over the long haul. That is why Camp Buckner—I will tell you that our FSRM, our sustainment and renovation and maintenance has been very, very well. We have worked very closely with our Army leadership, and we feel pretty comfortable in our ability to maintain our facilities.

The West Point military complex, Camp Buckner, is where we do our military training. So the sophomore group that we talked about earlier, our yearlings, spend their summer training there. It really is vital to the M in United States Military Academy.

As I mentioned, the academic pillar, the physical pillar, but where the cadets do military things in the summer, after their first year as freshmen or plebes, this is their first introduction to how we do things in the military and move on towards the crucible of ground combat.

It needs work. We have 410 structures on West Point. Most of those structures are Q3 and Q4, and many of those structures are out at Camp Buckner. It is Camp Buckner, but equally important is Camp Natural Bridge where we bring in real soldiers from the Army to come in and partner with the yearlings in that summer. So the infrastructure required out there needs some work at Camp Buckner.

Mr. VISCLOSKY. Mr. Aguilar and then Judge Carter.

## CYBER CURRICULUM

Mr. AGUILAR. Thank you, Mr. Chairman. I want to revisit on kind of the curriculum issue that Mr. Kilmer and Mr. Ruppertsberger mentioned a little bit. Specifically, we have all read the open source documents on our threats assessment, and you spoke about cyber in your comments as well. But specifically related to that, what challenges do we have in growing and maintaining, you know, these programs? This is something that obviously didn't exist from a curriculum standpoint years ago.

So how do we prepare for that? What types of research and extracurricular activities can individuals take related to the cyber field?

Admiral CARTER. So we started our journey into cyber curriculum dating back prior to 2010 as Congressman Ruppertsberger alluded to. Today over that period of time, we have mandatory courses for our freshmen and our junior. We are one of the few, if not the only school in the country, that has that because we think everybody baseline, whether they are an aviator or Navy SEAL needs to have an understanding in this important domain.

The academic major is only now in its fourth year. It was developed over time. As you can imagine, there are not a lot of Ph.D.S out there in our country that are educated in cyber, so we mostly recruit practitioners from places like the National Security Agency to come and teach at the Naval Academy. The desire to get into this field is remarkable. I mentioned we have 25 academic majors today. Last year's class graduated with 22 cyber operations majors.

The sophomore class, the year they pick their majors this year, started at 110 cyber operations majors. Roughly one tenth of the whole class is in one major. It is the fifth most popular major at the Naval Academy, so our midshipmen get it. There are a tremendous amount of activities for them to do, whether they are a cyber operations major or not.

The National Security Agency runs a contest every year, a war game, if you will, between the service academies to include Coast Guard and our Canadian friends, and it is a combination of Capture the Flag, moving data around, intruding our networks, and the cadets and midshipmen have to identify those and put patches on those. It is remarkable work, and sometimes we have been asked to go brief the Pentagon on what they have learned from those exercises.

Our midshipmen are also involved in policy contests. NY University, New York University has one of the top in the country, and they go internationally, and they compete very, very well. So this is a big topic at the Naval Academy.

And to end the conversation, thanks to the Members of Congress, in 2016, we received \$120 million to build probably the last major academic building on our 338-acre campus, Hopper Hall. It is just about getting ready to be framed out and be operational in 2020. It will be where all the cyber operations education will happen, and embedded in this is a sensitive compartmented information facility where we can teach at the classified level, something we have never had at the Naval Academy.

So this is the cyber field of dreams. This is the future, and we are attracting a lot of great talent from all over the country because they know that we have this capability to teach.

General SILVERIA. Sir, I will add that we are also very much in this space in that our Cyber Innovation Center will be breaking ground on our new facility later this in year. We are also uniquely placed in Colorado Springs to have the ability to partner with the National Cybersecurity Center Air Force Space Command that is in Colorado Springs and U.S. Space Command that is standing up, so we benefit from that greatly in the area.

I will also point out that you mentioned the research, and so we have one of the three cyber cities that are in the United States where cadets can hack into the cities and to function around in cyberspace, to hone their skills and practice their skills and work their research. But also, sir, it has to be also about getting into the high schools. There are so many cyber competitions now that go on around the United States, and that is really a growing element. We all went through the years as the robotics competitions continued to grow, and we seek out those want-to-be engineers.

Well, now we have an opportunity as the cyber competitions are growing to get out and find those want-to-be cyber warriors because it is not just about computer science. It is an important element here. It is about teaching cadets that are ready to fight and defend in cyberspace which is very different, and so we are all taking that on up front and directly.

Mr. AGUILAR. Thank you.

General.

General WILLIAMS. It is important that we fight and win in this domain. The cyber domain is absolutely critical to the land domain, the air, our maritime brothers and sisters. We have 25 young men and women, they are hand selected, who are going to join the cyber ranks this summer. They will commission in a few months. The folks who are responsible, they come to West Point. They recruit these folks. They are our best cadets. They are physically fit, they are smart, they think critically. It is very important they have those skills in this space.

We also have the opportunity—the Army has been very gracious to me. We have got the Army Cyber Institute which is right outside of our gate, and the cadets get to practice real-time the things they learn in the classroom with the Army cyber. We hold a big conference every year. Our cadets and cadre put that on here in Washington, DC.

And then finally, I think the linkage to our Futures Command which just stood up is an opportunity to link all of these domains. As we think about multi domain operations, cyber is a critical part of those domains.

Mr. AGUILAR. Thank you. I appreciate the answer. Admiral Carter, just a quick followup. You mentioned the cyber competition including the Coast Guard and Canadians. Who won the last one?

Admiral CARTER. Sir, I am happy to report Navy has won 3 out of the last 4 years.

General SILVERIA. But not the last one.

Mr. AGUILAR. You know what? In Washington he did just an amazing job with that answer, right? Thank you so much.

If the Canadians win, you can expect to be called up for a hearing right afterwards.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Carter.

#### REFURBISHING OF BUILDINGS

Mr. CARTER of Texas. Thank you, Mr. Chairman. I represent Fort Hood, and for the last 4 or 5 years I have been refurbishing barracks and building new barracks at Fort Hood. Blessed by the support of this group and MILCON, we are getting that done, but I have had to go through some pretty horrible spaces where soldiers were living. And Admiral, I read your letter that you sent out.

Admiral CARTER. Yes, sir.

Mr. CARTER of Texas. It feels just like a flashback to all the bad things I have seen in our barracks at Fort Hood, the stachybotrys mold growing on the walls, and I am very familiar with that having been put out of my home for an whole year because of that mold. And it shocked me because Annapolis is one of the prime tourist areas in this area. Everybody that comes up here wants to go at least take a look at Annapolis because it is close to Washington.

So I asked General Williams about how things were. Do they have those kinds of problems? He said to some extent, yes. I recognize the Air Force was created, your academy was created in my lifetime, but it is still got to be 50 years or something, I don't know. It is got to be a good while ago when it was. We have got to address that. We can't have that kind of working and living environment in our academies. It is just—it shouldn't happen. I am one that is going to be working on that because I think that is extremely important, and some of that stuff is a health issue, a real, legitimate health issue. But in looking at this, also, where you have a historical building and you are going to try fix it, holy cow. It costs a lot more money. Now, I don't know whether the Air Force would be designated historical yet, but I know the two schools that you have, everything there is historical buildings.

Does that cost you more when you start going in to fix the types of things that you described in your letter? Does that enhance that? It is all an historical—everybody gets designations, and there are ways to get that waived, at least at the State level. And if you have to deal with that at the Federal level, then it doubles your cost. Maybe we can figure out a way to waive those—some of that materials replacement at the Federal level. Do you understand what I am talking about?

Admiral CARTER. Yes, sir, I completely do, and I would tell you that we are very respectful of the historic nature of many of our buildings, most of them built between 1900 and 1920, Bancroft Hall being, I would argue, the most important because it does house the Brigade of Midshipmen.

There are challenges because you are not going to change the concrete structure of it. The roof is a challenge. I don't have the luxury of shutting down Bancroft Hall completely and gutting it because it is the only place we house midshipmen, so it is really important that we do it carefully, plan it. The ability to repair a wing



or so a year is optimal. It should be on an every 30-year recapitalization or modernization for its life, for it to sustain its life. The way we are funded right now, we don't have that type of money.

I have \$4 million right now that I am doing repairs to make sure that the rooms are safe, that there is no mold, and that we are reducing the amount of leaks that sometimes come through an aging roof. But this is part of the challenge, and we won't ever end it because of the nature of where we live, the humidity levels. So we understand that, but we are not planning on going anywhere, so we will continue to fight for it.

General SILVERIA. Sir, at Air Force we are an historical registered site. Our challenge is that all of the facilities at Air Force were all built around the same time, late 1950s and early 1960s, so subsequently, they are all aging out at the same time, so we need that same support for the continued recapitalization.

To delay sustainment and maintenance to repair such as dormitories only costs more later at those facilities. And just as Admiral Carter says, none of us have the space that we can afford to empty facilities and then remodel them. We have to do them in phases over years. So we have two main dormitories. Our Sijan Hall named after Lance Sijan is also something that next year, we will be looking to begin a multi-phase program because it houses 2,300 cadets.

General WILLIAMS. Congressman, we are halfway through our nine barracks. We call it the Cadet Barracks Upgrade Program or CBUP. And then we have an academic building upgrade program which we are also executing at this time.

Working very closely, we have a plan both interim and then mid term and then long term. With your great support over time, we will be able to execute that, so we are halfway through where our cadets live, revitalizing, updating all of the barracks area, and the academic buildings, That work is just beginning.

Mr. CARTER of Texas. You are all creating American heroes, the best of the best, and we owe it to you. I think we ought to seriously consider taking a look at setting aside funding for this capitalization and taking into mind that they have got to continue to operate while they do that, and that allows them to shut down completely.

I don't know where we are on something like that, but I would sure like to talk about it.

Mr. VISCLOSKY. Judge, I want to follow up on your line of questioning later, and I would point out you make a very solid point, and I am very concerned about some of the academies' ability to plan that work, and I am very happy to have a hearing going to follow up on that.

Ms. McCollum.

#### CLIMATE CHANGE

Ms. MCCOLLUM. Mr. Chair, I am not too far out of what you and Judge Carter were talking about.

Admiral Carter, if I remember correctly from our conversation, the Air Force and the Army, West Point, they each have their own dedicated line item for the academies in the budget line, and the Navy is working to address to make sure you get a line yourself

now. For the first time, we will see that in this budget. Am I remembering that conversation correctly?

Admiral CARTER. You are. Currently my up to 2019 budget goes through the Chief of Naval Personnel. They are our support sponsor for our budget line.

Ms. MCCOLLUM. So I think that will help us do better oversight on that. We had a conversation about the size of the different facilities. Is the Navy facility 338 acres?

Admiral CARTER. Yes, ma'am. It is 338 acres.

Ms. MCCOLLUM. And West Point is over 16,000 acres, and the Air Force Academy is over 18,000 acres?

General SILVERIA. Actually, over 19.

Ms. MCCOLLUM. Over 19. Well we will get that fixed on the internet. The reason why I bring this up is I am going to ask about climate change, and ground zero is the Naval Academy.

So as you are talking about all your infrastructure needs, I think this committee needs to be mindful in talking to the Navy and the Pentagon about what they are going to do separate and above what needs to happen with the structures at Annapolis and how they are going to plan for and implement what needs to happen with climate change. If you would just take a minute because we will dig into this deeper and then have more discussions with you at a later date, but we need to talk about—let's use a Naval term sea level rise, if people are not comfortable with climate change on here.

So just what are some of the things that you want to put on this committee's radar screen because that has to be separate. It cannot be competing with what needs to happen with the other facilities on campus.

Admiral CARTER. Thank you, ma'am. And it is an important issue for not just the Naval Academy but really many of our Naval installations that reside on the Chesapeake. We at the top of the Chesapeake see the significance. In the month of September, we had 16 nuisance floodings in the month alone, so this is a real issue for us. To give you an idea of how we are attacking this, we have a sea level rise—

Mr. VISCLOSKY. I am sorry. I didn't hear that. What did you just say?

Admiral CARTER. Sixteen nuisance floodings in September, this past September alone. So we have a Sea Level Rise Advisory Committee. We have considered how other nations have dealt with sea level rise, especially the Scandinavian countries. We are looking through the science of where the sea level will be 50 years from now and 100 years from now when we are still going to be on the Severn River.

Data shows us that the Naval Academy will see a one to one and a half foot rise by 2050 and 4.3 feet by 2100. There are certain sea walls that we are already planning to raise up to be ready for that. The strategy for how to deal with sea level rise is really pretty simple. You either block it, you move it, or you abandon it. And for the benefit of the committee here, the Naval Academy reclaimed about 55 acres from the Severn River to create our boundary fields in the 1950s. We would like to not give them back.

So this is an important issue for us and one that will continue, and as Congresswoman McCollum pointed out, this is above and

beyond the budgetary things that we have planned. So this is a concern for the Navy and the Naval Academy.

Ms. MCCOLLUM. Thank you.

Mr. VISCLOSKY. Mr. Calvert.

#### OVERRELIANCE ON TECHNOLOGY

Mr. CALVERT. Thank you, Mr. Chairman. I would like to discuss on the curriculum front. Admiral, when you were by the other day we were talking about overreliance on technology, the problems we have been having with ship collision. Part of the problem is navigational age, overreliance on technology, and the move away from maps, charts to determine where we are at.

And it used to be that you go on a Navy ship, there was always navigational charts on the bridge. We moved away from that, moved away from celestial navigation being even taught at the Naval Academy. The same thing, I would—for the Air Force. If we didn't have GPS, I wonder, you know, how these planes are going to land nowadays.

And even the Army and the Marine Corps using iPads instead of maps and charts. I understand they are going back to maps and charts in the field for obvious reasons. You never know when these things are just going to shut down, and this goes on throughout, I would expect, the military enterprise, that we have become so used to technology that we forget how we navigate, how we operate without those aids. Are we training these young people to be able to not rely on technology if things go wrong?

Admiral CARTER. Well, I will start off by saying when you come to the Naval Academy, the first thing you do in plebe summer is you learn how to sail. So there isn't a whole lot of technology involved when you are learning how to sail. You are learning the elements of the seas and the wind. That is a good baseline for how to transition to how to operate a Navy vessel.

We have 18 yard patrol craft at the Naval Academy. They are basic trainers, and it is about seamanship and navigation. But at the end of the day, as you point out, we have to continue to remind our people that one of the most important things to do when you are operating on the seas is to look outside. You can't just look at an instrument or look at an electronic chart. You have to continue to look outside. I couldn't agree with you more.

I personally in my 37 years of being in the Navy have experienced loss of connections to the GPS satellites, so it is a real thing. It does happen. We have taken a hard look at our curriculum and what we do in seamanship and navigation. We have not brought back a full celestial navigation course as I took in 1978, but we do touch on that so midshipmen understand the complexity, and the fleet has now brought it back as a standard requirement.

So we continue to make sure that we are preparing these young men and women to go out and not just operate high tech equipment but be able to do the basics when all that stuff might not work as well as it should.

Mr. CALVERT. Thank you.

General SILVERIA. Sir, for an Air Force Academy cadet, one of the very first things they do is fly in a glider and fly in a sail plane, so there is very little technology involved in a glider. And they are

towed up to space, up to the airspace, and learn those basic principles of flight so from the very beginning. We have a very robust glider program that is one of the most unique in the world. Our cadets, our junior and senior cadets teach the first year cadets the soaring program.

And we know consistently those cadets that are instructors in our glider program which speaks directly to your point, those instructors perform remarkably well in pilot training and beyond when they go out and join the force.

And I will add, sir, that prior to being the superintendent at the academy, I was deployed to the Middle East and conducted at the operational level operations in Afghanistan, Iraq, and Syria and very much handled every day the training and the recognition that we always needed to know that at any moment, some element of our technology would not be available.

And so the forces, all forces train that way operationally, and all forces function that way recognizing that at times, we may lose that technology.

General WILLIAMS. And I wanted to mention Congressman, it is very important that they understand the tenacity and the grit and the determination required to win in that dimension. And so from day one of the as new cadets or plebes, they are on their feet a lot and they are walking. And they are walking up and down hills, and they don't have any technology with them. In their sophomore year, their yearling year, if you will, they get exposed to more of the military skills required of being a logistician or an infantryman or artilleryman.

I will tell you as an artilleryman, that is one of the things we teach is that do not rely on the technology. You have to understand the charts and darts, if you will. What are the physics of how you make a round go from point A to point B? And not only in the summer as a practition, but also in the classroom.

Our Department of Military Instruction does a great job of teaching the history. And they talk about leaders of past and the operational environments they had to dominate and win in the past. And these are the same immutable characteristics of our current operating environment, so it is important that they understand the toughness, the grit, and determination to fight and win in those environments.

Mr. CALVERT. Yeah. I just bring that up because I think the first thing our adversaries will do in case we get into a real war is you are not going to have the technology you think you are going to have, so I appreciate that.

Thank you.

Mr. VISCLOSKY. I am going to turn to Ms. Kaptur in a moment. I would simply note that Mr. Ryan, who could not be with us today, has three questions for the record, and gentleman, if you could have those answered for us, I would appreciate it. Two of them deal with dietary habits and the food environment. I must tell you. I have a special interest too. As I describe my life when I am in Indiana, I eat happy food. When I am here with my wife, I eat healthy.

Ms. Kaptur.

## MEDICAL PROFESSION

Ms. KAPTUR. Thank you for sharing that, Mr. Chairman.

Welcome, and I apologize for being late. I had another committee I was required to be at. We thank you for your service to our country and for shaping the next generation.

I was very interested in your testimony. You used the word character, developing character. I would like to ask a whole lot of questions about that, but in my brief time, let me just say I am interested in each of the academies. How many of those who are being educated ultimately move into a medical profession, either as a doctor or a physician assistant? Do you have those numbers available, or do you have a sense of that?

Admiral CARTER. At the Naval Academy, it is roughly 12 of our thousand graduates go into the Naval medical corps which supports the Navy and the Marine Corps and the largest enlisted force of any rating for the United States Navy.

Ms. KAPTUR. Twelve of each?

Admiral CARTER. Twelve per year.

Ms. KAPTUR. Per year.

General WILLIAMS. Ma'am, for West Point, we will graduate in this class, 20 will be doctors, medical doctors. It averages about 20 from year to year is our average.

Ms. KAPTUR. Thank you.

General SILVERIA. And ma'am, we are right between those two; typically to 15 to 18.

Ms. KAPTUR. Do you think that is too low a number?

Admiral CARTER. I will just answer for the Naval Academy. We take a look at this, and of course, we fill the requirements that are given to us by higher Navy through the Chief of Naval Personnel. It is one of the few communities that is not a direct war-fighting role that we do provide graduates, but we find that our graduates that go into the doctor roles from the Naval Academy have a very high retention rate and do very well.

So I am happy that we provide some, and I think personally, this is my view, the number is about right.

Ms. KAPTUR. Well, I would ask this, if you could, to think about this question and provide for the record a reply.

The U.S. military finished 2018 with the highest suicide rate among active duty personnel in at least 6 years. We lost 321, including the Admiral of the Fifth Fleet, whom we had met in Tampa not long ago. In our society, if we look at what is going on, with the mass murders from coast to coast, the majority of those who are perpetrating these crimes are young people who have severe mental issues that have not been sufficiently addressed. I have been struggling myself with what do we do as a country, and one of the facts that I have learned is that we are about 100,000 doctors short in our country of those who can diagnose either at the pediatric level or at the adult level, and we have time bombs just waiting to go off all over this country.

So being 100,000 physicians short, I say to myself is there a way we can invent a program to produce more doctors who would have these skills? We learned from Special Forces that when they embedded behavioral specialists, not necessarily doctors but behav-

ioral specialists in units, the suicide rate went down to the military average. The average isn't good, but in any case. So I thought to myself how do we produce doctors in this field? Could there be a combined public program that links to the private sector? I don't if the military could have a role in that, but my goodness. We need more people adequately qualified.

I can guarantee you that at the veterans—when folks come home and they rotate out and they come to our clinics and so forth, we don't have enough personnel in our veterans hospitals and clinics to accommodate those who are demonstrating a much higher level of suicide than in past generations.

So I wanted to ask you. Have you ever given any thought to this? Is there some way that we could fund additional students who could go on in the medical fields that our society so desperately needs? Even if we could create a program that would partly be funded by their service to the country both militarily and on the civilian side when they would rotate out, perhaps? Have you ever given any thought to this?

Admiral CARTER. Ma'am, the numbers of Naval Academy Ensigns that go into the medical corps is a very small percentage of the Navy doctors that are produced for the U.S. Navy and the Marine Corps. The great majority of them are produced through an Officer Candidate School program that is specifically designated to take those civilians that are already in medical school or have finished medical school and then transition in the Navy.

It is also one of the few ranks where you can come in after being a full-fledged doctor in whatever your specialty is and come in at a mid grade level. So this is a Navy challenge more than a Naval Academy challenge. However, to your point, I would submit that as great as our young men and women are, they are not immune from these challenges. We have a Midshipmen Development Center which is specifically designed to help midshipmen with mental health, and our appointments are full. I have seen the appointment level triple over my 5 years as superintendent. And as much as that might sound like it may be not necessarily a good thing, what I would tell you is the stigma of going to see somebody and say I am having a bad day is not there at the Naval Academy.

I think I could say on behalf of all of our programs here, it is a busy time when you are a midshipman or a cadet. There is not a lot of time to get away and just take a couple days off, so it is a tough program. The Midshipmen Development Center is a great need for us and helps build the resiliency of our midshipmen.

General SILVERIA. Ma'am, I would like to add that as the Navy, as Admiral Carter mentioned, we are also responsive to the needs of the Air Force, but we are one source of the commissioned officers that come into the United States Air Force. So the Reserve Officer Training Corps as well as our OTS, our Officer Training School, they provide commissioned officers.

In a similar way that the Navy does, commissioned officers have a way of getting into the United States Air Force through other universities. So our physicians, our cadets that graduate and go to medical school are one part of the entire picture for the rest of the Air Force, for those that are going into medical school. And similar to Navy, we all have programs that are very robust in cadet coun-

seling, that are available to the cadets. There is very much a network of care that surrounds them where they can go if they just need to talk to somebody, if they just need to get away for a moment, to try to determine if they have—even to try to determine if they have a larger problem.

So we have a counseling center. We have family life counselors. We have chaplains that are available, a consistent network of care that is around the cadets.

Ms. KAPTUR. General, have you ever had cadets who developed mental illness onsets in the academy?

General SILVERIA. Yes, ma'am, we have. Over time, we have had cadets that have developed mental illness at the academy, and in addition to our counseling center, we have medical professionals that are mental health professionals that are able to provide the health and care of those cadets through the time.

Ms. KAPTUR. Is there any way each of you could estimate for the record because most of these illnesses onset in the late teens and 20s, what percentage of those who are admitted do develop these conditions, and what happens to them? Are they discharged, then? And if they are discharged, are they discharged to care, or are they just discharged to the street?

General SILVERIA. Ma'am, I will continue to answer. I will have to get for the record the numbers of those that we have had, but we have a number of ways that we care for young men and women. We provide that care to them directly, and they have ways that they can take time away from the academy. We have an opportunity for them to take six months away or a year away so that they can go and heal and get the care that they need and then return to the academy. So that is one avenue that they have to receive the care.

Ms. KAPTUR. General, thank you.

General WILLIAMS. Congresswoman, we have the same similar construct. The medical leave of absence if we find a cadet over their 4 years who develops some sort of mental health issue and need help, they can leave the academy. I am the one that authorizes the leave. And if they need to stay longer, they will stay longer so they can get that care.

But like my teammates here, while they are at West Point, we have a host of professionals that can help them, whether it be our Center for Enhanced Performance, we are talking about resilience. How do you increase or ensure that mental and spiritual and physical resilience is maintained over our 47-month experience. We have lots of coaches. We have a Center for Enhanced Performance. We have a Cadet Professional Development Center. We have chaplains as others have mentioned. We have a military family life counselor, so there is a network of folks who are standing by to nurture and coach and make sure the cadets graduate in their 47-month experience.

Ms. KAPTUR. Have the academies experienced any suicides this year or in prior years?

Admiral CARTER. We have not had one this year. We have had, on occasion, suicides in past years. They are rare, but we have. And to answer your question for the record, I don't have the exact numbers of those that develop mental illness and the details of how

we handled them, so I would like to provide that separately, ma'am.

Ms. KAPTUR. Thank you. General, did you wish to say something?

General SILVERIA. Ma'am, I was going to say we have not had any suicides in the past few years. We have had cadets with suicide ideations that we provide care for and allow them to receive mental health support.

General WILLIAMS. At West Point, we have had no suicides this year. We have had some in the past, ma'am.

Ms. KAPTUR. All right. Well, you know, I am not going to leave anybody who has a budget off the hook. We need doctors in this country. We have needed them for a long time. We have to figure out how to train them and get them out serving both in the military and in civilian society. I hope you give that some consideration as you plan your programming for next year, and I would love to hear from you for the record on that.

Thank you, Mr. Chairman. I yield back.

Mr. VISCLOSKEY. Mr. Womack.

Mr. Crist.

#### SEA LEVEL RISE

Mr. CRIST. Thank you, Mr. Chairman, and Ranking Member Calvert. Thanks to all of you for being here today. It is a privilege. I apologize for having run late. I was in another committee meeting too, so we all have lots of duties around here. Admiral Carter, I was curious. The Naval Academy, like my home in Pinellas County, Florida, is on the front lines of climate change as you addressed earlier. Like my district, you are surrounded by water, and when there is flooding, the water often has nowhere to go. So I was wondering what is the Naval Academy doing to respond to rising sea level and increased flooding?

Admiral CARTER. So thank you for the question. We have put together a committee to go after and study sea level rise at the Naval Academy. As I had mentioned earlier, we predict that sea level rise will go up a foot to a foot and a half by 2050 and 4.3 feet by 2100. So this is something that being right on the Severn River, we are going to have to deal with, and we will have to build funding to support how we protect the Naval Academy from the rising sea level.

The month of September was the highest number of nuisance floodings we have seen in our history, 16 in the month of September alone. So this is a challenge, but of course, we are the Navy. We do live by and operate by the sea, so we are going to have to learn how to do this. The Naval Academy is not planning on moving. We will change our very small 338-acre campus somewhat if we need to, but this is a real issue for us, and there will be some cost as to how we maintain and sustain the Naval Academy in years going forward.

#### MAINTAINING HIGH ACADEMIC ACHIEVEMENT

Mr. CRIST. Thank you, Admiral. And this is for any one of the panelists. The service academies rival any university in the country in terms of academic achievement, certainly. However, unlike other



universities, the service academies have another purpose, training high quality officers and members of our Armed Forces. Can you highlight some of the unique programs or requirements placed on cadets or midshipmen and some of the challenges this causes in maintaining high academic achievement?

Admiral CARTER. I will make a couple of key points. One that is the same for all of us, that makes us unique from any other college or university, we are a 4-year program, so there really isn't a 5 or a 6-year program. You come to the Naval Academy, you are intended to graduate in 4 years. We are now a developmental program, meaning that if you are good enough to get into the Naval Academy, we have every expectation that if you do the standard and you meet the standard which is moral, mental, and physical, that you will be prepared as a whole person ready to lead and graduate. We have seen some remarkable numbers in achievement and academic success.

Long ago when I was a midshipman, our attrition rate usually was around you 30 percent, easily 10 percent overall due to just academic deficiency. We developed a Center for Academic Excellence, a different place for tutoring as well as the extra instruction that is given by our world class faculty. We have now reduced academic attrition, non-voluntary at the Naval Academy, to less than one and a half percent over the last few years.

So what that equates to is we are now sitting at about 90 percent graduation rates, and if I can just put out a really great statistic about the Naval Academy. For any schools in our country that have more than 50 percent of their academic majors are STEM based that have more than 100 students, the Naval Academy has the highest graduation rate now going back 6 years. So we are very proud of that, and I think those are some of the things that make us unique and make us a unique challenge.

One other very interesting statistic. I know all three of us have very high accept rates or in higher academia known as yield meaning the number of freshmen that say yes to your offer. The Naval Academy is number one in the country at 88 percent over the last 2 years, 88 percent of prospective students that said yes to a Naval Academy offer.

Mr. CRIST. Thank you, sir.

General SILVERIA. Sir, I think I will use an example that we have cadets who designed and built satellites, and right now, they are controlling a satellite that passes over the academy every 90 minutes in our Satellite Operations Center. We have another one that we are going to launch soon, and then a third one that is ready. We don't have a rocket for it yet, and we don't have a space on that. That will be three satellites.

There are countries that don't have three satellites on orbit. But the same cadets that design and build and operate that satellite, just as the other two academies, are also participating in a rigorous military developmental program where they are learning leadership principles through those years, and they are also, in many cases, athletes that are on some of the varsity teams, or they are also participating in some athletic program.

So regardless of the depth that they are in in some element of the curriculum, we expect them to participate in all elements of the

military, the academic, and the athletic parts of the program, all underpinned by the character development that is required of all of the cadets.

General WILLIAMS. Thank you, Congressman. I think what makes us unique is, first and foremost, our code, the idea of character. We have the four pillars that I mentioned, the academic, military, physical, but character is what binds us. That is what makes the academies, all of us, unique. We all have codes, and our young men and women at the end of their sophomore year, right before they begin their junior year, have to affirm. They essentially join our services at the start of their junior year.

What also makes us unique is our requirement to be a warrior, that you have to be—we have a saying that every cadet is an athlete. Whether you compete at the Division I level, and we have a thousand. A quarter of our cadets participate at the Division I level at West Point, and I think the others are close, the same as well. And then also I would say the military training that we do in the summer is very, very unique. Our cadets get to jump out of airplanes. They get to assault out of helicopters. They get to walk a lot. They get to carry heavy things on their back and learn how to persevere, and they learn a lot in that 47-month experience.

They are fundamentally different at 47 months over the period of challenging experience. They learn a lot about themselves, and they grow in ways that they never thought when they came into the United States Military Academy.

Mr. CRIST. Thank you all very much, and I appreciate your service to our country.

Mr. VISCLOSKY. Mr. Womack.

#### CADET LIFE EXPERIENCE

Mr. WOMACK. Yes. Just a couple of things, one on cadet life. The organizations, the institutions that are before us today have kind of a time-honored interesting cadet life mix unlike any other institution of higher learning where there are requirements across the spectrum, the mental, the physical, the military component.

How has the cadet life experience changed over time recently, and is it constantly under evaluation to make sure that it is not a discriminator to get the best and brightest to come to the institution but can't be watered down so that we are not producing the highest quality junior officer that kind of separates us from the rest of our global peers?

General SILVERIA. Sir, I will say that as a 1985 graduate of the academy, when I look at the academy now today that I stepped into 32 years later, the level of sophistication is truly unbelievable. You know, I have mentioned our research and some of our other programs that the cadets are involved in, but the level of sophistication and the depth and the breadth of the program.

Cadets are involved in so many different clubs and so many different elements of the curriculum and so many different aspects of athleticism. That broad base that I see that the cadets experience, it really truly is remarkable. But you mentioned about the best and brightest. As I am with these young men and women, I think it is an important point to realize that we talk about all those elements. There are four elements in our military.

As we have all laid out, that is what they asked for. That is what they want. They consistently revel in the fact that yes, they are on an intercollegiate team and they are taking a difficult major and they are squadron commander, but they want to do something else in some other part of the academy. That is the kind of young men and women that we have that are trying to do more and more.

Mr. WOMACK. Admiral.

Admiral CARTER. Sir, I would echo the same things that my colleague, Jay, just said. What is lost on a lot of the folks is what happens to Midshipmen and cadets after the academic year. The summer program for us is broken into four distinct blocks, three principal ones, that are a month long and a shorter block zero.

And again, I go back to my time when I was a Naval Academy Midshipman from 1977 to 1981. I might go on one summer event, maybe do a cruise on a Navy vessel, be part of a leadership program. Our midshipmen are typically involved in two, sometimes three of the blocks doing everything from taking more classes, even though they may not need to, to do a professional development element, whether it be go operate with a Navy SEAL unit, be on a ship or a submarine, get exposed to all of the elements of the Navy and the Marine Corps, so they are engaged in this development to become a professional year-round.

And I think the other thing that is very different, and I think we would all agree and we have been talking about it is just the demographics of who is in the Brigade of Midshipmen. We have shifted significantly. We are not a perfect cross-section of what is society in the United States today in terms of the demographics, but we are getting closer.

And again, that is thanks to you and your staffs that are picking not just the best and brightest but the most representative of our United States. So it is a much, much different place, even just in even the last 5 to 10 years, at the Naval Academy.

General WILLIAMS. Sir, your sons and daughters that you ask us to take up and look after for 47 months, we ask you to evaluate their academic potential, their leadership potential, and their physical potential, and we look at that over that 47 months.

So to your question, it is important to continue to evaluate and reassess what is needed. I was speaking of the land domain in terms of being a leader in ground combat operations. I mean, we need folks that are Marshall Scholars and Truman Scholars but also can dominate in the physical and show the true grit, tenacity, and determination to dominate and win in those sorts of environments.

So the scholar athlete warrior is very important, and I think it requires a constant reevaluation over time as our environment changes. Our environment is complex. It is ambiguous. You have got to make it and you don't get a lot of sleep, and it is tough.

So your young men and women that come here, they learn that at all of our academies, and they certainly learn at West Point to be leaders of character in this space.

#### NOTIFICATION OF ACCEPTANCE TO A SERVICE ACADEMY

Mr. WOMACK. I just have one last question, and then I am finished. A couple of weeks ago—I have a policy in my staff that

whenever we have a notification that a young man or a young woman from my district is going to be going to a service academy that I get the privilege of being able to contact that individual before the academy does and make the notification. I highly recommend that to all of my colleagues. If you are not doing that, you should be doing that. You will not find any greater joy than that.

So a couple of weeks ago I called Isaiah Ballew at Greenwood High School in Arkansas in my district. I have been working with this kid now for a number of years, and it just so happens he wanted to go to the Naval Academy, his number one choice, and that is where he has had his heart set for—since I have known him. And I called him to tell him about this appointment, and he broke down on the phone. And it took him a while to regain his composure, and he apologized to me. And after talking to the young man, then I always ask them if they want me to contact their parents. Some do. Some would like for me to make the notification. So he told me to call his mom. I called his mom, and there was dead silence. And she too had to regain her composure.

Now, I am not saying for a minute that when a—you pick the university, calls a young man and says hey or sends them a letter, you are going to be admitted to our school, that there is not an emotional connection there. But only in the case of the military academies, and it is just not just Navy.

I picked Navy because it is recent. It is Air Force. It is West Point. It is Merchant Marines, even in the Coast Guard Academy. There is something about those that goes right to the heart and soul of who we are as a country unlike any other thing. And so I am going to give each one of the gentleman an opportunity. I know you have your own stories, but this is probably my layup question of the day for you, and that is how does that make you feel as the superintendent of an academic and military institution that gets such a response from the people that we are sending to you?

Admiral CARTER. Sir, thank you for sharing that story, and we get that it is an emotional thing when somebody is given a seat in a freshman class at any of our service academies. What is remarkable to me is—I have been now in my fifth admission cycle at the Naval Academy is not just the quality of who we get, the diversity, and not just in the demographics, 11 percent first generation American, 13 percent first in their family to ever attend college. We all understand how impactful that is.

It might surprise people to know that one in five of our midshipmen who show up are fluent in another language, so these are just some of the attributes. Oh. And, you know, 93 percent of them are already, you know, varsity letter winners in their high school.

And there are two significant days in the life of a 4-year, 47-month journey. And I think the induction day, that day that they come in as a civilian and put on a uniform for the first time, learn how to salute, stand at attention, and take an oath as a midshipman, it is remarkably emotional. Most parents go to that now. Of course, graduation which you can imagine when you see the hats get thrown in the air. It is the end of their midshipmen journey but the beginning of their career.

So I say thank you for sharing that story and reminding us why we do what we do and why it is so important.

Mr. VISCLOSKY. If I could accept that as an answer for the panel so we can move on, that would be terrific.

Ms. KAPTUR. I just have one small question, Mr. Chairman. Did anyone ask about the aircraft-related crashes today?

Mr. VISCLOSKY. No.

#### AIR-RELATED CRASHES

Ms. KAPTUR. If not, I would ask this question, General. Aircraft-related crashes are up nearly 40 percent since 2013, and my question is have budgets driven the academies to substitute simulated virtual computer training rather than real world training? Is that the reason for these crashes?

General SILVERIA. Ma'am, my role at the Air Force Academy is to inspire and to begin to teach these young men and women to take on careers as operational aviators in the United States Air Force. So we have a glider program, we have a parachute training program, and we also have T-53s which is a military version of a low wing general aviation small single engine propeller aircraft, and so I use those three elements to introduce the cadets into aviation.

We supplement all of that with training devices that include the simulators, but also now we have ones that include the virtual reality, and we are showing outstanding results where cadets that were able to solo in a certain amount of time in a glider, we can reduce that amount of time by, in some cases, 5 or 10 percent because of their performance after they have used the virtual reality goggles.

So budgets have not driven us to use those elements at the Air Force Academy. Those have been a real opportunity for us. In many cases, someone puts on a virtual reality goggle, and they can perform a function in the air 20 times with those goggles on when if they were in the air, they would only be able to do it one time.

Ms. KAPTUR. To what do you attribute, sir, the crashes?

General SILVERIA. Ma'am, as an aviator myself, traditionally the crashes that we attribute to, they always come from various reasons.

There is maintenance in aircraft, but there is also training that the airmen have and continue. So without review of the specific crashes that you are talking about, ma'am, but it is always various reasons for crashes in aviation.

Ms. KAPTUR. We have—and I will put this in the record—destroyers colliding with commercial vessels in the western Pacific. A Harrier jump jet crashed in Djibouti, and all the services are continually experiencing negligent discharges from weapons.

Ms. KAPTUR. Thank you, Mr. Chairman.

#### FACILITIES, SUSTAINMENT, RESTORATION AND MAINTENANCE ACCOUNT

Mr. VISCLOSKY. Well, I have three areas I would like to cover before we adjourn, and gentlemen, the first deals with Facilities, Sustainment, Restoration and Maintenance account. My understanding is for the military academy at West Point, the Training and Doctrine Command works with the academy to ensure that funding is included in your budgeting for this account for projects

for the academy, and that funding would be assured you so you can plan for those out years barring some major unforeseen circumstance.

Am I basically correct? I am on the right track? Okay.

General WILLIAMS. Mr. Chairman, let me say it is not—it wouldn't be Training and Doctrine Command. It would be my Army leadership that work the FSRM.

Mr. VISCLOSKY. I am sorry. I didn't hear you.

General WILLIAMS. You said the Training and Doctrine Command.

Mr. VISCLOSKY. Yes.

General WILLIAMS. So our Army leadership is how it would work my FSRM budget. That is senior Army leadership.

Mr. VISCLOSKY. I am completely confused now. Let me put it another way. The academy for facilities, the sustainment, restoration, and maintenance, you are in the overall budget request.

General WILLIAMS. That is right.

Mr. VISCLOSKY. You are part of that budget.

General WILLIAMS. That is right, Mr. Chair.

Mr. VISCLOSKY. You also can't anticipate, in the palm, the next 4 years barring, again, some significant change.

General WILLIAMS. That is right, Mr. Chair.

Mr. VISCLOSKY. You will plan your work when we finish our appropriations—

General WILLIAMS. Yes, sir.

Mr. VISCLOSKY. For the Naval Academy, my understanding is that as of this moment, there is no major command to ensure that type of predictability both for a current fiscal year or the next four.

Although literally yesterday the Secretary of the Navy announced plans to create a 3-star position to work to ensure that each of the major Naval educational institutions, yourself, I believe, the War College and the Naval post graduate will be in a similar situation that West Point is in today where there is predictability for the current fiscal year and the out years.

Admiral CARTER. That is correct.

Mr. VISCLOSKY. For the Air Force, my understanding is that the Air Force Installations Management Support Center budgets for the activities, but that they are centrally controlled, and no installation commander, including yourself, would know in advance for sure in a fiscal year how much money you are going to get. Is that basically correct, General?

General SILVERIA. Sir, one correction I would make is that in some cases, I do get money, that I know for sure that I will get some FSRM, but then in other projects, I have to wait and see if it will be funded.

Mr. VISCLOSKY. And when you say for some of it, is that within the facility sustainment account?

General SILVERIA. Yes, sir. Yes, sir. There is some that I get funded and then some that are not funded that I have to wait and see for funding later.

Mr. VISCLOSKY. The request for 2019 was \$174.2 million. Just for perspective, and if you have a ballpark figure, what percentage of that money could you count on in the current year, 2019?

General SILVERIA. Sir, I think I will have to get that to you for the record.

Mr. VISCLOSKY. And the follow-up question would then would be—

General SILVERIA. Because you want specifically within FSRM, yes, sir? You want specifically within FSRM?

Mr. VISCLOSKY. Yes.

General SILVERIA. Yes, sir.

Mr. VISCLOSKY. But that you would not necessarily know what that figure would be, either the portion you know you are going to get, or maybe I am wrong—

General SILVERIA. Well, sir, I do know.

Mr. VISCLOSKY [continuing]. For the out years?

General SILVERIA. Right. For the out years, I don't know that, yes, sir. Sir, we did talk to your staff a little bit that there is an amount that I know I still need for 2019 and for 2020, so I do know where my shortfall is for 2019 and for 2020.

Mr. VISCLOSKY. Could I ask Admiral, first of all, with the potential position being created, and again, it was announced yesterday, we will be receiving the 2020 budget on March 18th.

Would you anticipate your circumstances would change with the fiscal year budget request for 2020 so that again, you would be in a more comparable situation such as West Point where you would know for 2020, and you would have a fairly accurate prediction for the next 4 years.

Do you anticipate that is going to happen to you in 2020?

Admiral CARTER. Sir, I am aware of the recommendation by the Secretary to stand up a three star position for the Chief of Naval Operations staff. I think it will be a number of months before that position is created and flag levels have probably adjusted.

Mr. VISCLOSKY. I thought the Navy does stuff like that.

Admiral CARTER. Yes, sir. So I think our budget line for our operations and maintenance budget will go the same method to the Chief of Naval Personnel as you described.

I do want to make one adjustment to your earlier comment. My restoration and sustainment funding for the installation actually comes through Naval Facilities Command who works for the Chief of Naval Installations Command. So that is a separate operating budget line that supports that part of the Naval Academy. The other operations budget that I testified to earlier was to support civilian pay, ship maintenance, ship control, and midshipmen travel on some of those things.

Mr. VISCLOSKY. It would be my anticipation if you had greater certainty for the current fiscal year and then those follow on years, it would facilitate some of the investments you have go to make so you can plan to a greater degree.

Admiral CARTER. Yes, sir. I am very optimistic about this plan that the Secretary put forward yesterday. I think it will help support our needs in having a direct representative at the budgeting table to speak for what we call the flagship institutions, the Naval War College, the Naval Academy and the Naval Postgraduate School.

Mr. VISCLOSKY. General Silveria, the Navy made the announcement literally yesterday. At this point I am not aware that the Air

Force is in a position to, if you would, emulate the way the Army budgets for West Point. Just your opinion, I am assuming, from a budgetary standpoint and again renovations, and again you have got a problem where everything is kind of the same age. It would facilitate and make it more effective for you, and efficient if there was more dependability in that budgeting sequence?

General SILVERIA. Sir, I think there would be some possibility that it would probably be a little more efficient. But I have to tell you that my secretary, and my chief, and my manpower and readiness as Secretary of the Air Force are directly involved and know my needs consistently. They are working on some of the projects and discussing them openly with me directly. So I feel well supported and that they are aware of those facilities sustainment monies that we need.

Mr. VISCLOSKY. I don't doubt they are aware of your need. And I don't doubt their intent knowing both individuals, but if you had it in the budget, that it was an identifiable amount and you could plan, I assume there would be some improvement in your circumstances.

General SILVERIA. Oh, yes, sir. Yes, sir. If it was a separate budget like that, yes, sir. And it wasn't through another command as we all have. Yes, sir, it would be much more efficient.

#### ENDOWMENTS

Mr. VISCLOSKY. We would be delighted as—we are done at 2019 obviously, but with the budget submissions in 2020 not knowing exactly what is going to happen, would suggest on behalf of the subcommittee and would love to work with the services to make sure that predictability is forthcoming. I really think that would be a good idea.

Second area is the endowments, we have all gone to schools, we are all proud of our schools, maybe not so proud, it depends. You all have endowments from your graduates, and my understanding is in ballpark average at West Point it is about \$33 million, Air Force, because they are more frugal is about \$12 million, obviously different circumstances in Annapolis is about \$26 million. I must tell you because you are Federal facilities, I understand the impulse of graduates to support their universities.

I am concerned that someone who does your budgets, not yourselves, are figuring that your graduates are going to fill part of the hole that we as a government ought to be paying for. Just very briefly, do you end up in the middle of the year and you are filling holes with the endowments? Do you have any sense, is there some assumptions that they got an endowment and they can take care of this themselves?

And I don't want to put anybody on the spot here. And I am not opposed to the endowment and I am not opposed to the investment. You are running Federal facilities here.

General WILLIAMS. Mr. Chair, you fund us to be able to do our core mission, which is to graduate roughly 1,000 cadets every year. This endowment we all have different pieces of it, is what we call margin of excellence and they add on to. I create a needs statement that would be nice to have, but you fund us to what we need to graduate, to commission a second lieutenant and that they have a



4-year degree and move on. I meet my core requirements of what you provide us.

And this endowment provides additional, margin of excellence kind of quality. It allows us to compete with other tier 1 institutions. There is enrichment done. They enable enrichment in our academic programs, that is an example of what they are able to do on travel, and they also do some construction as well.

Mr. VISCLOSKY. Certainly that is true for the other two?

General SILVERIA. Yes, sir, very much true.

#### RETENTIONS

Mr. VISCLOSKY. But I just make sure we are not shifting burdens here.

The final question I have is on retentions and I do not know if the academies track, I do not know if the individual departments track. But my understanding is you become an officer any number of ways.

One is you attend the academy's incredible education. You may end up by not being so fortunate in going to the University of Southern California and participate—oh, I am sorry. My son's a graduate, I can make fun—and do ROTC.

You can also go to officer candidate school. Are there any matricides as far as 5 years out if I have done ROTC, if I have done officer candidate, I have done the academy? About the same percentages, different percentages of people as far as retention and continuing in the military? I am just curious.

Admiral CARTER. Sir, we track our Naval Academy graduates as alumni and follow their career path in detail. We do comparison data to ROTC and OCS. Our last look at those categories is all three were retaining at slightly higher levels, the Naval Academy a little more so, much deeper into a career.

So again, rough numbers in recent data is 95 percent of Naval Academy graduates are still serving beyond the 5-year point, which is usually, generally just getting to their first commitment about 55 percent beyond the 10-year point and about one-third beyond the 20-year point. And if you look at the Naval flag ranks, and especially as you get to the four star level, we are near 85 to 90 percent of the four stars are Naval Academy graduates.

Mr. VISCLOSKY. Do you know how that compares to the other two paths by chance, Admiral?

Admiral CARTER. I am sorry, sir, how they?

General SILVERIA. ROTC or officer candidate, do you know how that might compare with those two paths?

Admiral CARTER. So they are a little bit less. I think at the 5-year point they are probably almost exactly the same. And this is only for the unrestricted line community.

So for ships, surface warfare, submarine warfare, aviation, Navy SEAL, EOD, and elements within the Marine Corps, because that is where most of our graduates go.

So officer candidate school produces the vast majority of the support officer core, medical, dental, legal, chaplains, public affairs and that sort of thing. So that is not included in that comparative data.

So this is in what we call the unrestrictive line warfare communities. So part of this is to make sure that we are doing the right

things right, and that our graduates who obviously put a tremendous investment in are not just being retained, but they are being promoted and they are doing well.

General WILLIAMS. Mr. Chairman, I need to state that for the record. I know that my senior Army leadership is very concerned in this space about the return on investment in terms of the different commissioning sources. As I mentioned, West Point commissions about 1,000 second lieutenants a year, the ROTC around 6,000, and the Officer Candidate School slighting south of 1,000 each year. But I need to come back and state that for the record.

General SILVERIA. Sir, I would also like to take that for the record for the exact numbers, but I do know a sense that the retention rate overall over years, over years is roughly the same, but the promotion rates tend to be better for our Air Force Academy grads than the other commissioning sources.

And I know that among our senior officers among our general officers similar to the Navy there is a higher percentage, a disproportionate percentage of those who achieve our senior general officer ranks.

Mr. VISCLOSKY. Thank you very much gentlemen.

Thank you very much one for your service, again changing your schedules and for your testimony today. Look forward to working with you.

We are adjourned.

[CLERK'S NOTE.—The questions and answers for Chairman Visclosky follow.]

*Question.* The request for 2019 was \$174.2 million. Just for perspective, and if you have a ballpark figure, what percentage of that money could you count on in the current year, 2019?

*Answer.* Currently we have \$158M in requirements at Installation Mission Support Center (IMSC) for Facility, Sustainment, Restoration and Modernization (FSRM)/Construction Tasking Order (CTO) projects. We have received \$10.4M in funding and are awaiting additional funding for our requirements. We continuously work with IMSC to advocate for our projects. While our requirements may change if the Cadet Chapel is deferred to 2020 (as it currently falls below the AFIMSC funding line for 2019), the chart below depicts our current requirements:

FY	Project Title	Acquisition Status	\$ Requirement
2019 .....	Sustain/Repair Sanitary Sewer—Service Supply .....	Approved/Funded .....	\$294,215.00
2019 .....	Sustain/Repair 188 Manholes—San Sewer .....	Approved/Funded .....	\$970,000.00
2019 .....	Sustain/Repair Sanitary Sewer—Cadet Area 5 .....	Approved/Funded .....	\$1,244,000.00
2019 .....	Sustain/Repair Elevators—Basewide FY18 .....	Approved/Funded .....	\$6,081,000.00
2019 .....	Repair Storm Drainage—Stadium Blvd .....	Approved/Funded .....	\$106,099.00
2019 .....	Sustain/Repair Roof—Hangar Bldg 9209 .....	Approved/Funded .....	\$63,881.00
2019 .....	Repair Aeronautics Lab .....	Partially Funded (rcvd \$450K).	\$1,245,000.00
2019 .....	Repair Enlisted Dormitory 5223 .....	Awaiting Funding .....	\$1,500,000.00
2019 .....	Sustain/Repair Roof Plaza—Mitchell Annex .....	Awaiting Funding .....	\$1,335,262.00
2019 .....	Sustain/Repair NCAA Competition Baseball Field .....	Awaiting Funding .....	\$850,000.00
2019 .....	Repair Cadet Chapel .....	Awaiting Funding .....	\$144,000,000.00
2019 .....	Sustain/Repair Runways/Taxiways FY19 .....	Awaiting Funding .....	\$1,180,150.00

*Question.* The final question I have is on retentions and I do not know if the academies track, I do not know if the individual departments track. But my understanding is you become an officer any number of ways. One is you attend the academy's incredible education . . . You can also go to officer candidate school. Are there any matrices as far as 5 years out if I have done ROTC, if I have done officer candidate, I have done the academy. About the same percentages, different percentages of people as far as retention and continuing in the military, I am just curious.

Answer. USAFA graduates incur a 5-year Active Duty Service Commitment (ADSC) upon commissioning, while OTS and ROTC incur 4-year ADSCs. Those different initial ADSCs impact differences seen in overall retention rates for Air Force officers during their first few years on active duty. However, after the initial commitment has been met, all commissioning sources retain at approximately the same rate. After the initial commitments are complete, the Air Force has a variety of situations in which officers may incur additional commitment obligations: Pilots incur a 10–12 year commitment based on flight training requirements, while non-rated officers who attend Air Force-sponsored graduate schools, professional schools, or other schools that may accrue multi-year ADSCs upon completion of those programs. All of these additional commitments may impact what we see for overall retention rates.

Because typically about half of the USAFA graduates from each year are Rated, we expect the majority of USAFA graduates to remain in the Air Force beyond an initial 5-year obligation. This is borne out in the data, where we see more than half (55%) of USAFA graduates remaining in the Air Force longer than 12 years.

#### RETENTION OF OFFICERS

*Question.* The final question I have is on retentions and I do not know if the academies track, I do not know if the individual departments track. But my understanding is you become an officer any number of ways. One is you attend the academy's incredible education. You may end up by not being so fortunate in going to the University of Southern California and participate—oh I am sorry. My son's a graduate, I can make fun—and do ROTC. You can also go to officer candidate school. Are there any matrices as far as 5 years out if I have done ROTC, if I have done officer candidate, I have done the academy. About the same percentages, difference percentages of people as far as retention and continuing in the military. I am just curious.

Answer. There are three sources of commission in the United States Army, the United States Military Academy (USMA), the Reserve Officer Training Corps (ROTC), and Officer Candidate School (OCS). Cadets from different commissioning sources incur different Active Duty Service Obligations (ADSO) that range from 3 years for ROTC (non-scholarship) cadets to 5 years for USMA cadets. The fact that USMA cadets must serve to the 5-year mark makes comparing retention rates at this point uninformative. We instead provide 8-year retention rates below:

USMA—56%  
 ROTC (4yr scholarship)—52%  
 ROTC (3yr scholarship)—54%  
 ROTC (2yr scholarship)—64%  
 ROTC (non-scholarship)—65%  
 OCS (In-Service Option)—70%  
 OCS (Enlistment Option)—53%

Retention rates among USMA and ROTC 3-year and 4-year scholarship recipients are similar because of the rigorous selection and screening criteria of these cadet populations.

#### FSRM FOR WEST POINT

*Question:* My understanding is for the military academy at West Point, the Training and Doctrine Command works with the academy to ensure that funding is included in your budgeting for this account for projects for the academy, and that funding would be assured so you can plan for those out years barring some major unforeseen circumstances. Am I basically correct? I am on the right track? I am completely confused now. Let me put it another way. The academy for facilities, the sustainment, restoration, and maintenance, you are in the overall budget request.

Answer. For Non-FSRM, Academy operations, USMA is designated as a direct reporting unit by the Secretary of the Army and reports directly to the Chief of Staff, Army. Funding is distributed directly by the Army to the Academy like Army Commands. We fully participate in all aspects of the budget and programming process to address the Academy's resourcing needs.

FSRM, Sustainment, Restoration and Modernization funding is distributed by the Installation Management Command (IMCOM) to the U.S. Army Garrison—West Point. Sustainment is generated by an approved HQDA facilities sustainment model. IMCOM leads all aspects of the budget and programming process to address Garrison specific facility resourcing needs for West Point with Academy input.

[CLERK'S NOTE.—The questions and answers for Mr. Ryan follow:]

## HEALTHY ARMY COMMUNITIES

*Question:* First, let me congratulate the Army and Air Force on their Healthy Army Communities and Air Force Smart fueling efforts. These initiatives are critical to ensuring the readiness and resilience of our soldiers and airmen. The obesity epidemic in the United States has hit the military the same as the rest of society and the services have testified previously to the challenges that DoD has faced with both recruitment and retention. For USMA, is your installation included in the Healthy Army Communities initiative? Can you provide details on how you are improving the food environment and encouraging smart eating for the cadet?

Answer. USMA is part of the Healthy Army Community (HAC) initiative, and we provide healthy food options in all our food service organizations, activities, and Child and Youth Services (CYS) programs. Also, we host numerous fitness activities and competitions on West Point as part of HAC. In support of the United States Corps of Cadets (USCC) we have a Dietitian on the USCC staff, that provides individual counseling and nutrition-related briefings to companies and sports teams. Health initiatives in the Cadet Mess (CM) have evolved over the years to include:

—An extensive salad bar at lunch and dinner that contains a variety of vegetables, lean proteins, plant-based proteins and healthy fats.

—The Dietitian and CM work with food vendors to purchase high quality food products. This includes grass fed beef, free range eggs and organic products.

—To maintain nutritional quality, food preparation methods minimize added fats and optimize nutrient content by not frying food and not overcooking vegetables.

—The Dietitian and CM started creating videos highlighting healthy foods and food safety while in the CM. These are posted on the CM Facebook page.

—Healthy fueling options are available in a CM Grab-N-Go station for all Cadets, while sports teams are training at West Point, and while Cadets are travelling for events.

—Cadets also receive nutritional education as part of the mandatory curriculum.

## SMART FUELING INITIATIVE

*Question.* We have heard great things about what you are doing at the US Air Force Academy under the Smart Fueling Initiative, including applying best practices in college and university campus style dining and transforming your base food environment to provide more healthy options. What specific actions are you taking and do you have any metrics on the impacts these changes have had?

Answer. We have initiated Smart Fueling efforts across USAFA (Dining Facilities, NAF operations, AAFES and DECA). Our current primary focus is transforming the cadet dining facility. Falcon Express, a Grab-and-Go program modeled after other campus dining programs, was launched this February and provides dietitian-sourced items for cadets daily following the evening meal. Since its launch, this program has provided 16,173 entrees and averaged \$16,250 per week to support an average of 420 cadets per night and the cadet dining facility has seen a 6% increase in the meal utilization rate. Cadet feedback has been overwhelmingly positive. We have implemented a similar program at our USAFA Preparatory School, with similarly positive feedback.

Future plans for the cadet dining facility include “Pure Bars” (enhanced salad bars) for lunch and dinner and additional healthier-focused hot/cold Falcon Express items. We also plan to place pop-up kiosks with healthier meal/snack choices across the campus to further expand options.

To reach the base population with Smart Fueling choices, we have launched a healthier menu at the base bowling center that includes Go-For-Green options. In the near future, we plan to expand Smart Fueling practices targeting the base dining facility, coffee shop, golf course and Falcon Club to increase healthier choice options across the installation. To that end, we have submitted a \$500K unfunded request to expand the base dining facility hours of operation and allow access to permanent party (currently only active duty airmen and USAFA Preparatory School cadet candidates can dine there) in order to provide healthier dining options throughout the day for personnel.

[CLERK’S NOTE.—The questions and answers for Ms. Kaptur follow:]

## FUTURE ARMY MEDICAL SERVICE OFFICERS

*Question.* How many of those who are being educated ultimately move into a medical profession, either as a doctor or a physician assistant, do you have those numbers available, or do you have a sense of that? Do you think that is too low a number? I would ask you, if you could, to think about [if this is too low a number] and provide for the record a reply.

*Answer.* By Army regulation, up to two percent of cadets may go directly to medical school. The Medical Personnel Advisory Council meets annually to interview, select, and provide an order of merit list for cadets that would like to apply to medical school. The Class of 2018 had 16 cadets go through the selection process, and 13 went to medical school. The Class of 2019 is still working through the process. There were initially 28 applicants for 22 slots. The Class of 2020 has 28 applicants for 24 slots.

There is not a path for a West Point graduate to become a PA directly after graduation. All West Point graduates, except for those selected to attend medical school, are assigned to serve in one of the Army's basic combat, combat support, or combat service support branches. Some West Point graduates, later in their military careers, may transition into a medical profession. There are 246 doctors, specialists, or dentists currently serving on active duty who are West Point graduates of classes 2000 through 2009, which is about 25 per class. Though we don't have specific estimates, it is also likely that some graduates from each year group transition to being medical professionals after leaving active or reserve military service.

For the classes that graduated between 2008 and 2019, an average of 29 officers were assigned to serve as Medical Service Corps officers. These officers serve as administrative, operational, logistical, technical, scientific, or preventive medicine specialists. They also provide command and control of medical service units, and they coordinate the employment of medical service soldiers in support of operational units.

We make occupation-specific placements using our Talent Based Branching process which helps cadets understand their unique skills, talents, interests, and abilities and then attempts to match cadets to occupations in which their skills, talents, interests, and abilities will help the Army meet its requirements and priorities. We have great confidence in our process that graduates are getting the opportunity to serve in Army occupations that will be professionally rewarding as well as skill and career enhancing.



TUESDAY, MARCH 26, 2019.

**FISCAL YEAR 2020 NATIONAL GUARD BUREAU**

**WITNESS**

**GENERAL JOSEPH L. LENGYEL, CHIEF OF THE NATIONAL GUARD BUREAU**

**OPENING STATEMENT OF CHAIRMAN VISCLOSKY**

Mr. VISCLOSKY. The Subcommittee on Defense will come to order. This morning, the committee will receive testimony on the posture of the National Guard and Reserve Components and their fiscal year 2020 budget request.

This will be a two-panel hearing. Panel one recognizes the Chief of the National Guard Bureau. Panel two will recognize Reserve Component Chiefs from the Army, Navy, Marine Corps, and Air Force Reserves. I would encourage all members to stay for both panels.

Our witness for panel one is General Joseph Lengyel, Chief of the National Guard Bureau.

General, we are very pleased to have you here with us today, a member of the Joint Chiefs of Staff.

This subcommittee has provided the Reserve Component with significant resources through the National Guard and Reserve equipment account, an appropriation which is not included in the President's budget request, as well as additional funding for counterdrug operations, Humvee modernization, helicopters, fixed-wing aircraft, and more.

However, we would like to cover all aspects of funding for the Guard and Reserve today, to include your request for funding in the military personnel and operations and maintenance accounts.

With that, I thank you again for appearing before the committee today to discuss these important issues. We will ask you to present your summarized statement in a moment, but first I would recognize my good friend and colleague, Mr. Calvert, for his opening statement.

**OPENING REMARKS OF MR. CALVERT**

Mr. CALVERT. Thank you, Chairman Visclosky.

And, General Lengyel, welcome. While our National Defense Strategy is now focused on great power competition, we must remain mindful of the important role our National Guard members play in fulfilling these critical national security challenges. Meeting the challenges posed by adversaries, such as Russia and China, will also require that the National Guard is fully engaged, trained, and equipped so that they may be fully compatible with the Active Components.

We have relied heavily on the men and women of the Guard, more than 850,000 deployments since 9/11, and they performed admirably as they have been called upon time and time again in the fight against counterinsurgencies.

I look forward to hearing from you today about how you have been involved in the National Defense Strategy and the key roles that the Guard plays with respect to the warfight, defending and securing our homeland, building enduring partnerships. Thank you again for your service, and we look forward to your testimony.

Mr. VISCLOSKY. Thank you very much.

General, your full written testimony will be placed in the record, and members have copies. There will be one round of questions for each member present. In the interest of time, I strongly encourage you to keep your summarized statement to 5 minutes or less and to be complete, obviously, as you have always been in your answers, but as succinct as possible in responding.

General, the floor is yours.

#### SUMMARY STATEMENT OF GENERAL LENGYEL

General LENGYEL. Thank you, Chairman.

Thank you, Chairman Visclosky, Ranking Member Calvert, and distinguished members of this committee. It is a pleasure to be here today.

And, Mr. Chairman, at this time, I would like to submit my full written statement for the record.

The National Guard consists of nearly 450,000 citizen soldiers and airmen of the Army and Air National Guard. They represent the finest National Guard force in our history, and I am honored here today to represent them, along with their families, their communities, their employers, who all support them.

The National Defense Strategy outlines the priorities for our military to deter war, and protect the security of our Nation. My focus remains on the three primary missions, which are the warfight; defending and securing the homeland; and building enduring partnerships. Each one of these missions directly supports the National Defense Strategy.

In the warfight, on any given day, approximately 30,000 men and women of our National Guard support every combatant command around the globe. Our soldiers and airmen work with allies and partners to compete against adversaries below the threshold of armed conflict, to expand our Nation's competitive space, and to ensure we have and maintain an advantage.

We are poised in regions where our men and women are postured to delay, deter, and deny adversarial aggression. The National Guard is prepared to surge and expand its support in times of war, and we are always ready and always there to defend the Homeland. As the space domain increasingly becomes a war domain, our Air and Army Guard space units are vital to the space mission, as this domain becomes ever encompassing. As with our units in the Army and Air National Guard, it is imperative our space units remain aligned with their parent services, including any future potential Space Force.

In the homeland, the National Guard has, on average, about 10,000 guardsmen, men and women, soldiers and airmen, con-



ducting homeland operations every single day. Your Air National Guard fighter wings are protecting our Nation's skies in 15 aerospace control alert sites, including the skies over the Capitol here today.

Our cyber units continue to protect our networks from malicious cyber attacks. Twenty-seven of our States' National Guards were on duty and provided support in State Active Duty during the most recent elections, ensuring their integrity. The National Guard is also crucial to our Nation's ballistic missile defense, as proliferation of missile technology continues to expand.

On top of all this, the National Guard is ready to respond to emergencies, such as hurricanes, wildfires and flooding, as well as assist law enforcement during times of civil unrest, missions that the National Guard performs with little or no notice. Last year, the National Guard was called up 195 times to respond to homeland emergencies. Our presence in communities around the Nation uniquely posture us to respond when our communities need us. The National Guard's success in warfighting and homeland operations is a direct result of the enduring partnerships we build with international, Federal, State, and local partners.

The National Guard, through the State Partnership Program, now partners with 83 nations. This low-cost, high-return program builds enduring partnerships based on mutual trust and generates security cooperation around the globe. To date, the National Guard has codeployed 80 different times with our partner nations. On the Federal, State, and local levels, our deep partnerships and National Guard's unique authorities ensure a speedy response with unity of effort during times of domestic crisis.

To ensure the readiness of the National Guard to be deployable, sustainable, and interoperable with our Active Components, we require such things as appropriate levels of full-time support and replacing and upgrading old and worn-out facilities. We also require parity in equipping our force, through concurrent and balanced modernization and recapitalization of our force.

Mr. Chairman, I offer my sincere thanks and deep gratitude to this committee for the long history of support for the National Guard. During my time as Chief of the National Guard Bureau, the National Guard has seen increases in critical modernization and recapitalization that include C-130Js, Apaches, Black Hawks, Humvees, and C-130 propulsion modernization. This committee's support for these programs has provided and will provide for increased lethality of our National Guard and its readiness.

Mr. Chairman, I thank this committee for the continued support of the National Guard and Reserve Equipment Account. For decades, this account has enabled the National Guard to field a ready force that can both defend the Nation and respond to emergencies in every community, district, territory and State across our country.

To all the members of this committee, thank you for taking the lead in support of your men and women in the National Guard and their families. I am honored to be here representing them today, and I look forward to your questions. Thank you very much.

[The written statement of General Lengyel follows:]

**WRITTEN STATEMENT BY**

**GENERAL JOSEPH L. LENGYEL**

**CHIEF, NATIONAL GUARD BUREAU**

**BEFORE THE**

**HOUSE APPROPRIATIONS COMMITTEE**

**SUBCOMMITTEE ON DEFENSE**

**FIRST SESSION, 116<sup>TH</sup> CONGRESS**

**ON**

**THE NATIONAL GUARD**

**AND RESERVE POSTURE HEARING**

**MARCH 26<sup>TH</sup>, 2019**

NOT FOR PUBLIC DISSEMINATION

UNTIL RELEASED BY

HOUSE APPROPRIATIONS COMMITTEE

**INTRODUCTION**

Chairman Visclosky, Ranking Member Calvert, and distinguished members of the subcommittee, it is a pleasure to be here today with my fellow Reserve Component Leaders.

I assumed duties as the Chief of the National Guard Bureau over two years ago. It has been my honor each and every day to represent nearly 450,000 Soldiers and Airmen serving in the National Guard. They are the finest National Guard force in our nation's history.

For 18 years, the joint force focused on executing counterinsurgency operations and fighting violent extremists. Counterinsurgency operations will remain a core competency. However, the 2018 National Defense Strategy (NDS) refocuses the Department of Defense (DoD) for long-term competition with China and Russia. The NDS portrays China and Russia as our dominant focus, while Iran, North Korea, and non-state actors remain national security threats.

Your National Guard's three core missions of fighting America's wars, protecting the homeland, and building enduring partnerships directly support the NDS's three lines of effort: building a more lethal force; strengthening alliances and attracting new partners; and reforming the DoD for greater performance and affordability.

The National Guard has transformed itself since the first Gulf War. It is now an operational force and no longer a strategic reserve. It is imperative the National Guard remains an operational force, as part of our Army and Air Force, that helps protect and secure our interests at home and abroad.

**BUILDING A MORE LETHAL FORCE FOR THE WARFIGHT AND HOMELAND:**

*Warfight:*

First, fighting America's wars is the primary mission of the National Guard. The National Guard is focused on readiness as the NDS demands more lethality from our military. We are the principal combat reserve of the Army and Air Force making up 20 percent of the entire joint force providing strategic depth in support of combatant commands. There is only one standard of readiness in fighting America's wars. This readiness requires the National Guard to be deployable, sustainable, and interoperable with our active components. Enhancing full-time support and replacing and upgrading dilapidated facilities are vital in that regard. The National Guard also requires parity in equipping its force through concurrent and balanced modernization and recapitalization so that it can deliver the lethality required to the joint force.

On any given day, the National Guard averages 30,000 Soldiers and Airmen mobilized on duty in every region of the world. When mobilized and deployed, the Guard is interchangeable with its active components. We provide the joint force highly trained and experienced Soldiers and Airmen to meet mission requirements

anywhere. Our Citizen Soldiers and Airmen are present wherever you see the Army and the Air Force.

“Thirty-nine days a year” is no longer the standard for much of the National Guard. Today’s force expects to be deployed. Predictable and rotational mobilizations, where our service members can utilize their training, will help keep the force relevant, ready, and integrated with our active components.

The President directed the stand up of a Space Force this past year to protect and develop our vital interests in space. DoD space-based assets and capabilities protect our critical infrastructure, our economy, and our democracy. The National Guard continues to contribute critical capabilities in space, and we stand ready to support any future Space Force.

*Homeland:*

The NDS underscores the fact our homeland is no longer a sanctuary and new technologies and weapons can reach the heart of America with little or no warning. The 2019 Missile Defense Review clearly articulates the need to pursue advanced missile defense concepts and technologies to protect the homeland. The National Guard, with its Missile Defenders at Fort Greely, Alaska, Schriever Air Force Base, Colorado, and Vandenberg Air Force Base, California, remains critical to our nation’s missile defense and stands ready to evolve in recognition of advancing threats.

The National Guard’s unique dual State and Federal roles and robust presence in 2,600 communities in our states, territories, and the District of

Columbia give our forces the widest presence of any military force in America and the ability to quickly respond to contingencies. Our skills and experience from the warfight are used to assist first responders and play an important part in a unified response under Federal or State command during domestic emergencies. We will remain, in most cases, the first military force to assist first responders in the States, territories, and the District of Columbia.

In addition to approximately 30,000 Soldiers and Airmen mobilized around the world, on average, we have approximately 10,000 Guard Soldiers and Airmen conducting operations in the United States on a typical day. We provide capability and capacity to United States Northern Command and North American Aerospace Defense Command. Fifteen of the sixteen alert sites safeguarding our skies within the United States are operated by the Air National Guard (ANG). The National Guard Counterdrug Program assists law enforcement with the detection, interdiction, disruption and curtailment of illicit drug trafficking. Approximately 55 percent of DoD's chemical, biological, radiological, and nuclear (CBRN) response enterprise, capable of responding to a host of CBRN threats, reside in the National Guard. National Guard cyber units protect DoD's critical networks from malicious cyberattacks and provide an important cyber resource to Governors. Our Ground-based Midcourse Defense units in Alaska, Colorado, and California protect our nation from ballistic missiles.

Last year, the National Guard supported responses to natural disasters such as Hurricanes Florence and Michael, and the wildland fires in California by

providing a myriad of services and aid to those devastated in these regions. The National Guard was there every step of the way.

Whether executing DoD support to the Department of Homeland Security's Southwest border security mission or providing support for State responses to catastrophic disasters, the National Guard meets its homeland requirements while also meeting its wartime missions in support of combatant commands.

### **STRENGTHEN ALLIANCES AND ATTRACT NEW PARTNERS:**

Alliances and partnerships provide an enduring, asymmetric strategic advantage over our competitors. Working with allies maintains the favorable balance of power that deters aggression and promotes stability and economic growth.

The DoD uses multiple tools to strengthen partnerships and alliances that include security assistance, security cooperation, military-to-military leader and staff engagement, and regional cooperation. The National Guard aligns with the joint force through these activities and adds a unique contribution through the State Partnership Program (SPP).

#### *Partnerships:*

Eighty-three countries currently participate in the SPP with more partnerships expected in 2019. The SPP is a high leverage, low-cost program with partnerships in every region of the world. It expands America's competitive space

through exchanges that extend beyond the military realm. Roughly one-third of the nations in the world are partnered with one of our 50 states, our territories, and the District of Columbia. These relationships, built on trust, the exchange of ideas, and mutual respect, served as the basis for approximately 80 co-deployments and turned many security consumers into security providers.

The SPP is a scalable and tailored approach to security cooperation. The National Guard consults and coordinates with combatant commanders, U.S. Embassies and their Country Teams, and host nations to understand the full range of issues they face. SPP events are led by respective state adjutants general who seek engagements on a broad array of interests that are beneficial to both nations. Over 950 SPP events were conducted in FY18 across all Geographic Combatant Commands. In some of these regions, the SPP is the primary tool utilized by host nations for security cooperation. Given the benefits of this program, consistent funding is critical to sustain the groundwork and momentum that have been built over the 25 years since it began.

The National Guard's emphasis on partnerships did not begin with the SPP. Our history as a state-controlled organization naturally led to partnerships with state and local agencies and their officials. Governors leverage our presence throughout the nation through multiagency integrated playbooks used for planning and responding to crises. They call the National Guard to augment their state and local emergency response to leverage military capabilities and skills gained from the warfight such as manpower, training, leadership, organization, logistics, and communications. We instinctively take a collaborative and



multiagency approach to all emergencies based on our years of working with Governors and local community partners. We remain the States' sole military force to respond to domestic incidents.

The National Guard is a community-based force where our members are an integral part of their local communities. Whether partnering with local chapters of Youth ChalleNGe where more than 170,000 at-risk teenagers have graduated since its inception in 1993, or assisting local responders after a heavy snowstorm, the National Guard reinforces the connection between the American people and their military.

**REFORM THE DOD FOR GREATER PERFORMANCE AND AFFORDABILITY:**

Business reform is mandated by the NDS. The National Guard helps DoD achieve greater performance and affordability by optimizing the inherent cost-savings of the National Guard and posturing our forces for predictable operational requirements. This directly supports the joint force in meeting global demands and preserves readiness in the active components.

Reforming for greater performance also includes properly organizing the National Guard to achieve mission objectives. The National Guard Bureau (NGB) is a DoD joint activity with statutes and policies codifying the roles and functions of our organization. Along with the Office of the Chief of the National Guard Bureau, the NGB is comprised of the Army National Guard Directorate, the Air National Guard Directorate, and the NGB Joint Staff. The NGB operates as one entity

supporting the 50 states, three territories and the District of Columbia to man, train, and equip National Guard forces to execute DoD missions worldwide. We strive to ensure unity of effort within our organization and efficiently use the resources entrusted to the National Guard. The NGB must continue its march towards reform and efficiencies.

**CNGB'S THREE PRIORITIES:**

I have laid out three priorities to accomplish the objectives of the NDS and our three core missions of warfight, homeland, and partnerships - provide ready forces to the President and our Governors, take care of and develop our people, and promote an innovative culture.

*Priority #1 Readiness:*

The National Guard contributes to readiness recovery for the joint force by providing additional capacity through rotational forces. By deploying for known requirements, the National Guard enables the joint force to meet increasing global demands while reducing strain on the active components. In FY18, our Soldiers and Airmen supported DoD missions spanning every Geographic Combatant Command and utilized some of the same skills helping communities throughout the nation in responding to emergencies such as hurricanes, floods, winter storms, a volcano, and wildfires.

The Army National Guard (ARNG) is committed to providing ready forces that are warfighting-capable and Governor-responsive. In providing ready forces for the

Army and the joint force, the Army designates select ARNG formations as Focused Readiness Units that are available to rapidly deploy and conduct contingency operations. Additionally, four ARNG brigade combat teams and the units that support them will complete decisive-action training rotations at the Army's premier combat training centers. These activities occur in parallel with deployments and exercises that our Citizen-Soldiers participate in around the world. The ARNG's primary focus in FY20 is to reverse shortfalls in recruiting and ensure full-time support is fully leveraged to achieve and maintain our readiness.

The ANG is also committed to the readiness of the force, its 21<sup>st</sup> century Guard Airmen, and building for tomorrow's fight. The Air Guard provides the same levels of readiness and deployment timelines as the active duty. It exceeded its FY18 end strength goal of 106,600 with a continued focus on training and resourcing efforts that improve readiness and lethality.

Looking to the future, the ANG must modernize and recapitalize its equipment concurrently and in a balanced manner commensurate with the active duty ensuring deployability, sustainability, and interoperability across all mission sets. The Air Guard remains focused on resourcing and training lethal, resilient Guard Airmen and developing exceptional leaders.

*Priority #2 People, Families, and Employers:*

There must be a balance between the needs of Guard members' employers and the needs of the states and the nation. Striking the appropriate balance

requires training that is predictable, when possible, and deployments that leverage this training and enhance national security.

We have increased our recruiting efforts. The current economic environment requires competing against other market forces and remaining competitive through incentives in order to recruit the very best men and women.

The National Guard fosters integrity, respect, and candor within its ranks by maintaining high standards of personal conduct and bearing. We will not tolerate those who choose to act with a lack of integrity and character, nor will we accept sexual assault, sexual harassment, discrimination, and any forms of communication that degrade or demoralize unit cohesion and readiness. We provide our utmost support and care to victims of these acts.

We are also emphasizing mental health and resiliency for our units as we strive to prevent suicides. Any Soldier or Airman who takes his or her own life is one too many. First-line supervisors, battle buddies and wingmen will continue to receive the requisite training necessary to look out for fellow Soldiers and Airmen.

We must also ensure our families are aware of family readiness programs, employment assistance programs, and where to turn when they need help. Our families faithfully commit to our nation and we must ensure we remain faithful to them.

*Priority #3 Innovation:*

The National Guard is a catalyst for DoD's innovation initiatives. Whether looking at ways to save costs through greater utilization of untapped capacity in the National Guard, or reviewing ways to expand the competitive space and increase our advantages through our SPP, DoD has many options to use the Guard as "the innovative force" to help address today's challenges.

We have dedicated resources to ensure our culture is dynamic, and forward leaning by questioning existing processes and challenging the status quo. We have to educate and empower our Guardsmen and implement innovative measures.

Our National Guard Innovation Team (NGIT) is one vehicle we use to innovate. This team leverages the talent, experience, abilities, and insight of our traditional Guardsmen enabling the Guard to integrate skill sets and join Guard members from unconnected fields that can sometimes lead to breakthroughs. This past year, the NGIT worked on issues related to communications, employer support, recruiting and retention, reform initiatives, and technology adaptation. The challenge ahead will be in the implementation of some very innovative ideas.

**CONCLUSION:**

The operational National Guard is an integral part of the joint force and plays an important role in every aspect of our national security and defense. I am proud of the Citizen-Soldiers and Airmen who serve to protect our homeland and interests abroad. We face many challenges ahead, some in areas not seen before.

However, I am confident we will confront these challenges as we always have – through the extraordinary talents and commitment of our Guardsmen and women.

We remain...Always Ready, Always There!

Mr. RYAN [presiding]. Thank you, General.  
We will begin the questions. Mr. Calvert.

#### EQUIPMENT REQUIREMENTS

Mr. CALVERT. Thank you, Mr. Chairman.

Thank you again, General. I appreciate your being here today. This subcommittee has placed a great deal of emphasis on modernization of the total force to ensure that the Guard and the Reserve have equipment compatible with the Active Force.

Can you discuss the impact that this has had on the National Guard with respect to deployments alongside the Active Component and with respect to fulfilling your homeland defense missions? Recently, the Guard was called to help fight wildfires in California. And so, as a side note, I want to know if we have adequate equipment to address those needs.

General LENGYEL. Well, yes, sir. Thank you very much, sir, for that question. And this operational force that the National Guard has become has caused us more than ever before to have to be deployable, sustainable, and interoperable with our service components, with the Army and with the Air Force.

In my view, that means that the old ways, the old days of where you would buy new equipment and you would put it into the Active Component and you would cascade the older equipment into the Reserve Component I believe is really no longer a relevant model. I mean, in any conceivable scenario where the United States is going to have to go to war with a near peer competitor, it is pretty much agreed that everyone is going to have to fight. The Active Component, the Guard, the Reserve, everyone will be there.

Whether you deploy on day 20 or whether you deploy on day 50 or whether you deploy on day 120, all of the components of the services are going to have to go to war. And when you get there, you are going to have to be able to plug in, you are going to have to be able to communicate, you are going to have to be able to sustain all of those warfighting functions that we have, which means we are going to have to have the same equipment as the Active Component.

So, over time, you know—and we do have some older equipment in the National Guard, just by nature of the modernization process. Some of the older C-130s, and some of the Apaches are being modified. Some of the tanks are being modified. And I believe that it is incredibly important that the service—and to a large degree they are—modernize our force structure in accordance with the Active Component as we go forward.

Whenever we are modernized and ready to go here in the homeland, that equipment makes us more ready to do what we need to do in any respect, whether it is fighting fires with new helicopters, like new Black Hawks that we have in California that are used to extinguish fires with fire extinguishers, as we saw many times last year. So it is incredibly important that we maintain a modern Reserve Component and National Guard.

Mr. CALVERT. Unfortunately, we have had our fair share of fires in California, and the Guard has been very helpful in that. So we certainly appreciate that. And I know they got some new Black

Hawks to help combat that. So we are grateful that they have them. So thank you.

General LENGYEL. We are grateful to you, sir, for getting them for us. Thank you very much.

Mr. CALVERT. Thank you, Mr. Chairman.

Mr. RYAN. Mr. Ruppertsberger.

#### ADVANCED ELECTRONICALLY SCANNED ARRAY

Mr. RUPPERSBERGER. General, first, thanks for the meeting in our office, and based on that meeting, I have a question I am going to ask you. The first thing, in 2015, there was a Joint Emergent Operational Need, you call it JEON, for 72 advanced electronically scanned array, which is AESA, radars for the National Guard. These systems significantly improved air-to-air detect and risk in support of the Aerospace Control Act mission in the defense of the homeland. Did you get all that?

General LENGYEL. I did, yes, sir.

Mr. RUPPERSBERGER. Okay, fine. I believe that there are a hundred of the F-16s still in service for the Air Force, National Guard, and Reserve, and some of these platforms are expected to be in operation in 2040. It is essential that these aircraft remain operationally viable against the increasing sophisticated threats.

Two questions: Would additional Air National Guard squadrons benefit from these AESA radar upgrades; and, two, what benefits would these new radars provide?

General LENGYEL. Well, yes, sir. I mean, without a doubt, the defense of the homeland is one of the things that we do in manning the alert sites, as I mentioned in my opening remarks. And the acquisition of the active electronically scanned array radar will allow us to better identify, detect, target and defeat potentially weapons that could be used against the homeland. So the 72 platforms that we have, the 72 AESA radars that are coming, will be a big help, and they will be stationed eight each at the S-16 locations at those alert sites.

That does create some problems for us in that we will now have a mixed fleet of different kinds of radars in these squadrons, which makes it difficult because these squadrons do more than just protect the homeland. We deploy in support of other combatant commands around the world, and it makes logistics more difficult. So, without question, we would like to see that eventually the entire fleet of F-16s begin modernization with the AESA radars. We have an additional 261 F-16s that will not, under the current program, be upgraded with the AESA radars.

So I think it is important that we consider that, you know, should funds become available, that the Air Force consider modernizing more than just the 72 that are currently in the plan for the National Guard.

Mr. RUPPERSBERGER. Would this be a high priority for you and your National Guard and Reserve?

General LENGYEL. I believe it would. I believe it would make it a more capable platform. It does more than just detect threats. I mean, it is an enhanced new generation sensor that makes the aircraft actually more survivable. In a combat environment, there are many reasons that we would want to have—



Mr. RUPPERSBERGER. Give me an example of how it would work.

General LENGYEL. Well, I mean, the radar, it functions differently than the old phased array radars that actually have moving parts. It is easier to maintain once it is on the platform. It functions differently in terms of how it emits energy and how it returns and receives energy to identify its targets. It can see smaller targets. It can see cruise missiles perhaps that may be shot, you know, at the United States. So that is one way it would see as it would target incoming threats.

The other thing it can do is actually act as a sensor, where it can actually find other types of electromagnetic energy that may be targeting that platform itself so that it can then become a more survivable platform in combat.

Mr. RUPPERSBERGER. Okay.

I yield back.

General LENGYEL. Thank you.

#### ADVANCED ELECTRONICALLY SCANNED ARRAY

Mr. RYAN. Thank you, General. I just have a quick followup. So you are talking about 72 platforms, new. That will be the new radar. How many total?

General LENGYEL. Well, there are—

Mr. RYAN. You say there is a mixed fleet and you got to figure out how to get everything working together. How many old radars will still be online?

General LENGYEL. There will be an additional 261 radars that are still out there.

Mr. RYAN. Okay. So there are 261 old ones.

General LENGYEL. On top of the 72 new AESA radars. That is correct.

Mr. RYAN. And how long does it take to get all those working together?

General LENGYEL. Well, I think—I don't know exactly. I mean, it is relatively—it is not a hugely long time to install a radar, but, I mean, we have to acquire the radars and have them installed. It would be a matter of years. Fifty airplanes would cost about \$110 million. If we did 50 a year, it would take, you know, 5 years essentially time, about \$600 million to do the whole fleet.

Mr. RYAN. Okay.

[The information follows:]

*Question.* How many F-16s will be left without AESA radar? What is a realistic time line to get all additional F-16s upgraded with AESA? How much money does that equate to per year and overall?

*Answer:* 261 of the ANG's 333 F-16's will remain equipped with a legacy radar, reducing the fleet's overall lethality. With \$682.5M, estimated completion for all ANG F-16's would be 2029. As future units recapitalize to new fighters, the number of radars, cost and time to complete the upgrades should reduce accordingly.

Mr. Rogers.

#### C-130 FLEET

Mr. ROGERS. Thank you, Mr. Chairman.

General, welcome back. Good to see you again. Thank you for visiting in my district last year—

General LENGYEL. Yes, sir.

Mr. ROGERS [continuing]. To observe the counterdrug program, which is very, very effective, by the way. So thank you for being there for that and for our recent visit.

The Kentucky Guard State Partnership Program is working very well. Thank you. Djibouti and Ecuador. And that is a very beneficial program for the country, especially for the Guard. As you know, it has been one of my priorities to ensure that the Air National Guard modernizes its C-130 fleet, their C-130H models, now some of the oldest in the Air Force, and they need both upgrades and new planes.

Tell us what the Air National Guard is doing to keep these aging aircraft viable and to meet warfighting and domestic response missions.

General LENGYEL. Yes, Chairman, sir, thank you very much for the question. In our C-130 fleet, obviously we have a lot of old or older model C-130Hs in the National Guard. We have I believe it is 14 units and about 133 C-130H models in our fleets.

And the C-130H model is getting older. So we have a program to modernize it. The Avionics Modernization Program 1 and 2, which are currently ongoing and there is money in the program to modernize these platforms. And then the additional modifications that we are doing to try and make the aircraft more viable for a longer term is we are actually doing some propeller and engine modifications to the C-130 fleet.

Right now, there is no additional money in this year's budget to modify the propulsion systems and the engines of our C-130H models. But over long term, as you may have read, we have had some issues with some of the older C-130s and their propeller blades, and for a while this year, some of the fleets were grounded as these older blades were unflyable.

So we believe that we have to do two things: You know, predominantly continue some of the modernization efforts with the Avionics Modernization Program, continue that, and additionally, we think it is necessary to continue the propellers and propulsion modernizations as well for some of these platforms.

Conversely it is always a choice. As you know, the Air Force hasn't put any more money against the C-130J model for our fleet, the recapitalization of that program. But I believe that at some point we are going to probably consider wanting to do both as in terms—I thank the committee for adding eight C-130Js last year and six the year before that and two the year before that, which allowed us to begin to actually recapitalize an older C-130 fleet.

I believe over time, as we continue the modernization process, it will be a consideration to consider buying more J models at some point in the future to continue the fleet such that it is just going to get older and it is going to need to be modernized.

Mr. ROGERS. Well, as you are well aware, this committee provided funding for 16 new—

General LENGYEL. You did.

C-130JS

Mr. ROGERS [continuing]. Js between fiscal 2017 and 2019. Where will these aircraft be based and on what timeline for those 16?

General LENGYEL. So there is a process inside the Air Force, a basing process that the Air Force uses and the Air National Guard participates in. The Air Force sometime later this fall, probably fall of 2019, will determine the preferred locations and potential alternates on where these aircraft might be based. And then when they become available to bed down—I believe in 2022 is I think when we get the first aircraft—we will have selected places where we can bed down the new C-130Js. But those decisions of alternative locations, primary alternate locations won't be determined until later this year, sir.

Mr. ROGERS. Do you expect future Presidential budget requests for more 130Js for the Air Guard?

General LENGYEL. Well, I am not aware of there being a plan to buy more, but I would recommend that we consider that. The flying hour cost for the C-130J models are lower. The sustain maintenance costs over time are lower. And like any old platform, the longer you have a platform there, the C-130H will progressively get more and more expensive to maintain and to fly so that it can be deployable, sustainable, and interoperable.

And as you know, we rely heavily on that aircraft in the homeland as well for all sorts of disaster response. So it is a very important platform to the National Guard and to the Air Force.

Mr. ROGERS. Thanks, General.

General LENGYEL. Yes, sir.

#### ELECTION SECURITY

Mr. RYAN. Thank you, General. I have a couple questions. You mentioned in your opening statement you had about 10,000 guardsmen operating around the homeland. Can you talk to us a little bit about the elections process? I think that is something we are all very interested in. Can you give us some detail on what the role of the Guard has been around elections?

General LENGYEL. I can tell you that if you are referring to the cyber activity during the recent elections, we did. I mean, I believe that, you know, this year coming into the election season this past election year, there was a concern of the security of our networks. And so the Commander of U.S. Cyber Command and myself at U.S. Northern Command brought all the adjutant generals in to Colorado Springs, and we gave them a brief on here is how we view the threat that international actors may portray to our networks, to driving changes in the narrative, to swaying the political process in the U.S.

So at least all of the States had awareness of what may be happening in and around their States with respect to manipulating information via the networks or the like.

#### RUSSIAN ELECTION INTERFERENCE

Mr. RYAN. So, when you say that, can you be clear as to what you mean? Foreign actors trying to influence—

General LENGYEL. Absolutely. Where there were Russians playing on our networks or, as you widely read in the press, people trying to manipulate the narrative, political narratives here in the United States.

Mr. RYAN. So what exactly did they do? There is an issue that comes up. Here is the election. It is a polarizing issue in the country. What do they do?

General LENGYEL. Well, I believe that they—you know, we were discussing how perhaps they use social media and various bots and things to create a political narrative that may sway one way or the other an election campaign. I think that there were people that were concerned about manipulation of networks and vote totals and those kinds of things.

I think with respect to the National Guard and what were they doing, on election day, they were trying to monitor the security of networks in State.gov networks, not DOD networks, State.gov networks. And on election day and during election season, we had 27 States that had some cyber capacity, State capacity, State Active Duty monitoring the security of State.gov networks.

And, you know, I think we continue to learn how to do this better. We continue to learn how to stay connected with, you know, what may be a security issue with respect to our networks, which is not a DOD issue. Perhaps it is going to be a DHS issue or some other capacity, but we are involved in it.

#### SECURITY OF THE NETWORKS

Mr. RYAN. I am going to take some liberties because I am the chairman right now. This will not happen again for a long, long time, I think.

So these—and we are not in a classified setting either, so obviously you want to be careful. But these foreign countries are coming in here. They find a rift in our social media platforms and conversations that we are having. They actually create content, right? Like, if there is an issue that is polarizing and there is—one party is on one side and one is on the other side, they like the fact that there is this conflict within our country, and then they try to throw gasoline on it, right?

General LENGYEL. Yeah. I mean, that is possible. But, I mean, from how the National Guard played in this thing, they were strictly monitoring the security of the networks. They were not doing anything with respect to monitoring narratives or information.

Mr. RYAN. So what do we do if we find these bots that are kicking out content? What is our response to that? We shut them down?

General LENGYEL. You know, I think that there would be some other DHS Cyber Command, some other entity besides the National Guard would take an issue with that. I think an awareness—I think, you know, in general, the society's need to validate data before what you believe what you read on the internet or social media. It is a foundational issue that we need to deal with. But that has really nothing to do with the National Guard Cyber Enterprise.

#### READINESS

Mr. RYAN. That is why I bring it up because I think this is one of the fundamental issues in the country right now is that our adversaries are intentionally trying to keep us divided in the country. And it is not a political statement. It is a statement of security and

our ability to move forward as a country. So I wanted to just highlight that.

One last question before we move on. Readiness has obviously been a huge issue, going back to Iraq and Afghanistan and then sequestration. Can you just talk to us a little bit about your feelings on the Guard's readiness at this point and how your budget that you are submitting is trying to fill some of those gaps?

General LENGYEL. Yes, sir. I think—obviously, readiness is the number one priority, readiness and lethality for the National Defense Strategy. It is the Army's number one priority. It is the National Guard's number one priority.

I think that, from a readiness perspective, the National Guard is as ready, really, as it has ever been. We have a cycle, a disciplined training program that fits into a model that supports the utilization of the operational force. Because of that, we have—the Army has invested in us and given us more Combat Training Center rotations. We have four Combat Training Center rotations in this year's budget. They have slightly increased the number of flying hours for our Army aviation helicopter pilots. We have increased, you know, some sustainment programs inside the Air Force, to maintain and increase the readiness on the Air National Guard side as well.

We have continuously worked on our medical readiness. The Army National Guard readiness is at 89 percent. It is the highest component individual medical readiness inside the Army. So we have worked very, very hard to become a force that is accessible and ready and able to be mobilized quickly if the Nation needs us.

We do have issues that we continue to see that could enhance our readiness. The one program that remains at risk, I believe at a high level of risk for the Army National Guard, is the level of full-time support that we are manned at. We are manned at 64 percent of what the Army requirement says we need to maintain our readiness. It is the lowest readiness account. When you look at training and medical and sustainment, it is the only account, really, that we man at such a low sustainment rate.

So I would like to see over time us continue to work on improving, perhaps reducing the risk of our full-time support inside the Army National Guard, but overall, the readiness of the Reserve Component is good. We generally are at a lower level of readiness than the Active Component anyway on the air side. The same on—I mean, on the Army side. The same on the air side. I think it is a relatively good news story inside this budget for readiness. It maintained a high priority throughout the budget.

Mr. RYAN. Mr. Cuellar.

#### PERSONNEL QUOTAS

Mr. CUELLAR. Thank you, Mr. Chairman.

Thank you, General for what you all do.

I know there are some States that have not been able to meet any of their personnel quotas for the National Guard units. And then you have a State like Texas that has over 21,000 personnel. And I think, you know, if they are given the opportunity to grow with the additional manpower slots or associated funding, I think it would help the overall cost.

Are there any discussions? Is there any way we can help you on those discussions about the possibility of realignment of manpower slots from those States that can't achieve their quotas and move them to States like Texas that have the capacity? And I don't want to take anything away from anybody, but if they are not able to do it, then don't penalize a State like Texas that is willing to step up.

General LENGYEL. Well, yes, sir. We have a project ongoing right now inside, again, the Army National Guard to look across the Nation, where do we have units that are not able to recruit to full manning levels inside the Army National Guard. And as this ongoes, it will go on over the summer, we will look to reposture underrecruited force structure from a State that simply can't recruit to it anymore into other States—Texas is one who obviously has the ability to recruit over and above its current force structure. There are other States that can do that. But there is a project undergoing right now inside the Army National Guard to look at perhaps restationing structure that can't be recruited in other States.

[The information follows:]

*Question.* What is the current status of the ARNG force structure realignment project that will realign billets between States? What is the goal of the program? When will the program provide its recommendations?

*Answer:* States and Territories have until 1 April 2019 to provide force structure adjustments required to balance their personnel strength with their authorized force structure allowance. The goal of the program is to more efficiently distribute force structure across the 54 States and Territories in order to improve end-strength and unit readiness. States that have historically failed to meet end-strength requirements potentially reduce force structure, while States that have historically exceeded end-strength requirements potentially gain force structure. Final re-balance recommendations will be provided to Chief, National Guard Bureau by 1 June 2019. Approved re-stationing actions will be executed beginning in FY22 and completed NLT FY26.

#### COUNTERDRUG PROGRAMS

Mr. CUELLAR. I am sure Mr. Carter and I would be very interested in this. So, if you can keep us posted on this, we would appreciate it. Again, nothing to take away from any States, but if they are given the opportunity and they can't do it, then give them to States who are willing to do that. So I appreciate it if you can give us something in writing and just keep us posted on that.

The other thing is I know that the National Guard has been dealing with counterdrug programs for many years. I think more than 30 years. A GAO report, as you know, found out that the DOD strategy is out of date and doesn't reflect current drug threats. And, as you know, the bad guys have the money, have the resources to be constantly changing. And then, in 2014, the National Guard rescinded the guidance for States on how to operate and administer the program and hasn't replaced it yet unless if you all have done that since the GAO report. And then DOD has funded State counterdrug activities without first approving their plan.

So can you tell me how the National Guard and DOD are addressing these issues?

General LENGYEL. Yes, sir. I am aware of the GAO report that came out in January. It made five recommendations. You mentioned three, I think, three of them right there. We are in the process of putting out new guidance so that the current National

Guard's Chief National Guard Bureau instruction will be on the street here very quickly. I am also aware of the discussion of aligning the State plans and making sure that the State plans were submitted and approved before we disburse funding. We have already got mechanisms put in place to make sure that that happens.

The other two issues, the aligning the threat-based resource model or how we allocate the specific funding in accordance with the strategy, and the general officer group that decides and helps us craft the appropriate threat-based resource model is meeting next week to begin going over aligning the threat-based resource model with the National Counterdrug Strategy, to make sure that they are aligned. So I am aware of them. There are four things specific to me and the National Guard Bureau. We have addressed two of them so far and two more to go, and I am happy to update that to you soon.

#### STATE PARTNERSHIP PROGRAM

Mr. CUELLAR. And then just to finish one last thought, the State Partnership Program is a great program. I see where you are at. I know Texas is involved and, too, many other States, and I appreciate what they are doing. Why is Mexico not included? I mean, there is so much emphasis by the President and other folks on Mexico. Do you all need some help meeting some people down there?

General LENGYEL. No, sir. I think, you know, every nation—

Mr. CUELLAR. You know, they are working on their own National Guard.

General LENGYEL. I know. That is good.

Mr. CUELLAR. I want to be helpful. I know my time is up, but I would love to follow up, but if you need to meet some folks, I will be happy to introduce you and move the process. And I know there is a sensitivity between the U.S. and Mexico; I understand all that. But I would be happy to work with you to find a State that is willing to work with Mexico. I mean, there is so much emphasis. I mean, if we can't do something with our own next-door neighbor, I think we are missing something here.

General LENGYEL. Yes, sir. And, as you know, the nation that is going to be partnered has to request a partnership. And thus far, Mexico has not requested to be a partner. And this has happened before. There are some nations who believe sometimes that they don't want to partner with a State; they want to partner with a Nation. They are a full Nation; they want to partner with the United States, not any particular State.

That has changed over time. Brazil used to have the same thought. We just signed a partnership last week between Brazil and the State of New York. So I think that, you know, we would be obviously more than willing to supply a partner to the nation of Mexico if they desired one and the combatant commander supported it. I think it would be a great plan.

Mr. CUELLAR. I will work with you.

Thank you, Mr. Chairman.

Mr. VISCLOSKY [presiding]. Judge Carter.

## CHILDREN OF MILITARY PERSONNEL

Mr. CARTER. Thank you, Mr. Chairman.

Welcome. Thank you for being here. I am going to ask you a question that is kind of peculiar to my office right now. Right now, it is a national policy for all 50 States that Active Duty military personnel's children are flagged by the schools so that teachers, counselors, and administrators know that these are military children because military children generally can have special needs, with dad or mom being deployed and that type of thing.

The issue has been raised to me, which I agree with, that we are deploying the Guard and the Reserve at historic levels. And I think those children should be flagged also for special counseling needs and so forth. And it is just a matter really of put in the computer and flag them. But it brings that so if a child is acting out, they can see, hey, their dad or mom may be deployed, and they may need some help.

Do you agree that would be a good addition? Or if you don't, tell me why.

General LENGYEL. No, I think it would be a fine addition. Sir, I think that, you know, the National Guard, the business model usually means that people stay in the same community for many, many years. So they will go through an entire school system, and they won't move. But I think that identifying them as military members with parents who deploy and parents that may have stress, I think it would be a good thing.

## SOUTHWEST BORDER

Mr. CARTER. I think so too. Let's talk about the southern border, which we have quite an interest in in our State. According to this, 6,000 Defense Department personnel are down there, of which about 2,100 are National Guard troops, and they have assisted in 23,000 arrests and helped seize 35,000 pounds of illegal drugs.

Can you tell us about your deployments along the southwest border and highlight any successes you have and give us your opinion about long-term needs for National Guard troops on the border to assist DHS?

General LENGYEL. Sir, I can. I was on the southwest border this past weekend. I was actually in Arizona. I went to Nogales. And I have been to Texas on that southwest border as well. We have been on the southwest border this time—as you know, we have been on the border many other previous times. This time, we have been on there since April 10th of last year.

And we have been on a mission in direct support of the Department of Homeland Security to assist them with security on the border. We are not doing any law enforcement activities. We are not doing any detainee or immigration operations. We are doing simple tasks that allow Customs and Border Patrol and Customs and Border Protection officers to be more available to do the law enforcement and hands-on business of securing the border.

Without a doubt, the National Guard forces are making a big difference, enabling the Department of Homeland Security to help secure the border. They were effusive in their praise, and they are doing everything from helping keep vehicles working to helping



clear brush so that they can actually see and secure the border to aviation activity to monitoring security video cameras of issues on the border and calling out when technology has indicated that somebody has breached the border, such that a Customs and Border Patrol agent could be dispatched, if required, to go interdict and engage perhaps an immigrant going down there.

So I can tell you that, without a doubt, they relayed to me, the Customs and Border Patrol, that they are overwhelmed; that without having the National Guard forces on the border, at least now they don't see being able to secure the border to the degree that they need to without the assistance of the continued National Guard.

I don't know how much longer we are going to be down there, certainly through the end of this year. The current Operation Guardian Support that we do is ongoing. And we are starting to look at this mission as if it may be an enduring mission in terms of 2 or 3 years long.

So I believe that they are making a difference. They are helping secure the border for DHS and their responsibility. And everyone who is down there is a volunteer. They enjoy the mission, and they are getting a lot out of it. They want to be there, and I suspect that we will be there for some time.

Mr. CARTER. I suspect you will be too.

Thank you, Mr. Chairman.

Mr. VISCLOSKEY. Thank you very much.

Mrs. Kirkpatrick.

#### OPERATION GUARDIAN SUPPORT

Mrs. KIRKPATRICK. Thank you, General, for being here. I represent a southern Arizona district. Where were you in Arizona last week?

General LENGYEL. I was in Nogales.

Mrs. KIRKPATRICK. Oh, you were? Okay.

General LENGYEL. Yes, ma'am.

Mrs. KIRKPATRICK. So I have Tucson and then Cochise County, which is sort of southeast of there.

General LENGYEL. Yes.

Mrs. KIRKPATRICK. Well, great. I am glad you were there. It was a beautiful week in Arizona.

General LENGYEL. It was.

Mrs. KIRKPATRICK. You know, as of March 4th, there were 2,362 Guard personnel supporting Operation Guardian Support along the southwest border. I know that you are supporting DHS and border protection administrative tasks and aviation support. You are not doing any law enforcement missions.

But I understand that some Governors have started pulling support for the border mission. How do you effectively plan for Guard personnel to execute the mission if the Governors do not approve their deployment?

General LENGYEL. Well, there are multiple ways you can use the National Guard. One way is under title 32, which is under—federally funded but State control, which is how we are doing it right now. And there are 21 States currently providing support to the now two border States: Texas and Arizona.

New Mexico's Governor has decided to limit Guard support. There are still a few on the border, but they are winding down. California is also, their numbers are—they were at 350, and they are on their way down to a much smaller number and have said they don't want any other States there. So, when you are using the Guard in a title 32 status, the accepting State must approve the Guard to come in. So that is one way we are doing it.

Should the Nation, the Department of Defense, want to use the Guard in a title 10 mobilized status, they certainly could do that, and then they would use them like any other part of the force. I know of no intent to do that at this particular point.

And as I was there this past weekend in Texas and in Arizona this weekend, I believe that it is time to bring the providing States together and say, how can we best do this? Arizona eventually will get tired. Their folks have other ongoing global deployments and other jobs and schools and such that they may need additional assistance. But so far, I believe that the current level of support that we are providing is sustainable for the long term in both Texas and Arizona, as is National Guard title 32 support.

Mrs. KIRKPATRICK. And I just want to say how much we appreciate your work in Arizona and welcome that. And if my office can be of any assistance, please don't hesitate to call on me.

General LENGYEL. Yes, ma'am.

Mrs. KIRKPATRICK. Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Aderholt.

#### F-35S

Mr. ADERHOLT. Thank you. Thanks, Mr. Chairman.

I want to just ask about the F-35s and about the delivery to the National Guard units in Montgomery, Alabama, and just want to ask about, is that still on track for 2023, and also all the MILCON needs included in that as well?

General LENGYEL. Yes, sir, it is still on track. Congratulations to Alabama. I am sure they are very pleased with the acceptance of the F-35s there. And, to my knowledge, they should all be on track to accept those in about the 2023 timeframe. I know of no issues with respect to MILCON, environmental issues that would inhibit that.

#### ENVIRONMENTAL IMPACT STUDY

Mr. ADERHOLT. What about, what is being done to ensure that the environmental impact study is completed in a timely fashion?

General LENGYEL. You know what I would like to do? I am not aware of any issues with the environmental impact study, but I will check on that and report back to you as soon as I find out.

#### GRAY EAGLE CAPACITY

Mr. ADERHOLT. Okay. And it is my understanding that the Army originally planned to have Gray Eagle companies in all the eight Reserve Component divisions, but my understanding, no aircraft has been assigned to the Army National Guard. Are there plans to establish a National Guard in MQ-1C capacity—capability, rather?

General LENGYEL. So, sir, I think that, again, I would like to get back with you on that particular question. I am not aware of any issues or the Army considering establishing additional Gray Eagle capacity in the Army National Guard although if we could recruit to it and have it, we would—obviously, Alabama is a large National Guard State. You know, I think I would like to look at that and also get back to you and give you specifics about the Gray Eagle.

Mr. ADERHOLT. Okay. All right. Thank you.

[The information follows:]

*Question.* Are there plans to establish a National Guard MQ1C capability?

*Answer:* The Army National Guard has no plan to establish MQ-1C within its existing force structure. Headquarters Army has not validated a requirement to implement MQ-1C structure into the Army National Guard.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Kilmer.

#### CYBER MISSION ASSURANCE TEAM PILOT PROGRAM

Mr. KILMER. Thanks, Mr. Chair.

And thanks, General, for being with us. I had the opportunity to sit down with some of the folks from the Guard in the State of Washington just last week and got an update on the Cyber Mission Assurance Team pilot program, which is a mouthful.

But one of the things I came away with was the notion that States definitely need reinforcements when it comes to addressing some of these cybersecurity issues. If there is an attack on critical infrastructure, that can very well be a national security issue. If there are attacks on our election security, that is an issue of national security as well. And having that cost and that risk basically be borne by just the States on their own I think would be very challenging. And I appreciate that the Guard, through this pilot program, seems to be appreciating that reality.

I was hoping you could just give a little bit of—tell us a little bit about the program, if you have any insights into its progress, what we have learned from it so far.

General LENGYEL. So, yes, sir. Thanks for the question. I think, you know, the cyber domain, we are under attack every single day. And what we have come to realize is many of our Federal installations are relying heavily on non-Federal utilities and power plants and other things on the grid that enable it to continue to do its work. So the Cyber Mission Assurance Teams are designed to help make sure that, you know, the critical infrastructure that is really not related to the installation could be made to be mission assurance, such that the mission of the Federal installations could still be executed.

We picked three States for the initial test, and these States, Washington State being one, Ohio being one, Hawaii being the third. It is early in the program. The program is designed to—it was designed to be about a 2-year test, so it won't end until 2020. About the springtime of 2020, we will be able to assess what kind of impact they are able to have. But in the pilot program, we allowed each State to kind of come in with their own concept of operations on how they best would do this. We didn't want to define for them how it is. They will use commercial off-the-shelf software to maintain and check utilities and secure other critical infrastruc-

ture that could impact the operations of the installations. And then we will make an assessment: Is this something that we should invest in more broadly across the Nation?

So I am hopeful. I am hopeful that, particularly a State like Washington that is on the high end side of cyber capability with lots and lots of civilian expertise that can help us identify these risks, I am hopeful that these will be seen as value-added.

Mr. KILMER. Is your gut right now—and I know that Mr. Ryan touched on this issue too. Is the gut right now to it sounds like at least to extend it an additional year, the pilot, and then potentially to stand up a program in this regard or—

General LENGYEL. Well, right now, the test goes until 2020. And so, you know, we haven't had to come to a decision yet where we would extend it, by any means. But we will see what it says, and we will show to this committee and to others here is what these teams were able to do, here is what they are able to find. We will see if there is value in that, and if there is value—they are relatively small teams, about 10 people. And only three of them, people on that team, are full time. So it is not—a big footprint, in terms of manpower. But, you know, we will see what they provide, and then we will make a recommendation as to whether this is something that we want to go nationwide.

Mr. KILMER. I was really compelled by it, for what it is worth. I mean, these were men and women who, you know, spend their day at Microsoft and Amazon and core tech companies and then take that knowledge with them to try to protect our national security from within the cyber domain in particular.

General LENGYEL. Yes, sir.

Mr. KILMER. I found it very compelling.

I want to respect the time, so I am happy to yield back.

Mr. VISCLOSKY. Mr. Aguilar, you have been a very active member this morning.

#### CYBER SECURITY

Mr. AGUILAR. Thank you, Mr. Chairman.

Thank you, General. If I could fill in a little bit, I am not from the distinguished State of Washington, but if I could piggyback on my colleague's question, how long does it take to stand up personnel in the cyber domain, would be my first question? And do your units receive sufficient training for military cyber schools, and to what extent do we use civilian organizations to help provide that training?

General LENGYEL. So, you know, our cyber capacity and the units inside the National Guard are reaching some level now after 6 years of really building them hard of some level of maturity. So we have 11 cyber protection teams in the Army Guard. We have 12 cyber protection teams in the Air Guard. We have additional cyber units that do cyber intelligence, and those kinds of things that are growing, and now they are maturing.

This emergence of this Cyber Mission Assurance Team, as we were just discussing, is a new part of it. But, you know, it takes a while, and it is quite technical. And to be a cyber warrior, there is a rigorous joint school process that you have to go through. It is still a challenge for us to find school seats and to get the right

people that can go and do those kinds of things. And that is why we tend to want to stay in big States with big cyber industry presence. We have experts that are good at this and can get through the school systems and the training slots to do it.

You know, I think that, as far as using civilian training activities, I am not aware of any case where we are doing that. We are going to military schools and trying to find cases where we can give people with civilian-acquired skill sets credit for having been trained in cyber techniques before, but they still have a pretty rigorous joint training process that they have to go through, which is in the military.

#### RETENTION OF SKILLED PERSONNEL

Mr. AGUILAR. Should we use more incentives to get the right folks in these hard-to-fill positions?

General LENGYEL. Well, I think in any of these skill sets—cyber being one, space will soon be another—that have a high dollar draw for these skill sets in the civilian world, we are going to need incentives and bonuses to retain them to do a military job in the National Guard, which I think we do and will continue to do.

Mr. AGUILAR. Thank you, General.

Thank you, Mr. Chairman.

#### CONTAMINATION AT VARIOUS FACILITIES

Mr. VISCLOSKY. Thank you very much.

General, I would like to touch upon two areas. The first deals with contamination at various facilities. And if I could just refer to the two chemicals and the problem as PFOs to simplify this conversation, I would appreciate your indulgence.

It is my understanding that it is the responsibility of EPA to set a maximum contamination level for these chemicals. Am I correct on that?

General LENGYEL. Sir, I believe that is correct. It is EPA's responsibility to do that.

Mr. VISCLOSKY. I also understand and am disappointed—and this isn't directed at you personally—that the Department of Defense writ large is privately pushing EPA to adopt a weaker standard. And when we are talking about the toxicity of water for lifetime health advisory for human drinking water, I think that is inappropriate, and I think it is wrong. I don't think we should shirk our responsibility, whether it is DOD or any civilian agency, from cleaning up our mess.

I also, because we have had this conversation in different permutations over the last couple years, am disappointed by what appears to be a lack of seriousness and speed and deliberateness about the negotiations to determine liability at the sites that are located with civilian airports.

I live in Gary, Indiana. I have spent my life and continue trying to clean up Superfund sites, brownfield sites, and everything in between. So I do not diminish the difficulty of this problem, which is why I am emphasizing it. Because it is my understanding if a standard is ultimately set to end up at a cleanup, we are talking about preliminary assessment and inspections up to 3 years, then a remedial investigation feasibility study up to 4 years, then a pro-

posed plan for another year. Then we need an agreement on record for a decision for a year. Then we need design and construction for up to 3 years, and then we can start.

And we are talking about human health. So my first concern is the issue of we ought to have appropriate standards, and whether or not DOD is pushing to have a lower standard so maybe the difficulty and expense is not so great. And as far as negotiations, I also realize, because many of these are shared facilities, and each would be unique as to who shares what portion of the responsibility.

And, again, I am not diminishing any of this. But with all of the steps that need to take place, I am wondering how we are doing. And I am looking at the budget for the last couple of years, and it is my impression that in fiscal year 2018 we had \$20.6 million set aside. In fiscal year 2019, we had \$12.7 million set aside. The request by the administration for \$24.5 million.

So my sense is if there is also a fiscal indication as to the importance the administration attaches to it, it has gone down to zero. So, generally, I would like to have your impression, and what can be done about this? I think it is a very serious problem.

General LENGYEL. Yes, sir. Chairman, honestly, I am not aware of any attempt by the DOD to lower the standards or deal with the EPA to change the numbers. I am not aware of that. I am very aware of the issue, PFOS, PFOA. I am very aware that widely it is going to be indicated at some level in many installations across the Nation, not just Air but Army National Guard, from my perspective.

Broadly speaking, clearly, we have to do the right thing by the communities we live in. We have to protect the water systems. We have to make sure that we analyze it, we find it, we determine how it got there. The speed in which all of that happens, the assessment to the investigations to ultimate ending with some sort of remediation does take time. And I don't know how to make that happen faster, other than I can tell you that, from my concern in the National Guard, I am very concerned that the funds required to investigate it, the funds required to remediate it currently, for the most part, are not available to us like the rest of DOD. We are not able to access the Defense Environmental Restoration Account to fix these issues when we do find the problems.

So my concern is, as you are aware, the Office of General Counsel has opined that the National Guard and State facilities are not authorized to use that account. We have to use training dollars from our O&M accounts to investigate these things and to provide any remediation. Over time, I would like to consider that we change that back.

#### ENVIRONMENTAL CLEAN-UP

Mr. CALVERT. Would the gentleman yield on this for a second? I used to, back in my prior chairmanship, have EPA under my jurisdiction. So I am somewhat familiar with this problem in all the military bases around the country, especially this PFOS issue and the cleanup issue. But it is mostly the EPA's fault because of their slow bureaucracy that they move at. But there are new technologies that can totally clean up these sites, and EPA refuses, and

the military establishment. They go through these old pump and treat operations, which seems like it never ends. And these new enzymal technologies that they have completely cleans up these sites, the brownfield sites, Superfund sites, and gets them back in the economy.

So I hope we can take a look at that and encourage the military, EPA, and others to start looking at these new technologies to actually clean the sites up entirely and get them back into the economy, which would help especially these poor areas.

Mr. VISCLOSKY. General, if I could go back to your comment, for fiscal year 2019, there is \$12.7 million set aside in an account. So what happens to that \$12.7 million if the Guard can't use it? Is anybody using it for anything?

[The information follows:]

*Question.* Will the NGB execute the full \$12.7M of O&M environmental restoration funds from FY19 appropriation's bill. If not, where will the funds be re-appropriated to?

*Answer.* The ANG was appropriated \$11M in ANG O&M for ANG restoration in FY 19 and will execute the full amount. We are unsure of the quoted \$12.7M of O&M environmental restoration funds.

General LENGYEL. Sir, I would imagine we would be able to use it, you know, to do the investigations or clean it up. If that money was allocated to us I think maybe to repay some states who had already spent dollars to clean up sites—they had found it and needed some remediation. They were actually able to come back to us and get some money to pay them back. I believe that is what that \$12.7 million is supposed to pay for.

Mr. VISCLOSKY. Do you know—and I mentioned the steps in the process and the first one is assessment—whether or not the Guard—and, again, I understand the uniqueness of each one of these sites, I agree with Mr. Calvert. Have they all been assessed?

General LENGYEL. Not all of them, no. They are in the process of being assessed now.

Mr. VISCLOSKY. Could you provide the subcommittee with a list—

General LENGYEL. Yes, sir.

[The information follows:]

*Question.* Provide a list of all 77 bases that have undergone PFOS preliminary assessment and their status in the CERCLA process.

*Answer.* All PFOS/PFOA Preliminary Assessments for ANG are completed. The ANG site inspections for PFOS/PFOA are currently in various stages of completion and the current status is as follows:

Installation	State	SI Report Final
Alpena CRTC .....	MI .....	Yes
Atlantic City .....	NJ .....	No
Bangor International Airport .....	ME .....	Yes
Barnes Municipal .....	MA .....	Yes
Birmingham International Airport .....	AL .....	Yes
Boise IAP .....	ID .....	Yes
Bradley IAP .....	CT .....	Yes
Burlington ANGB .....	VT .....	Yes
Capital Municipal (Springfield) .....	IL .....	Yes
Channel Islands .....	CA .....	Yes
Charlotte Douglas International Airport .....	NC .....	No
Cheyenne Municipal Airport .....	WY .....	Yes
Des Moines International .....	IA .....	Yes
Duluth IAP .....	MN .....	No

Installation	State	SI Report Final
Ellington Field (Houston)	TX	Yes
Forbes Field	KS	No
Fort Smith	AR	Yes
Fort Wayne IAP	IN	Yes
Francis Gabreski	NY	Yes
Fresno Yosemite IAP	CA	No
General Mitchell	WI	No
Great Falls International	MT	Yes
Greater Peoria	IL	Yes
Gulfport Biloxi Regional Airport	MS	Yes
Harrisburg IAP	PA	Yes
Hector Field IAP	ND	Yes
Horsham	PA	Yes
Jackson International Airport	MS	Yes
Jacksonville IAP	FL	Yes
JB Cape Cod	MA	Yes
Joe Foss Field (Sioux Falls)	SD	Yes
Joint Base Fort Worth	TX	No
Key Field	MS	Yes
Klamath Falls (Kingsley Field)	OR	Yes
Lambert St. Louis IAP	MO	Yes
Lincoln Municipal Airport	NE	No
Louisville IAP—Standiford Field	KY	No
Mansfield International Airport	OH	No
Martin State	MD	Yes
Martinsburg (EWVRA Shepherd Field)	WV	Yes
McEntire Joint National Guard Base	SC	No
McGhee-Tyson Airport	TN	Yes
McLaughlin (Yeager Charleston)	WV	Yes
Memphis International Airport	TN	Yes
Minneapolis-St. Paul	MN	No
Moffett Field	CA	No
Montgomery Regional (Dannelly Field)	AL	No
NAS New Orleans	LA	No
Nashville Metro Airport	TN	Yes
New Castle	DE	Yes
Pittsburgh IAP	PA	Yes
Pease AFB	NH	Yes
Portland IAP	OR	Yes
Puerto Rico—Muniz IAP	PR	No
Quonset State Airport	RI	Yes
Reno Tahoe IAP	NV	Yes
Richmond IAP Byrd Field	VA	No
Rickenbacker AGB	OH	No
Rosecrans Memorial Airport	MO	Yes
Salt Lake City	UT	No
Savannah Hilton Head IAP	GA	Yes
Schenectady Airport	NY	No
Selfridge ANGB	MI	Yes
Sioux Gateway Municipal Airport (Sioux City)	IA	Yes
Sky Harbor International (Phoenix)	AZ	No
Springfield-Beckley Municipal Airport	OH	No
Stanly County/Badin AGS	NC	No
Stewart International Airport	NY	Yes
Syracuse Hancock IAP	NY	Yes
Terre Haute IAP—Hulman Field	IN	Yes
Toledo Express Airport	OH	Yes
Truax Field	WI	No
Tucson International	AZ	No
Tulsa IAP	OK	Yes
Volk Field ANGB	WI	Yes
Will Rogers IAP	OK	Yes
WK Kellogg Airport (Battle Creek)	MI	Yes



Mr. VISCLOSKY [continuing]. Please. And as to whether at least the assessments have been completed; if not, what the status of each one of those sites is. I would appreciate that.

General LENGYEL. Yes, Mr. Chairman.

Mr. VISCLOSKY. I would ask also, kind of following up with Mr. Calvert, we don't have jurisdiction over EPA, but obviously, it is within the jurisdiction of the full committee. If you could also provide for the record the person responsible at the Department of Defense for these negotiations with EPA to have a standard set, so that we could have the responsible person in the same room with the responsible person at EPA and have a reasonable meeting.

[The information follows:]

*Question.* Who in the DoD is responsible for discussing PFOS/PFOA related issues with the EPA?

*Answer.* The ANG does not discuss PFOS/PFOA related issues with the EPA unless they are directly related to ANG-specific restoration activities. The ANG recommends that any questions regarding DoD liabilities or responsibilities should be addressed to Deputy Assistant Secretary of Defense For Environment in the Office of the Assistant Secretary of Defense (Sustainment) and the Secretary of Defense Associate General Counsel (Environment & Installations).

The second area I want to cover is your operation of maintenance facilities for the Facilities Sustainment, Restoration, and Maintenance Account, there is an increase of \$219 million, and for the base operation support an increase of \$63 million, both increases for fiscal year 2020. The usual activity would be for the base operations support to be doing the engineering activity and for it to be executed. With the additional moneys, do you have the necessary engineering personnel to perform those responsibilities?

General LENGYEL. Well, sir, yes, I would say we normally do. But I am going to go look. I will look at this money and see the specific projects that you are talking about and make sure that we have the engineering capacity to look at it. But I would think we do.

[The information follows:]

*Question.* Do you have enough engineering personnel to perform their assessments prior to the execution of the additional SRM funds? If not, will you need to contract services? Will this add to the cost?

*Answer.* Yes, the majority of States have in-house capability to address the needed assessments. Some States will contract their assessments. This will not add to the cost because the contracted assessment is included in the project cost estimate.

Mr. VISCLOSKY. Okay. And would it be the anticipation, because of the \$219 million increase, that given that engineering designed during fiscal year 2020, that there would be time remaining in the fiscal year to obligate those additional funds for the Facilities Sustainment, Restoration Account?

General LENGYEL. Chairman, I will have to get back to you on that. I will have to provide that for the record.

Mr. VISCLOSKY. Okay.

[The information follows:]

*Question.* Will you have enough time to execute the FSRM funds in FY20 or should FY20 handle the assessments with follow on funds in FY21 for the actual maintenance and repairs that must be executed?

*Answer.* Yes, depending on time of receipt of funds (e.g., end of 3QFY20), ARNG could execute up to an additional \$700M in Sustainment (repair), Restoration, and Modernization within FY20. Any further funding in SRM would be better executed in FY21.

I yield to Mr. Calvert.

## SPACE FORCE

Mr. CALVERT. One comment, Mr. Chairman.

As we move forward with this new Space Force that the administration obviously is promoting, I would like if we can stay informed about what the Guard is going to be doing as we move forward on this proposal, what role do you think the Guard is going to be involved in. There are a lot of rumors going around about where things are going, how things are being plugged in. This committee needs to be informed of that because there are dollars attached to that. These various commands, you know, will this be a combatant command, how we are going to work this out.

So any information that affects that, we would appreciate having.

General LENGYEL. Yes, sir. I will be happy to pass that to you. I have been an advocate and made the recommendation that should they decide to create a Space Force, that the capabilities that are in the Air National Guard and Army National Guard become part of that Space Force as a Space National Guard, but that is yet to be determined. Those are details to be worked out should this Congress decide they want to create a Space Force.

## LIABILITY AT EACH SITE

Mr. VISCLOSKY. General, I am over my brain lock now. The second question I had to follow up is for the negotiations on liability at each site.

General LENGYEL. Sir.

Mr. VISCLOSKY. For the liability at each site.

General LENGYEL. Yes, sir.

Mr. VISCLOSKY. Is there a separate individual doing those negotiations, or is there an office with a director in DOD that is supervising all those negotiations at these sites as to how are we going to apportion responsibility? Because, again, I would understand we shouldn't pay for something that is not a Federal responsibility.

On the other hand—again, I hate to beat my district to death—we take 7 years looking for a shell corporation that went bankrupt and is now offshore to help pay for something. Seven years later, we haven't done a thing. So that negotiations on responsibility are important too.

Is there an office at DOD that is supervising all of these, or is this a base-by-base issue?

General LENGYEL. No, sir. I am sure there is a process that determines each individual site that, as we analyze them at each particular one, there would be a method—and I can't tell you what that office is—to negotiate, investigate, litigate, to determine what the appropriate percentage of liability were to be for the Department of Defense or Federal liability and State liability. But I can't tell you exactly who that is.

Mr. VISCLOSKY. If you could for the record, that would be terrific.

General LENGYEL. I will put that also in my report.

[The information follows:]

*Question.* How is the proportion of responsibility/liability determined between the state, federal government, and local entities where PFOS is found? Who at the DOD negotiates responsibility?

Answer. The issue of how liability is assessed is actually a complicated one. The CERCLA process is as follows: 1) Preliminary Assessment/Site Inspection; 2) Remedial Investigation/Feasibility Study; 3) Proposed Plan/Record of Decision; and 4) Remediation. ANG remediation process starts with releases that took place on DoD property. The DoD (OSD, Air Force and National Guard Bureau) follow releases off of the installation until we know the extent of the contamination and then remediate. The short answer is that DoD (OSD, Air Force and National Guard Bureau) may apportion percentages anywhere within this process. But here are some basic guidelines:

Step 1. Preliminary Assessment/Site Inspections are accomplished primarily on-base and DoD (OSD, Air Force and National Guard Bureau) will take responsibility unless there is reason to believe that what we are seeing on-base is coming from an off-base site. If we deem the contamination not to be a DoD release, we then stop the CERCLA cleanup process, assuming there is not imminent threat to human health and the environment, and will turn over our results to the state regulator or EPA to take action against the polluter. If we believe that the contamination is mixed, i.e. some of it is ours and some of it belongs to a third-party, we will then continue through the CERCLA phases and complete the Remedial Investigation. We then go on to Step 3 or 4 below.

Step 2. If contamination flows off-site and co-mingles with contamination from a third-party DoD (OSD, Air Force and National Guard Bureau) will either seek help to complete the Remedial Investigation and go to Step 3 below, or complete the Remedial Investigation or Remedial Investigation/Feasibility Study and then go to Step 3 or 4 below.

Step 3. If during the Remedial Investigation or after the Remedial Investigation it is apparent that there is mixed contamination, DoD (OSD, Air Force and National Guard Bureau) will approach the state regulator, EPA, or the Department of Justice. The state regulator, the EPA, or DOJ may seek to set up a potentially responsible party committee to remediate a site and the parties will negotiate percentages. The DOJ also has the option of going to court to seek immediate apportionment. It is not uncommon for the parties to get to the Proposed Plan/Record of Decision point and then have to go to court to have the court decide apportionment. DoD (OSD, Air Force and National Guard Bureau) may also turn over the remediation process (during the Remedial Investigation or after) and allow the regulator to take over and simply fund whatever our apportioned share is determined to be.

Step 4. DoD (OSD, Air Force and National Guard Bureau) also has the option of simply finishing up with the CERCLA process through remediation and then turning to the DOJ for DOJ to obtain reimbursement. This is normally done when the majority of the contamination is from DoD activities or there is a potential threat to human health and DoD will continue with the restoration process so as to not slow down the restoration process.

Mr. VISCLOSKEY. We have a second panel, but if there is a quick question from any of the members?

Mr. RYAN. Mr. Chairman, I would just like to add my support to the discussion you were just having that Mr. Calvert jumped into, that I think in northern Ohio, southeast Ohio, southwest, I mean, the industrial Midwest we have been dealing with this. You just want to bang your head against the wall because these communities continue to fall further and further behind.

So, if we can find some kind of leadership within Defense, which obviously the history of the military has always been on the cutting-edge of solving some really big problems for us, I just want to publicly say I am all into that.

General LENGYEL. Yes, sir.

Mr. VISCLOSKEY. General, thank you very much for your service and your time today.

General LENGYEL. Thank you, Chairman. Thank you, members of the committee. Thank you.

TUESDAY, MARCH 26, 2019.

**FISCAL YEAR 2020 RESERVE COMPONENTS****WITNESSES****LIEUTENANT GENERAL CHARLES LUCKEY, CHIEF OF THE ARMY RESERVE****VICE ADMIRAL LUKE MCCOLLUM, CHIEF OF THE NAVY RESERVE****MAJOR GENERAL BRADLEY S. JAMES, COMMANDER, MARINE FORCES RESERVE****LIEUTENANT GENERAL RICHARD W. SCOBEE, CHIEF OF THE AIR FORCE RESERVE****OPENING STATEMENT OF CHAIRMAN VISCLOSKY**

Mr. VISCLOSKY. I would like to welcome panel two, the Army, Navy, Marine Corps and Air Force Reserves. I would encourage members to continue to participate.

I want to welcome Lieutenant General Charles Luckey, Chief of the Army Reserve; Vice Admiral Luke McCollum, Chief of the Navy Reserve; Major General Bradley James, Commander Marine Corps Reserve; and Lieutenant General Richard Scobee, Chief of the Air Force Reserve.

Gentlemen, we are pleased to have you before us today as witnesses. We thank you for your service and your testimony today. Please proceed with your testimony. Your full written testimony will be placed in the record. Given the size of the panel, brevity would be appreciated. Obviously, in your answers, completeness would be appreciated along with, again, succinctness. I would leave it to you to begin. Thank you very much.

General LUCKEY. Chairman, Ranking Member, it is great to be back here.

Mr. VISCLOSKY. Excuse me, I did not recognize Mr. Calvert.

**REMARKS OF MR. CALVERT**

Mr. CALVERT. Mr. Chairman, in the interest of time, I just want to thank the chairman for having this hearing, and for all of you, I look forward to your testimony.

And, with that, without wasting any additional time.

**SUMMARY STATEMENT OF GENERAL LUCKEY**

General LUCKEY. Chairman, again, and Ranking Member, it is great to be back in front of you this afternoon on behalf of the 200-some-odd thousand soldiers in America's Army Reserve, their families, and the employers across the Nation and across 20 time zones that support this force. I appreciate you. I appreciate your interest, and I appreciate all your support for our soldiers, their families, and the employers that are supporting all of us.

In preparing to meet the challenges of new and evolving threats around the world, the Army Reserve continues to train and organize and posture itself to identify early-deploying formations, aggregate additional capabilities and move quickly to accomplish post-mobilization training tasks in order to meet the warfighter's time-sensitive requirements. This construct, Ready Force X, remains, as you know, the way in which we focus energy, optimize

our processes, and prioritize our resources to deliver capabilities at the speed of relevance for a major war.

Early-deploying RFX capabilities need to be able to move quickly, in some cases in days or weeks, in order to support the Joint Force in any significant conflict or demonstration of national resolve. We do not call this fighting tonight. I do call it fighting fast. Readiness is what we are building. We continue to do it. We have expanded upon the RFX construct, and we are more ready than ever.

While we fully acknowledge that our first responsibility is to bring our unique capabilities to the fight as part of the total Army in winning the Nation's wars, we also embrace our opportunity and our mandate to respond at no notice to disasters in the homeland to take care of our fellow citizens at their time of greatest need. Our soldiers and facilities and capabilities postured in thousands of communities across the Nation stand ready to deploy at very short notice pursuant to immediate response authority, as needed by our fellow citizens.

Our key responsive capabilities include search-and-rescue units, aviation assets, route clearance engineers, medical units, water supply and water purification operations. And we have provided assistance, as you well know, during many major events, including Hurricanes Harvey, Irma, Maria, Florence, and a variety of other disasters, to include work we did just last week in Nebraska in response to flooding.

For the past 2 years, America's Army Reserve has been on the path to seize digital key terrain. As many of you know well, this journey presses the Army Reserve's Innovation Command, headquartered in Houston, Texas, and now in direct support of Army Futures Command, to assess and develop emerging outpost and technology hubs across the country.

The command serves as a link for operational innovation and development of concepts and capabilities to enhance the readiness of future force by capitalizing on extensive civilian acquired or retained skills, knowledge and experience. We are uniquely positioned as your Federal force to provide the Army with an array and staying on pace with rapidly emerging trends and opportunities in the private sector. We are also providing the potential pool of on-demand talent for the Army's Futures Command.

As it pertains to cyberspace operations, we remain steadily on glide path to establishing the 10 Cyber Protection Teams, which I know is of some concern to the committee here this morning, at locations around the country such as San Antonio, Boston, Pittsburgh, and the Bay area in California. Army Reserve cyber soldiers bring unique skills and experience to the force from their civilian occupations, drawn from over 40 corporations, financial institutions, and Academic Centers of Excellence, and will provide direct support to Army Cyber Command and other governmental agencies.

We remain grateful to Congress for passing the fiscal year 2019 Defense Appropriation bill and for ensuring consistent and predictable funding, which will build Army Reserve readiness and support into the future.

Finally, we have been able to leverage the congressionally provided National Guard and Reserve Equipment Account, NGREA, to

purchase key systems, both from the modernization perspective and from the dual-purpose perspective, including the Joint Light Tactical Vehicle in a very small quantity, weapons fire assimilators, wet gap crossing equipment, and a wide variety of dual-purpose capabilities that can be used either to support the warfighter or our fellow citizens in time of response to a disaster.

As I previously testified, there is an inherent challenge in a part-time force. This team needs to be ready enough to be relevant but not so ready that our soldiers cannot maintain good meaningful civilian employment and healthy sustaining family lives.

This nimble and efficient part-time force would not be possible without our civilian employers around the globe and our families. They are essential partners in national security, sharing the best talent of the world with us. And they continue the commitment and sacrifice which allows our soldiers to serve the Nation while maintaining rewarding civil employment and sustaining family lives. We have a deep appreciation for employers who share their workplace talent with America's Army Reserve.

I appreciate again your sustained support. I appreciate your interest in the readiness of the force, and I also appreciate what I know all of you share with me, which is your concern about balancing readiness of our soldiers with their ability to maintain their civilian employment and sustain the support of their employers and also of their families. I appreciate this committee, and I appreciate your support. I look forward to your questions.

[The written statement of General Luckey follows:]

The 2019 Posture of the United States Army Reserve,  
America's Global Operational Reserve Force

Submitted by

LIEUTENANT GENERAL CHARLES D. LUCKEY

33d Chief of Army Reserve and

8th Commanding General, U.S. Army Reserve Command

March 22, 2019

**NOT FOR PUBLICATION UNTIL RELEASED BY THE  
HOUSE APPROPRIATIONS COMMITTEE**

Title 10 USC specifies the Chief of Army Reserve shall submit to the Secretary of Defense, through the Secretary of the Army, an annual report on the state of the Army Reserve and the ability of the Army Reserve to meet its missions.

The report shall be prepared in conjunction with the Chief of Staff of the Army and may be submitted in classified and unclassified versions.

**AMERICA'S ARMY RESERVE: Leadership. Energy. Execution.**

The increasingly complex and volatile global security environment, the changing character of warfare, and the rapid advance of technology continue to demand increased readiness and capability to deter and, if necessary, defeat aggression. As the dedicated federal reserve of the Army, Army Reserve — its units-of-action and individual Soldiers — must be ready to mobilize, deploy, fight and win as an integrated part of the Army team anywhere in the world. More to the point, it must do so quickly.

Over a long history of wars and contingency operations, as well as domestic emergencies, the Soldiers of America's Army Reserve have never failed to answer the Nation's call. Today, we continue to build and sustain the most capable, combat-ready and lethal Federal Reserve force in the history of the Nation. It is a large undertaking. As a community-based force with a presence in all 50 states, five U.S. territories and 30 countries, America's Army Reserve spans the globe with over 200,000 Soldiers and Civilian employees and 2,000+ units in twenty different time zones. It comprises nearly 20 percent of the Army's organized units and over a quarter of its mobilization base-expansion capacity. As a unique set of enabling formations, the Army Reserve provides a large percentage of the Army's maneuver support and sustainment capabilities, including medical, fuel distribution, civil affairs, logistics, and transportation units. Put simply, America's Army Reserve supports U.S. national security interests by providing key and essential capabilities that the Total Army and the Joint Force need to dominate on the battlefield the opening days of conflict. Nested within the Army's priorities of Readiness, Modernization and Reform, our supporting lines-of-effort are to:

- Build and sustain an increasingly capable, combat-ready and lethal force ready to deploy, fight and win.



- Continue to garner and maintain the support of our Soldiers' employers and Families as they balance their lives.
- Anticipate change as we shape and scope the future force, and leverage our unique and pervasive connections with the Nation's private sector.

The challenges of building and fielding such an array of ready and lethal capabilities from the ranks of a largely part-time team is no small task, but the diversity and efficiency of the force is also its strength. Leveraging a dispersed and dynamic phalanx of Soldiers and leaders with civilian-acquired or retained skills from over 140 different career fields, America's Army Reserve brings the brains and brawn of the Nation to bear for the Army and the Joint Warfighter as needed.

This effort requires a balance of pragmatism, operational drive and focus, and a strategic perspective on the tough business of driving deep and abiding cultural change. Shifting our orientation from predictable, rotational and episodic readiness and employment, to large-scale and short-notice combat operations against a peer or near-peer threat demands a dramatic change in our mindset and perspective. At its core, only inspired leadership at echelon — combined with boundless energy and a pervasive commitment to embrace and deliver the warrior ethos within the context of existential warfare — will harden this team's resolve and hone the decisive edge. This is the work that we are about.

## **BUILDING THE MOST CAPABLE, COMBAT-READY AND LETHAL FEDERAL RESERVE FORCE IN THE HISTORY OF THE NATION**

In preparing to meet the challenges of this new and evolving threat paradigm, your Army Reserve is training, organizing and posturing itself to be able to respond on short notice to identify early-deploying formations, aggregate additional capabilities and move quickly to accomplish

post-mobilization training tasks in order to meet the Warfighter's time-sensitive requirements. This construct, Ready Force X (RFX), is the *way* in which we focus energy, optimize processes and prioritize resourcing to deliver capabilities at the speed of relevance for a major war. Early-deploying RFX units and capabilities need to be able to move quickly – in some cases in days or weeks – in order to support the Joint Force in any significant conflict or demonstration of national resolve. We do not call this “fight tonight” readiness; we call it “fight fast” capability. From a cultural perspective, RFX requires that each Soldier, at the individual level, embrace the ethos of personal readiness. While many of aspects of collective readiness at the unit level can be tuned-up quickly upon mobilization, the key individual Soldier requirements of physical fitness, medical readiness, tactical discipline, professional education, and fieldcraft proficiency must be “baked in” to the entire force. Put simply, at a profound level, we are *all* in RFX.

As noted above, this focus on fighting fast, and in opposition to a peer adversary, is a stark and challenging departure from the progressive and rotational (or cyclic) readiness models that have evolved over the past 18 years of sustained operations, primarily in the CENTCOM theater of operations. Not only does it drive all aspects of our training to build increasingly high levels of both individual and collective readiness, but it enables us to prioritize equipping and modernization of certain formations or capabilities with a sustained level of focus over a period of years, as the lead capability sets and formations inside the RFX architecture do not “rotate” arbitrarily from one year to the next. This key attribute — the ability to plan and sustain a coherent training, equipping and resourcing strategy across a number of years for the bulk of America's Army Reserve — will deliver ever greater capability and lethality as we move in to the future.

As with the other components of the Army, your Army Reserve pushes to stress Soldiers and units with relevant scenarios that emulate the full-spectrum, all-domain, aspects of the next

fight, while simultaneously acknowledging that we continue to deploy the force into the current one. By orchestrating, rationalizing and synchronizing strenuous training exercises and activities at a wide variety of training platforms and venues across North America, and around the globe, your Army Reserve has elevated its priority on combat-readiness and fieldcraft to an unprecedented level. Working closely with the other components of the Army and, in many cases, with close partners and allies from around the world, America's Army Reserve continues to build and expand upon opportunities to train the way we will fight; together. Whether it be our expanded and, essentially, year-round Cold Steel gunnery operation — now well into its third year — or an expansion of Combat Support Training Exercises (CSTXs), routine and embedded rotations at the Army's Combat Training Centers, or ever closer collaboration with our teammates in the Army National Guard at such training venues as Northern Strike or Golden Coyote, we continue to explore expanded options to build readiness for tomorrow.

The Army Reserve is always looking to the future and the next fight. To that end, the United States Army Reserve is fielding 60 Joint Light Tactical Vehicles (JLTVs), which we will use as training and familiarization platforms setting the conditions for fielding-at-scale in the years ahead. As the leading edge of Army Reserve modernization, these initial JLTVs will support the Army Reserve Training Strategy and accelerate Army interoperability; both in training and on the battlefield.

#### **DEFENSE SUPPORT TO CIVIL AUTHORITIES (DSCA)**

##### **Always Present. Always Ready.**

With Soldiers, facilities and capabilities in more than 1,100 communities across the Nation, America's Army Reserve is well-postured to respond quickly when disaster strikes and

our fellow Americans are in their time of greatest need. Our key responsive capabilities include search and rescue units, aviation assets, route clearance engineers, medical units, water and fuel distribution operations, water purification and communications support; many of these forces have been well-tested over the recent past. While we fully acknowledge that our first responsibility is to leverage our unique capabilities to support the Army in winning the Nation's wars, we also embrace our opportunity and mandate to respond to need, on no-notice, in the Homeland. As America's Army Reserve demonstrated recently in its response to Hurricanes Harvey, Irma, Maria and Florence, we cede this responsibility to no one.

The Army Reserve has been able to invest in the capacity and depth to be well-postured to move quickly and effectively to support our fellow citizens when they need our support. This is a huge benefit to the Nation, and one that informs our focus as we look to the future.

While recognizing Federal Emergency Management Agency is the lead federal agency for disaster response in the Homeland, America's Army Reserve is enhancing the immediate response authority of our Army Reserve Regional Commands to more effectively command and control units to execute emergency response operations in support of the American people. As an example, and to that end, we have reorganized, empowered and equipped our 1st Mission Support Command, headquartered at Fort Buchanan, Puerto Rico, to be the "go-to command" to generate and integrate your Army Reserve's immediate response operations in the Caribbean when disaster response is needed. We will continue to shape, develop and scale this capability as we move forward, ensuring that we position our units and their equipment to become ever more responsive and operationally effective.

**SHAPE AND GROW THE FUTURE FORCE: Modernize and Reform**

From its inception in 1908, leveraging the huge capacity and existing technical capability of medical professionals in the Nation's private sector, America's Army Reserve has always brought depth in critical technologies to the Army. Our times are no different. Drawing now upon its diverse and dispersed professionals working in a variety of leading edge technologies across the country, your Army Reserve will tap into the finest brains in business, industry and academia to act as a screening force for the Army and an additive to national security. This role is in our cultural DNA.

For the past two years, your Army Reserve has been on a path of transforming its structure and procedures to seize the "digital key terrain." This journey presses on as our 2-star Innovation Command — headquartered in Houston, Texas and now in Direct Support of Army Futures Command in Austin — assesses and develops emerging outposts in technology hubs across the country, focusing on the harnessing of skills and talent acquired or retained in the commercial sector. The command serves as a link for operational innovation and the development of concepts and capabilities to enhance the readiness of the future force by capitalizing on extensive "civilian acquired or retained" knowledge, skills and experience. As a screening force for the Army, we are uniquely positioned to support the Army in staying on pace with rapidly emerging trends or opportunities in the private sector, while also providing a potential pool of on-demand talent for Army Futures Command. This process is already well underway.

As it pertains to cyberspace operations, we remain steadily on glide path to establishing Cyber Protection Teams at key locations around the country, such as Camp Parks, CA (Bay Area), Adelphi, MD (D.C.), San Antonio, TX, Fort Devens, MA (Boston), and Coraopolis, PA (Pittsburgh). Moreover, the Army Reserve Cyber Operations Group (ARCOG), with five Cyber

Protection Centers and 10 Cyber Protection Teams, provides direct support to Army Cyber Command (ARCYBER), and general support to other government agencies including DHS, NSA, FBI and DIA. Army Reserve Cyber Soldiers bring unique skills and experience to the force from their civilian occupations, drawn from over 40 corporate, financial and academic institutions. The cyber talent within the Army Reserve delivers capability, improves cyber readiness, and increases our network defense capability. To identify and cultivate cyber talent, the Army Reserve created the National Cyber Private Public Partnership in 2015. This program places Soldiers in critical Army Reserve cyber formation and provides enhanced opportunities to pursue civilian careers in the field.

As for reform, America's Army Reserve is committed to achieving the Secretary of the Army's intent of increasing both the effectiveness as well as the efficiency of the Total Army, reducing overhead, eliminating redundancies and streamlining procedures while further delegating authorities and empowering subordinate commanders wherever possible. As the Principal Official of this Component of the Army as well as the Commanding General, U.S. Army Reserve Command, I have directed my team to consolidate supporting staff operations, reshape headquarters and drive to an integrated Army Reserve staff that is optimized to support each independent set of responsibilities as a holistic effort. This rigorous analysis and scrutiny predates the publication of the Department of the Army Reform Initiative memorandum and is advancing on pace. Over time, this initiative will ensure that we strike the right balance between staffing headquarters, providing full-time support to units in the field, and cascading appropriate authorities "down echelon." We will continue to assess and evaluate the size, consolidation and function of headquarters as we press into the future, and we will adjust with agility and speed.

**SUPPORT SOLDIERS, FAMILIES AND EMPLOYERS**

Our dynamic requirement remains straightforward, but tough: this team needs to be ready enough to be relevant, but not so ready that our Soldiers cannot maintain good, meaningful civilian jobs and healthy, sustaining family lives. This challenge is exacerbated by the simple fact that we must recruit and retain our ranks where Soldiers live and work, and anticipate emerging demographics by moving force structure to not only where talent resides today, but where it will be tomorrow. This process demands agility, synchronization and integrated planning. It also relies, without exception, upon the enduring support of thousands of employers across America as well as our Soldiers' Families.

Put simply, this part-time force would not be possible without the support of civilian employers around the globe. They are our essential partners in national security — sharing the best talent in the world with us — as they continue the commitment and sacrifice which allows Soldiers to serve the Nation while maintaining rewarding civilian employment. America owes those employers who are willing to trade a short-term inconvenience or disruption to the “bottom line” in exchange for a more secure common future a deep appreciation for sharing their workplace talent with America's Army Reserve.

As with employers, nothing would be possible for an all-volunteer force unless our Families continued to stay on the team. There is no doubt that the Army depends on its Families to support its Soldiers and to share them with us. This is doubly so in the Reserve Component where many weekends and training days are consumed in what would otherwise likely be “family time” for our Active Component brothers and sisters. Accordingly, the Army Reserve relies heavily on our Families, and the communities that support them, as we partner with a broad range of organizations and employers who support our military Families.

To that end, America's Army Reserve is pressing hard to leverage new technologies and opportunities to better communicate with our entire Army Reserve family. We are presently in the final stages of developing and propagating a new "smart phone friendly" application that will enable our Families to self-organize and provide mutual support where they live and work at the zip code level without regard to their Soldier's specific unit-of-assignment or chain-of-command. This Double Eagle mobile application is also designed to help leaders maintain contact with Soldiers during the periods between battle assemblies as well as conjure supporting resources for Soldiers and Family members who may be in crisis. As a command insight tool, the app creates a broadly expanded level of access and connectivity, propagating the penetration-at-echelon of timely and relevant information and key aspects of commander's intent. Across our dispersed battle-space, it will increase our Soldiers' bond as a team while offering their Families similar opportunities as a critical partner in this undertaking. Finally, working in close coordination with U.S. Army Recruiting Command, the app will be optimized to support the Total Army in identifying potential recruits for the team by leveraging the entire end strength of America's Army Reserve as real-time recruiters, living and working across the America and scouting talent for the Nation.

### **CONCLUSION**

We remain grateful to Congress for passing of the FY19 defense appropriations bill and for ensuring consistent and predictable funding which will directly support Army Reserve readiness and modernization. As a result of it, your Army Reserve will continue to meet the challenges of the time. In these dynamic and challenging times, we will stay steady in the saddle as we build the most capable, combat-ready, and lethal federal reserve in the history of the Nation.



Mr. VISCLOSKY. Thank you very much.  
Admiral McCollum.

#### SUMMARY STATEMENT OF ADMIRAL MCCOLLUM

Admiral MCCOLLUM. Well, good morning, Chairman Visclosky and Ranking Member Calvert, and distinguished members of the subcommittee. It is my distinct honor to report on the status of America's Navy Reserve, which is a highly skilled and integral part of the Navy's enduring and worldwide fighting force.

This morning, we have over 3,045 Reserve sailors serving in some of the most austere locations around the globe. Without the unwavering support of employers and loving families and this committee, the Reserve fighters would not be the force multipliers that they are today. I believe I speak for all my colleagues sitting here with me today as I offer our most sincere thanks for your support.

Focused on the objectives of the National Defense Strategy of warfighting readiness, we are building a more lethal Navy Reserve. PB-20 is the mechanism that will allow the Navy Reserve to continue to focus on strategic depth. The Navy Reserve utilizes two key enablers, which we are very thankful for, which is our discretionary RPN and flexible NGREA, and they fund to generate both capability and interoperability with our force of the Active side as well. Your continued support to ensure these accounts remain robust and consistent and predictable is critical to our success.

Similar to the Active Component, the Navy Reserve seeks funding amongst readiness, wholeness, and investment. PB-20 is prioritized accordingly. Your support of the C-130 avionics upgrade to extend its service life is very much appreciated. PB-20 brings also the Navy's maritime patrol inventory to 117 aircraft, and should additional resources become available, the Navy included P-8s in its unfunded priority list that supports the recapitalization of the Reserve force toward the requirement of the warfighting requirement of 138. It also allows the Navy Reserve squadrons in Whidbey Island and Jacksonville to continue to operate beyond 2023.

Similar to aviation, recapitalization of the expeditionary forces within the Navy Reserve is very important. Your support of the four 40-foot patrol boats in PB-20 will accelerate a more lethal Navy Reserve. Additionally, the force is growing its focus in cyber and extended its Joint Reserve Intelligence commanders to provide more capability as well.

In closing, I would just say I could not be prouder of our Navy Reserve force. And every time I set foot around the globe to visit our sailors who are forward deployed in our Reserve Centers, in our aviation squadrons, I come away extremely inspired by their dedication and their motivation to apply both their military skills and their civilian skills toward warfighting lethality within the total force.

On behalf of the Navy and Navy Reserve, I thank you for your support and the time here today, and I look forward to your questions.

[The written statement of Admiral McCollum follows:]

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SUBCOMMITTEE ON DEFENSE  
COMMITTEE ON APPROPRIATIONS

STATEMENT OF  
VICE ADMIRAL LUKE M. McCOLLUM, U.S. NAVY  
CHIEF OF NAVY RESERVE  
BEFORE THE  
HOUSE SUBCOMMITTEE ON DEFENSE  
COMMITTEE ON APPROPRIATIONS  
FISCAL YEAR 2020 NATIONAL GUARD AND RESERVE  
MARCH 26, 2019

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SUBCOMMITTEE ON DEFENSE  
COMMITTEE ON APPROPRIATIONS



# United States Navy Biography

**Vice Admiral Luke M. McCollum**  
**Chief of Navy Reserve**  
**Commander, Navy Reserve Force**

Vice Adm. Luke McCollum is a native of Stephenville, Texas, and is the son of a WWII veteran. He is a 1983 graduate of the U.S. Naval Academy and is a designated surface warfare officer. McCollum holds a Master of Science in Computer Systems Management from the University of Maryland, University College and is also a graduate of Capstone, the Armed Forces Staff College Advanced Joint Professional Military Education curriculum and the Royal Australian Naval Staff College in Sydney.



At sea, McCollum served on USS Blue Ridge (LCC 19), USS Kinkaid (DD 965) and USS Valley Forge (CG 50), with deployments to the Western Pacific, Indian Ocean, Arabian Gulf and operations off South America. Ashore, he served in the Pentagon as naval aide to the 23rd chief of naval operations (CNO).

In 1993 McCollum accepted a commission in the Navy Reserve where he has since served in support of Navy and joint forces worldwide. He has commanded reserve units with U.S. Fleet Forces Command, Military Sealift Command and Naval Coastal Warfare. From 2008 to 2009, he commanded Maritime Expeditionary Squadron (MSRON) I and Combined Task Group 56.5 in support of Operation Iraqi Freedom. He also served as the Navy Emergency Preparedness liaison officer (NEPLO) for the state of Arkansas.

As a flag officer, McCollum has served as reserve deputy commander, Naval Surface Force, U.S. Pacific Fleet; vice commander, Naval Forces, Central Command, Manama, Bahrain; Reserve deputy director, Maritime Headquarters, U.S. Fleet Forces Command; and deputy commander, Navy Expeditionary Combat Command.

McCollum became the 14th chief of Navy Reserve in September 2016. As commander, Navy Reserve Force, he leads approximately 59,000 Reserve Component personnel who support the Navy, Marine Corps and joint force.

He is the recipient of various personal decorations and campaign medals and has had the distinct honor of serving with shipmates and on teams who were awarded the Joint Meritorious Unit Award, the Navy Unit Commendation, the Meritorious Unit Award and the Navy "E" Ribbon.

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Chairman Visclosky, Ranking Member Calvert, and distinguished Members of the Subcommittee, as Chief of Navy Reserve it is my distinct honor to report to you on the state of the United States Navy Reserve and to discuss our fiscal year (FY) 2020 budget request.

America's Navy Reserve delivers strategic depth and operational capability to the Navy, Marine Corps, and Joint Forces. An integral part of the United States Navy, the Reserve Component is comprised of 101,000 citizen Sailors; to include 48,000 Selected Reservists, 43,000 Individual Ready Reservists and 10,000 Full Time Support members, from every state and territory. On any given day, roughly 20 percent of the Selected Reserve Component is operational, delivering critical support to our forces around the globe. Historically comprising less than two percent of the Navy's total annual budget, Navy Reserve Sailors have mobilized over 84,000 times to every theater of operation since 2001, including 3,310 mobilizations in FY 2018.

Aligned with guidance from the National Defense Strategy and the Chief of Naval Operations Design for Maintaining Maritime Superiority 2.0, the Navy Reserve is rebalancing to meet the dynamic challenges of today and the threats of tomorrow. We are building a more lethal and ready force, focused on capabilities, as an essential element of naval power in an era of great power competition.

## **STRATEGIC FORCE READINESS**

The Navy Reserve's guiding principles are lethality and warfighting. We are a ready and lethal military force, maximizing value to the Nation through efficient operation and modernizing the way we do business. We effectively support and complement the Active

Component, while making optimal use of talented Reserve Sailor's skill sets to increase total force proficiency and capability. We are accelerating the impact of the Navy Reserve mission in the new competitive global environment as we build strategic readiness.

### *Fiscal Predictability*

On behalf of the entire Navy Reserve, their families and employers, I want to personally thank you and this committee for a full FY19 on-time appropriation. The reduced fiscal uncertainty has gone a long way toward increasing operational efficiency, readiness and unit morale. Predictable and dependable funding ensures that Navy Reserve Sailors are able to provide consistent and timely operational support to the Total Force. Discretionary Reserve Personnel, Navy (RPN) funding is the primary fiscal means by which the Navy Reserve provides this support. Current RPN funding level supports 31 percent of Combatant Commander operational demand. Your continued support to ensure robust, consistent, and predictable RPN funding is the most important enabler for maintaining force readiness and Navy Reserve operational mission accomplishment.

### *Sailor First Initiatives*

To enable Force readiness, Navy Reserve Sailors balance many priorities associated with their civilian jobs, family commitments, and their duties as part-time Sailors. The Navy Reserve utilizes several tools to help these Sailors manage the stressors that can accompany this busy lifestyle. The Psychological Health Outreach Program (PHOP) is one of the most successful models to date, ensuring Reserve Sailors have access to appropriate psychological health care services. PHOP counselors provide psychosocial briefings, including, Operational Stress Control

and behavioral health screenings to Reserve Sailors across the nation. PHOP counselors use the Resiliency Check-in tool to provide one-on-one behavioral health assessments to Sailors new to the Navy Reserve to include on-the-spot initial assessments and follow-up referrals. This has become a proven way to ensure Sailors have access to counseling support from specially trained providers in dealing with common issues associated with the military lifestyle, including the stress related to the mobilization cycle, family separation and post-mobilization reintegration.

Because many Reserve Sailors and families reside in remote or rural areas and serve part-time roles, their eligibility for military treatment options is limited. PHOP covers any gaps in mental health care for Reservists, regardless of duty status or geography. In the past year, BUMED's PHOP Program Manager and PHOP counselors teamed with the Navy Reserve to strengthen PHOP support and involvement in suicide prevention. During FY18, the program used 56 licensed mental health professionals from 29 locations to reach over 42,000 Sailors and their family members.

## **NAVY RESERVE FORCES**

The Navy Reserve force structure focuses on interoperability and the operational effectiveness of Sailors and platforms. Reserve Sailors train and work alongside Active Component (AC) counterparts and units, creating synergy and cohesion between components. Reserve Sailors provide a ready rapid response to calls for worldwide support, across many mission areas, often on short notice.

*Commander, Navy Reserve Forces Command (CNRFC)*

CNFRFC operates six regional headquarters and 123 Navy Operational Support Centers (NOSCs), located in all 50 states, Puerto Rico, and Guam. NOSCs collectively serve as drilling locations and provide administrative support to over 1,400 RC units. NOSCs reside on and off DoD installations, a mix of stand-alone facilities, Navy-Marine Corps Reserve Centers, and joint Armed Forces Reserve Centers. These NOSCs are the readiness generating epicenters of the Navy Reserve. CNRFC and its NOSCs offer a unique response capability and range of options in order to source Combatant Commander requirements – from mobilization of an entire unit to activation of a single Individual Augmentee Sailor. This model delivers increased flexibility, with both operational capacity and strategic depth, to the total force, in a dynamic global security environment.

As of late-January, over 3,000 Navy Reservists were mobilized and 1,408 were preparing for mobilization. These sailors support Combatant Commands around the globe, and individual mobilizations add to the broad and diverse set of operational support missions the Navy Reserve executes on a daily basis, including Expeditionary Warfare, Naval Air Warfare, Fleet Air Logistics, Cyber Warfare, Unmanned Aerial Vehicles, and Shipyard Maintenance.

*Commander, Naval Air Forces Reserve (CNAFR)*

CNAFR comprises three air wings, two Joint Reserve Bases and one Naval Air Facility. Fleet Logistics Support Wing and Tactical Support Wing reside at Naval Air Station-Joint Reserve Base Fort Worth, TX, while Maritime Support Wing is headquartered at Naval Air Station North Island, CA. Naval Air Forces Reserve Joint Reserve Bases are in Fort Worth, TX, New Orleans, LA, and the Naval Air Facility is in Washington, D.C. In addition to these



standalone commands, the Navy Reserve operates multiple Squadron Augment Units which directly support various AC Navy squadrons around the country. Navy Reserve owns and flies approximately 150 aircraft, supporting the Navy Total Force and acting as necessary strategic depth in both hardware and the 8,700 aviation professionals onboard.

#### **Reserve Maritime Capabilities: P-3 and P-8**

Recapitalizing the Navy Reserve's Maritime Patrol and Reconnaissance Force (MPRF) capability is the #1 equipment priority, as illustrated in the 2019 National Guard and Reserve Equipment Report. The Navy's surge capacity within MPRF consists of two Reserve patrol squadrons operating legacy P-3C Orion aircraft. These two squadrons create 13 percent of Navy's current Intelligence, Surveillance and Reconnaissance capacity and provide Combatant Commanders with a vital strategic asset.

The P-8A Poseidon, a 737-derivative aircraft, replaces the P-3C maritime patrol aircraft, providing broad area, full spectrum, anti-submarine warfare, armed anti-surface warfare, and networked maritime Intelligence, Surveillance, and Reconnaissance capabilities. Recent changes to the National Defense Strategy and Defense Planning Guidance caused the Navy to review the current MPRF structure and the P-8A warfighting requirement. To ensure compliance with these directives, and to deliver this capability to the warfighter, the requirement was increased from 117 aircraft to 138 aircraft. This requirement gap represents an opportunity for the Reserve Component to provide both operational value and strategic depth to the total force. Recapitalization of the two RC squadrons currently operating the legacy P-3Cs, through FY2022, with additional P-8A aircraft, aircrews, and associated military construction, will buy down warfighting risk. VP-62 (Jacksonville, FL) and VP-69 (Whidbey Island, WA) offer the Navy a

lethal strategic reserve by retaining trained and experienced military aircrew who are likely to operate similar commercial aircraft in their civilian career.

#### **Reserve Logistics: C-40 and C-130**

The Navy Reserve air logistics component, made up entirely of RC sailors, fulfills the Navy's requirement for the Navy Unique Fleet Essential Airlift (NUFEA) capability. Whether in direct support of combat or other required operations, Navy Reserve executes 100 percent of the Navy's organic intra-theater air logistics support mission using C-40A and K/C-130T aircraft. These squadrons provide responsive, flexible, and rapidly deployable air logistics support to the Navy and Marine Corps year-round. With crews always ready to deploy, they fill a vital strategic role toward combat logistics sustainment when full mobilization is required. As great power competition builds, strategic assets such as these become ever more paramount.

Aircraft modernization is a critical step in preserving NUFEA. More than 17 years of increased operational tempo within a constrained procurement environment has taken a great toll on the aircraft and equipment that our Sailors operate. The Navy Reserve integrated force structure depends on the ability to quickly and seamlessly assimilate with active units for mission execution. As Navy continues to prioritize investments in advanced aircraft, weapons systems and equipment, RC assets must be resourced to ensure the highest levels of safety, availability, interoperability, and mission employment. We will continue to leverage the availability and readiness provided by modern, compatible hardware for maximum effective employment.

We appreciate this committee's continued steadfast support, which helped Navy Reserve to purchase two additional C-40A aircraft which, once delivered to Kaneohe Bay, HI, will fulfill the risk-adjusted wartime inventory requirement of 17 aircraft and bring down the 11-year average airframe age.

Our 24 K/C-130T aircraft average 24 years of age, resulting in maintenance issues that heavily degrade their dependability. As many Navy leaders have previously testified, the K/C-130T propeller grounding bulletin issued by Naval Air Systems Command in September of 2017 caused a huge readiness gap in our NUFEA capability. While the C-130 aircraft were grounded, C-40A operational tempo was greatly increased to recover the capability degradation. The end result was not a decrease in lift support, but increased consumption of C-40A capacity that we expect to last for years to come. Congress was instrumental in funding new propeller systems for the K/C-130T to get them airborne and address the number one readiness degrader and ensuring rapid recovery of the capability for now and sustainability into the future.

For continued future sustainment, modernization of the K/C-130T fleet is necessary. The T56 3.5 Engine Upgrade addresses the number two readiness degrader for K/C-130T and will result in a 23% increase in engine longevity and a 12-17% fuel efficiency savings. The Navy K/C-130T fleet is also in the midst of an Avionics Obsolescence Upgrade (AOU) program that modernizes the fleet, bringing the communications capability on par with current FAA and international flight standards, and improves safety of occupants. Continued support and rapid deployment of the K/C-130T Avionics Obsolescence Upgrade is much appreciated.

#### **Reserve Fighter Aircraft: F/A-18**

The 31 F/A-18A+ legacy Hornets assigned to Navy Reserve squadrons include some of the oldest in operation, none of which are interoperable with AC squadrons. In the near term, Navy is recapitalizing RC F/A-18A+ aircraft with F/A-18C/Ds from the active duty fleet. Along with active procurement, the Reserve recapitalization is directly linked to improved depot throughput.

Based on AC Super Hornet and Joint Strike Fighter procurement, an eventual transition of RC Hornets to later generation strike fighters will be possible. The 24 F/A-18E/Fs from FY19 and 24 F/A-18E/Fs in the Navy's FY20 request increase the pace of this transition. Focused attention on this process will rebuild the Navy Reserve's strategic reserve fighter capability.

#### **Reserve Adversary Aircraft: F-5**

The Navy Reserve supports AC pre-deployment training by supplying one seventh of the total annual adversary requirement. Seasoned fighter pilots operate F-5 Tiger aircraft that, without investment, will quickly reach the end of their service life. The FY20 budget includes the purchase of 11 F-5s which will mitigate the impact of the eventual service life expiration of current F-5s. Beyond this aircraft purchase, the long term plans for the Navy include a study to establish a modernized, dedicated adversary air training enterprise. Such a plan will leverage veteran combat pilot experience, maximize pilot retention in the Navy Reserve and cultivate a robust strategic reserve of lethal aviators.

#### **Special Operations and Personnel Recovery Support: HSC-85**

HSC-85, employed as the Navy's only dedicated rotary-wing special operations support and personnel recovery support squadron, provides strategic depth to the Helicopter Sea Combat community and a combat-ready mission-flexible squadron to the Geographic Combatant Commander. This squadron, and the two tactical support units that emerged from the disestablishment of HSC-84 in 2016, offers the Navy a return on investment by capitalizing on the talent and experience of AC Sailors as they leave active duty. They share lessons learned, tactics and techniques with the rest of the HSC community to increase the Navy's overall helicopter combat capability. HSC-85 offers short-notice, deployable surge capability to support

global contingencies while filling training and mission support gaps to the joint force for deploying special operations units. HSC-85 is a veteran squadron, having maintained a permanent forward deployed operational presence for years, supporting U.S. Africa Command and U.S. Indo-Pacific Command mission-critical requirements. HSC-85 is a valuable complement to the Navy Helicopter Sea Combat community.

*Commander, Naval Information Force Reserve (CNIFR)*

CNIFR, Ft. Worth, TX, is the executive agent for nine Joint Reserve Intelligence Centers (JRICs) located throughout the country. In partnership with the Defense Intelligence Agency (DIA) Joint Reserve Intelligence Program (JRIP), these facilities provide fully capable intelligence and cyber warfare centers enabling wartime readiness through training and operations, and real-time intelligence support to Combatant Commands, Combat Support Agencies, the intelligence community, and Navy fleets. There are a total of 28 Service-managed JRICs located across the country, providing Navy Reservists a “train as you fight” environment utilizing the same systems and tactics, techniques and procedures as the parent commands. This enables:

- Fully-equipped and accredited intelligence production facilities,
- Analyst-to-analyst interaction across the intelligence community,
- Real-time transfer of operational intelligence,
- Full integration and collaboration of the Reserve intelligence community as a force multiplier, providing strategic depth to our fleets and joint forces,
- A nationwide network significantly reducing temporary duty cost by allowing Information Warfare professionals to serve at duty stations close to home, and
- Capabilities to surge before crisis and continuity of operations in the event of crisis.
- Continuity of operations capabilities to enable active duty commands to reconstitute C2 elements

In partnership with the JRIP, CNIFR has committed the resources necessary to maintain our Navy-hosted JRICs as viable warfighting platforms - now and into the future. JRICs Minneapolis, Fort Worth, and Denver were all prioritized for upgrade to Joint Worldwide Intelligence Communications System (JWICS) 7.0, tripling the bandwidth of the platforms, comprehensively supporting today's analysis, imagery and CYBER mission requirements. This upgrade directly supports requirements identified in recent great power competition planning, and DIA's prioritization of the Navy JRICs directly reflects the mission criticality of those sites to identified fleet needs and priorities. The remaining Navy JRICs will be upgraded to JWICS 7.0 during FY19.

Infrastructure updates are ongoing and necessary to sustain state-of-the-art warfighting platforms. Our current initiatives include:

- New MILCON in New Orleans, repurposing an existing facility for a new JRIC,
- Upgrade of the electronic security systems of all Navy JRICs during FY19,
- Renovations of JRICs Norfolk, San Diego and Millington, and
- Evaluating options for JRICs Denver and Minneapolis.

Collectively, these projects incorporate the latest and best technologies to safeguard platform security and enhance the JRICs' ability to operate with continuous, uninterrupted network access. The Navy Reserve remains fully committed to modernization and ensuring our Reserve Information Warfare professionals have access to the latest warfighting equipment and networks for optimal readiness and lethality.

*Navy Expeditionary Combatant Command (NECC)*

Located at Joint Expeditionary Base Little Creek-Fort Story, Virginia, NECC is manned with more than 50 percent Reserve Component members. This subordinate command of Navy Fleet Forces Command manages Reserve Sailors that offers capabilities that include:

- Littoral, Riverine and coastal warfare
- Maritime and port security
- Expeditionary Logistics Support
- Expeditionary Intelligence
- Expeditionary Combat Readiness
- Naval Construction Force (Seabees)

NECC Reserve Sailors, heavily leveraged for prior service experiences, work side-by-side their active component counterparts in the Navy and across the Joint Force providing invaluable expertise in these vital areas. NECC Forces execute full spectrum military operations to shape the battlefield environment, provide humanitarian assistance and disaster relief, and conduct major combat operations. The NECC model of Reserve integration is battle-tested, demonstrating the targeted value of strategic reserve assets. This model and the increased agility it enables, is poised to grow as strategic requirements build in this era of great power competition.

**RESERVE REFORM***MPT&E Transformation*

Navy's Total Force Manpower, Personnel, Training and Education (MPT&E) modernization efforts are well underway. The Navy is transforming administrative and human resource processes, which have remained virtually unchanged for decades, in order to increase

our ability to recruit, train, and retain the agile and lethal force of tomorrow. This holistic transformation effort seeks to streamline personnel management processes and dramatically improve quality of life in our most valuable resource - our Sailors – which leads directly to increased force readiness. Key outcomes of this transformation include:

- Permeability between Active and Reserve Components allowing for a seamless Total Force response to Fleet and Combatant Command needs;
- Timely, accurate, and auditable personnel and pay actions;
- A seamless data environment accessible throughout the world;
- Transforming labor intensive, antiquated processes into standardized, automated ones that require less oversight;
- Professional call centers and mobile/online self-service portals with 24/7 customer service for Sailors and their families, where most personnel transactions can be done virtually; and
- Improving Fleet readiness through predictive analytics supported by big data, which will enable better Sailor fit, talent matching, improved retention, and agile responses to meet dynamic Fleet needs.

Our Sailors will see big dividends over the next several years from investments in modernizing the MPT&E Enterprise - improved performance, productivity, and cost efficiencies in all aspects of personnel readiness. Simplifying the constant toggle between civilian employment and military service will result in improved fleet retention and strategic depth for the Navy Reserve.



***Duty Status Reform***

Currently there are numerous statutory authorities used when mobilizing RC personnel. The National Defense Authorization Act for Fiscal Year 2016 directed the Secretary of Defense to assess Military Compensation and Retirement Modernization Commission (MCRMC) recommendation #4: Consolidate current 30 RC duty statuses into 6 broader categories and determine whether it would increase efficiency in the RC. DoD is developing legislation that will reform the current RC duty status construct pursuant to Section 513 of the 2018 National Defense Authorization Act.

**CONCLUSION**

America's Navy Reserve remains eternally steadfast, ready to respond when called. Our proud citizen Sailors carry the 104-year tradition of supporting the Navy, Marine Corps and Joint Force wherever, and whenever, called. We strive to ensure warfighters effectively accomplish all missions, as both a ready operational force and a veteran strategic reserve. As we rebuild strategic depth in the face of great power competition, a more lethal warfighting military component will emerge. I look forward to working with you and I thank you for your continued support.

Mr. VISCLOSKY. Thank you.  
General James.

#### SUMMARY STATEMENT OF GENERAL JAMES

General JAMES. Good afternoon, Chairman Visclosky, and Ranking Member Calvert, and all the distinguished members of the subcommittee. Thank you for the opportunity to appear before you today to testify on behalf of the Commandant of the Marine Corps about your Marine Corps Reserve. I am honored to be here with my fellow Reserve Component service chiefs.

The mission of the Marine Corps Reserve is to stand ready to augment, reinforce, and sustain the Active Component. Along with the Active Component, we have Reserve forces forward deployed supporting combatant commands' requirements.

Over the past year, more than 2,100 Reserve Marines were mobilized, supporting 35 operational requirements in each of the six geographic combatant commands. Additionally, 754 Reserve Marines have volunteered as individual augments, which filled 63 percent of the services' requirements.

I am pleased to inform you that the morale of the Marine Corps Reserve remains high, as evidenced by the Reserve Component end strength maintaining 99 percent of the total requirement. I am consistently, constantly impressed by the professionalism, the competence, the dedication to duty and the motivation of our Reserve Marines. Like their Active Duty sisters and brothers, they serve selflessly to protect our great Nation. The way they balance family responsibilities, civilian lives, jobs, schools, careers, is nothing short of extraordinary.

At any given time, Marine Forces Reserve stands ready to provide a brigade-size element of Reserve Marines and sailors fully trained for combat operations, while the remainder of our force is poised to augment and reinforce, given appropriate amounts of predeployment training based upon their wartime mission assignments.

I would like to leave this distinguished body with two thoughts on how continued support from Congress can result in a more ready and lethal Marine Reserve force. Number one, I want to extend my gratitude for your continued support of the National Guard and Reserve equipment appropriation. I would appreciate a greater spending flexibility within this appropriation in order to procure critical shortfall items and modernize equipment and systems.

Number two, I would like to thank you for this year's appropriations. On average, the Marine Corps Reserves only have 38 training days a year. That places an increased importance on the adequate and timely appropriation. With your continued support, I can assure the Reserves predictable and uninterrupted training schedules to maximize personnel, material, and training readiness. I appreciate the opportunity to be here today and look forward to your questions.

[The written statement of General James follows:]

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BY THE SENATE APPROPRIATIONS COMMITTEE  
SUBCOMMITTEE ON DEFENSE

STATEMENT OF  
MAJOR GENERAL BRADLEY S. JAMES  
UNITED STATES MARINE CORPS RESERVE  
BEFORE  
THE HOUSE APPROPRIATIONS COMMITTEE  
SUBCOMMITTEE ON DEFENSE  
CONCERNING  
THE GUARD AND RESERVE  
ON  
MARCH 26, 2019

NOT FOR PUBLICATION UNTIL RELEASED  
BY THE SENATE APPROPRIATIONS COMMITTEE  
SUBCOMMITTEE ON DEFENSE

**Major General Bradley S. James**

In November 2018, Major General Bradley S. James assumed the duties of acting Commander of Marine Forces Reserve.

Major General Bradley S. James is a native of Austell, Georgia and a graduate of Kennesaw State University. After graduating from flight training in 1988, he served at Cherry Point, NC with VMGRT-253 and VMGR-252. He also served at the 2nd Marine Aircraft Wing Headquarters as the Air Transport Coordination Officer.

Captain James joined VMGR-234 in Glenview, Illinois in 1993 and relocated with the squadron to Naval Air Station Joint Reserve Base Fort Worth in 1994. During this tenure, he served primarily as the Weapons & Tactics Instructor. Major James served as Officer in Charge for KC-130 Detachments for the 24th and 26th Marine Expeditionary Units while deployed in Macedonia and Kosovo. In 1999, Major James transferred to MAG-41 Headquarters.

In 2000, he returned to VMGR-234 as the Operations Officer. LtCol James activated in 2002 as the VMGR-234 Detachment "A" Commander and led a combined detachment under the 13th MEU (SOC) during combat operations in Afghanistan.

He deployed in 2003 to Shaikh Isa Air Base, Bahrain as 3rd Marine Aircraft Wing Advance Party Officer in Charge and Group Commander for the 319th and 384th Air Expeditionary Wings (USAF) in support of I MEF during Operation Iraqi Freedom. LtCol James assumed command of VMGR-452 in 2003 and deployed to Al Asad, Iraq for OIF II-2 supporting Operation Phantom Fury. In May 2006, LtCol James reported to II Marine Expeditionary Force at Camp Lejeune, NC as the Reserve Integration Division Site OIC and Operational Sponsor for the Individual Marine Augment Program.

As a Colonel, he served as the Deputy Group Commander of Marine Aircraft Group 49, Willow Grove, PA, the 4th Marine Aircraft Wing Assistant Wing Commander in New Orleans, LA, Department Head at Reserve Affairs Quantico, VA and Deputy & Executive Assistant to the Deputy Commandant of Plans, Policy, and Operations at the Pentagon.

From 2016-2018, BGen James served as the Commanding General of 4th Marine Aircraft Wing.

He is a graduate of the Air War College, Joint & Combined Warfighting School, Weapons & Tactics Instructor & Senior Watch Officer Courses, Marine Corps University Senior Planners Course, Reserve Component National Security Course, Joint Interagency Multi-planners Course, Senior Joint Info Operations Course, Joint Force Air Component Commander Course and Leading Innovation Energy Applications Course. He has accumulated more than 5000 flight hours in the KC-130 E/F/R/T variants.

***Introduction***

Chairman Visclosky, Ranking Member Calvert, and distinguished members of the Subcommittee, it is my privilege to appear before you and provide an overview on the current state of the Marine Corps Reserve.

The United States Marine Corps is the Nation's force-in-readiness – ready to go now, to respond and compete, and if necessary, ready to fight and win. When our Nation calls, the American people expect quick, decisive action from Marines – both the Active and Reserve Components. As part of a Total Force, the Marine Corps Reserve stands ready to augment, reinforce and sustain the Active Component by providing forces for employment across the full spectrum of crisis and global engagement.

Your Marine Corps Reserve has been engaged around the world in theater security cooperation activities and operations, serving side-by-side with our Active Component. Organized as a traditional Marine Air-Ground Task Force, Marine Reservists from each of our major subordinate commands -- 4th Marine Division, 4th Marine Aircraft Wing, 4th Marine Logistics Group, and Force Headquarters Group -- have made a tremendous impact across a diverse spectrum of operations in support of every geographic combatant commander.

I am deeply impressed by the professionalism, competence, and dedication of our Reserve Marines. Like their Active Component counterparts, they serve selflessly to protect our great Nation. I am inspired by the way they balance family responsibilities, civilian careers, and military service. They do so with humility, without fanfare, and with a sense of pride and dedication that is consistent with the great sacrifices of Marines from every generation. Without a doubt, the success of the Marine Corps hinges on the quality of our Marines.

My focus remains on maintaining the ability to provide manned, trained, equipped, and

well-led forces capable of supporting the Active Component. With your continued support, we will strengthen and maintain our readiness to be positioned to fight, compete, and win.

### *A Total Force*

As an integral part of the Total Force, the Marine Corps Reserve plays a key role in providing that national security force in readiness. The Marine Corps Reserve provides critical capabilities to the Total Force which increases the lethality of the Corps and contributes to the competitive advantage with potential adversaries. Over the past year, the Marine Corps Reserve supported combatant commanders by providing forces focused on combat operations, crisis prevention, crisis response, and theater security cooperation. Global deployments, along with participation in Service, Joint, and multi-national exercises, develop the depth of experience of the Reserve Force, ensuring the Marine Corps Reserve is relevant, ready, and responsive to meet combatant commanders' requirements for highly trained forces.

In 2018, 2,135 Reserve Marines mobilized supporting 35 operational requirements in each of the 6 geographic combatant commands. Likewise, nearly 14,000 Reservists participated in 76 training exercises, supporting requirements in 41 countries across the globe. Additionally, 754 Reserve Marines volunteered to serve as individual augmentees, providing support to combatant commanders and Service staffs. Marine Forces Reserve filled 63 percent of the total service individual augment requirements. The demand for Marine Forces Reserve to meet requirements as an operational reserve increased by 263 percent since 2017, which was the third consecutive year of increased operational requirements. We have continued to meet the high demand for use as an operational reserve, though this has begun to challenge readiness to meet strategic requirements. For historical perspective, the Marine Corps deployed 8 reserve formations in 2001, compared to 35 reserve formations in 2018.

In 2019, Marine Forces Reserve will continue to support the combatant commanders by mobilizing in excess of 2,540 Reservists supporting approximately 43 formations. Over the course of 2019, nearly 12,000 Marines will support theater-specific exercises and security cooperation events across every combatant command. These operations and exercises greatly increase the Reserve Component's interoperability with the Active Component, Joint Forces, and our allies.

The demand for the Marine Corps' unique capabilities has increased, requiring more Reserve Component activations of units and task organized formations to produce enabling capabilities across the range of military operations. For example, Marine Forces Reserve has increased the participation of Marines filling the security force and advisory requirements to Task Force South West in Helmand, Afghanistan. These teams include Reserve members operating in the High Mobility Artillery Rocket System (HIMARS) battery, the Train Advise and Assist teams, and the security forces company which continues to provide local security to all United States forces. In addition, for the fourth year in a row, we have mobilized and will deploy a Special Purpose Marine Air-Ground Task Force to U.S. Southern Command in support of theater security cooperation objectives. For the first time in nearly ten years, we mobilized and deployed a reserve infantry battalion – 2d Bn, 23d Marines – to Okinawa, in support of a combatant commander's requirements. The last Marine Reserve infantry battalion to be mobilized and deployed in support of combatant commander requirements was in 2009. In 2019, we will continue the trend of battalion-level mobilizations by deploying 1st Battalion, 25th Marine Regiment to Okinawa, Japan, also in support of the unit deployment program to the Indo-Pacific Area of Responsibility. Reconnaissance, assault amphibian and combat engineer units have also deployed to the Indo-Pacific Area of Responsibility in support of III Marine Expeditionary Force's requirements in

Okinawa, Japan. United States Central Command (CENTCOM) continues to be the recipient of the highest number of Marine Corps Reserve units and individuals. Of the 35 formations activated in 2018, 17 deployed to the CENTCOM AOR. This trend will continue in 2019 as 20 of the 43 Reserve formations we activate will deploy to the CENTCOM AOR.

Marine Forces Reserve (MARFORRES) continues to provide daily support to combatant commanders in a wide range of roles that include multi-national exercises, such as Dynamic Front 19 in Latvia, Arctic Challenge 19 in Finland, New Horizons 19 in South America, and Maple Resolve 19 in Canada. I anticipate Marine Forces Reserve will continue to deploy and to integrate with the Active Component in support of high-priority combatant commander requirements for the foreseeable future.

In addition to participating in operational requirements across the globe, Marine Forces Reserve supports the Total Force by dutifully executing the sensitive and crucial mission of providing casualty assistance to the families of our fallen Marines. There is no responsibility that we treat with higher regard than the solemn mission of providing casualty assistance. Inspector-Instructor and Reserve Site Support Staffs are geographically positioned to accomplish the vast majority of Marine Corps casualty assistance calls and are trained to provide compassionate and thorough assistance to families. Indeed, the majority of Marine Corps casualty notifications and follow-on assistance calls to the next of kin are made by our Marines. During Calendar Year (CY) 2018, our Inspector-Instructor and Reserve Site Support staffs performed 95 percent of the casualty calls performed by the Marine Corps.

The professionalism and compassion of our Casualty Assistance Calls Officers (CACOs) continues well beyond the initial notification. We ensure that our CACOs are well trained,



equipped, and supported by all levels of command through the combination of in-person and online training. Once assigned, the CACO serves as the family's central point of contact and coordinates with funeral homes, government agencies, and other organizations. They assist family members with planning the return and final resting place of their Marine; and ensure the filing of appropriate documents so families receive all benefits they are entitled. In many cases, our CACOs provide a long-lasting bridge between the Marine Corps and the grieving family.

Additionally, Marine Forces Reserve units and personnel provide significant support in the form of military funeral honors for our veterans. MARFORRES performed 20,400 military funeral honors which represented 93 percent of all funeral honors rendered by the Marine Corps during 2018. As with casualty assistance, we place enormous emphasis on providing timely, compassionate, and professionally executed military funeral honors. Although this comes with a cost to readiness, as some Marine Reserve units are executing in excess of 500 funerals per year, which impacts their ability to maintain or increase readiness.

Finally, Marine Forces Reserve functions as the most wide reaching link between the Marine Corps and communities across the Nation. We are the face of the Marine Corps to the majority of the American public. With Reserve units located across the country, Marine Forces Reserve is uniquely positioned to interact with the American public and communicate the Marine Corps story to our fellow citizens; most of whom have little or no contact with the Marine Corps. Last year, Marine Forces Reserve personnel and units conducted more than 500 local and regional public engagement and community relations events across the country.

*Predictability*

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

We ensure units and personnel are ready to meet any challenge by employing a Force Generation Model that rotates Marine Reserve units through a five-year Training and Readiness Plan. The Force Generation Model enables Marine Forces Reserve to effectively support Global Force Management requirements while maintaining combat ready units and detachments based on priorities established by the Commandant’s Force Management Plan. While restraining the number of available units to no more than twenty percent for sourcing global force management rotational requirements, the Model enables Marine Forces Reserve to preserve the bulk of its force for major contingency operations.

The key element in the Force Generation Model is the deliberate application of scarce training resources, the most significant being Annual Training periods, to progressively build combat credible forces over a four-year period. Employment of reserve units, detachments, and individuals into Service, Joint and multi-national exercises provides opportunities to train to higher level Mission Essential Tasks, thereby advancing capability over a five-year cycle. Generally, units are assessed through a culminating Integrated Training Exercise (ITX) during the fourth year of the training cycle for a potential mobilization in the fifth year. Additionally, the Reserve

Component trains with the Active Component in exercises in the United States and abroad which supports enhancing interoperability.

### ***Personnel***

Marines, Sailors and our civilian Marines are the foundation of all that we do. The resources we dedicate to sustaining and developing this foundation directly contributes to the success of our institution. The vast majority of the Marine Corps Selected Reserve's authorized end strength of 38,500 falls under Marine Forces Reserve. The Selected Reserve is composed of Marines in four categories: Selected Marine Corps Reserve Units, Active Reserve, Individual Mobilization Augmentees, and service members in initial training. Embedded with these Marines are 1,641 Active and Reserve component Sailors who serve critical roles in the operational, medical, dental, and spiritual readiness of our Reserve Force. The success of Marine Forces Reserve would not be possible without continued support from the U.S. Navy.

In addition to the Marines and Sailors of the Selected Reserve, Marine Forces Reserve administratively controls approximately 61,000 Marines who serve in the Individual Ready Reserve (IRR). Marine Forces Reserve continues to monitor the mobilization viability of these IRR Marines through the use of muster events at multiple locations across the country. These muster events allow Marine Forces Reserve to ensure these IRR Marines meet the requirements for mobilization. These events also provide the opportunity to address administrative issues, conduct mental health and post-deployment assessments, to review Reserve obligations and new opportunities, and to meet with Marine Corps recruiters. During the past year Marine Forces Reserve conducted 31 muster events and met 5,189 IRR Marines. In addition to the musters, Marine Forces Reserve contacted and screened 52,000 Marines telephonically.

The Marine Corps Reserve strives to retain the very best Marines capable of fulfilling our leadership and operational needs. Marines approaching the end of their current contracts, whether Active or Reserve Component, receive counseling on the tangible and intangible benefits of remaining associated with the Selected Reserve. We educate each transitioning Active Component Marine on opportunities for continued service in the Marine Corps Reserve through the Marine Corps' transition assistance and educational outreach programs.

Recruiting and retaining high quality Marines remains essential to the Marine Corps' role as the Nation's Force in Readiness. Marine Forces Reserve enjoys high affiliation and retention rates enhanced through incentive programs, such as occupational specialty retraining, inactive duty travel reimbursement, and bonus payments. Your support of these incentive programs enabled us to maintain our end strength at 99 percent of total authorization, and our Military Occupational Specialty match rate at over 85 percent.

### ***Equipment***

Reserve Component units remain highly interoperable with their Active Component counterparts due to the Marine Corps' Total Force approach to equipment fielding and management. Reserve Component Forces are manned, trained, and equipped to standards that facilitate the seamless integrated employment of forces to meet combatant commander requirements. Our reserve units and personnel continue to be in high demand, with approximately 100 exercises, missions, and operations currently scheduled this fiscal year, to include mobilization of battalion and squadron-sized units. This high operational tempo places a stress on our ability to maintain our equipment and replenish our deficiencies. Most disconcerting is our individual combat equipment deficiencies, which in the event of a large-scale wartime mobilization may become a strategic risk to mission.

Currently, our organizational combat equipment levels are sufficient to meet home station training requirements and our operational pace with augmentation from Marine Corps Logistics Command. With regard to maintenance readiness, Marine Forces Reserve has mitigated risk for many years in two ways. First, risk is mitigated by refining units' Training Allowances, which is that portion of a unit's full Table of Equipment located at Reserve Training Centers. Our goal is to balance the amount of equipment necessary to conduct training with the amount of equipment that can be maintain given personnel and fiscal constraints. Second, risk is mitigated by leveraging Overseas Contingency Operations (OCO) dollars to buy mobile maintenance support teams that augment the limited organic maintenance capacity. Congressional support for the Marine Corps Reserve FY 2019 President's budget request within the National Defense Authorization Act, to include OCO, is paramount to our continued success in sustaining our equipment and maintenance readiness.

Equipment modernization and improved readiness are the key factors which allows the Marine Corps to keep pace with future threats and preserve operational agility. Upcoming fielding of the Joint Light Tactical Vehicle (JLTV) and Amphibious Combat Vehicle (ACV) will provide the Reserve Component with the latest generation of combat equipment. Additionally, fielding of programs such as the Ground/Air Task Oriented Radar (G/ATOR) and the Ground Weapons Locating Radar (GWLR) will enhance our ability to fight and win on the modern battlefield. The top procurement priority of the Marine Corps Reserve is the KC-130J Super Hercules. The Marine Corps Reserve has been fielded 7 of 28 aircraft and will not be fully fielded until 2025. This extended fielding timeline forces the Reserve Component to simultaneously operate the KC-130J and the legacy KC-130T aircraft. These two aircraft have vastly different logistics, maintenance, and aircrew requirements, resulting in an increased outlay of resources to maintain the readiness of

the Reserve Component KC-130 Squadrons.

### *Training*

Each year and typically in the summer, Marine Forces Reserve participates in a number of training exercises both within the United States and overseas to improve combat readiness and enhance our ability rapidly activate and integrate with the Active Component. The service-level Integrated Training Exercise (ITX) is conducted aboard Marine Corps Air-Ground Combat Center, Twentynine Palms, California. ITX improves combat readiness, efficiency in Total Force integration, and enables more rapid activation response times at the battalion and squadron level. The exercise consists of two infantry battalions conducting live-fire and maneuver exercises, along with other elements of the Marine Air-Ground Task Force. This is one of the few opportunities that Reserve ground, aviation, and logistics combat elements, under the command of a regimental headquarters, are able to come together and coordinate all warfighting actions to operate as a Marine Air-Ground Task Force under live fire and maneuver conditions. Additionally in 2018, Reserve Marines and Sailors participated in Exercise Northern Strike at the Joint Maneuver Training Center aboard Camp Grayling, Michigan. Exercise Northern Strike provided an opportunity for Reserve Marines to train alongside Army and Michigan Air National Guard forces, as well as Canadian forces in a joint, combined-arms, live-fire exercise emphasizing close air support, joint fire support, and coordinated maneuver with fires.

To preserve fiscal and materiel resources, Marine Forces Reserve uses training simulators wherever and whenever possible. Reserve units employ Indoor Simulated Marksmanship Trainers (ISMTs) to maintain combat marksmanship skills and to maximize the use of their most precious resource, time. The ISMTs enable onsite training and eliminate long distance travel to remote DoD areas. Additionally, units capitalize on non-traditional training methods such as online training to

mitigate the limitation of 38 training days per fiscal year to complete mission essential tasks and all required DoD and Service annual training requirements. Expanding the use of simulators and online training enhances readiness and enables the Reserve Component to maximize limited training time during drill weekends.

### *Facilities*

Marine Forces Reserve occupies facilities in 47 states, the District of Columbia, and the Commonwealth of Puerto Rico. These facilities include 27 owned and 133 tenant Reserve Training Centers, three family housing sites, one permanent barracks, two emergency troop housing barracks and one General Officer Quarters. Although some sites are located on major DoD installations, most are situated within civilian communities, ranging from neighborhoods to industrial and commercial districts. We continue to improve the maintenance and security of our facilities to ensure the safety of our Marines and Sailors and to provide an effective training and mobilization location.

Fifty-seven percent of the facilities budget supports the sustainment and maintenance of existing infrastructure and day-to-day operating costs. We have improved the overall readiness of our facilities inventory through the Facilities Sustainment, Restoration and Modernization (FSRM) support program and maximized the impact of our budget through divestiture and demolition of excess footprint.

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

of failing infrastructure and modernize capabilities.

Of most critical importance is the safety of our Marines and Sailors. We have ongoing efforts to improve overall force protection at all of our sites by working with our service partners and the National Guard for joint occupied facilities. Numerous protection assessments and security engineering reports have been conducted at our facilities to assist and develop designs to mitigate protection concerns, specifically physical security. These assessments identify physical security requirements and serve to prioritize security enhancements to ensure our Marines and Sailors are secure in the facilities where they work and drill.

The combined effects of our targeted consolidation, FSRM, and MCNR programs have steadily reduced the number of inadequate or substandard Reserve Training Centers and enabled better support to the Force. As our infrastructure ages, however, our operating costs are steadily increasing. In addition, service level efforts to modernize our force and its infrastructure by 2025 also increase costs. Continued support to our annual funding request for our facilities program will enable us to improve the overall physical infrastructure that reinforces the operational readiness of our units.

### ***Health Services***

Marine Forces Reserve Health and Human Service' (HSS') ensures the health and wellness of the Reserve Marines and Sailors remains at the forefront. We continue to improve medical readiness through a robust Post-Deployment Health Reassessment (PDHRA) Program within Marine Forces Reserve and an accurate monitoring, identification, and notification of the unit-level actions necessary to attain readiness goals. Additionally, our Health Services personnel participate in Force Readiness Assistance & Assessment Program (FRAAP) inspections and audits which provide oversight at unit level and the ability to monitor policy adherence and readiness.



The Reserve Health Readiness Program (RHRP) greatly increased overall medical and dental readiness throughout the Force. This program funds for and dispatches contracted civilian medical and dental providers to units that do not have medical or dental support personnel or are not supported by a military treatment facility. During FY 2018, the RHRP performed 18,481 Periodic Health Assessments, 14,255 Mental Health Assessments, 576 PDHRAs, 55 PreDHAs, 3,966 laboratory services, 12,539 audio services, and 11,967 dental procedures.

Between deployments, our Health Services priority is to work toward achieving the DoD's goal of a 90 percent medically ready force. During FY 2018, our individual medical and dental readiness rates were 78.7 percent and 85.9 percent, respectively. Marine Force Reserve units rely heavily on RHRP to maintain our medical and dental readiness. Continued support of this program is imperative for maintaining readiness.

### ***Behavioral Health***

In addition to RHRP, Marine Forces Reserve executes a robust behavioral health program, which includes Combat Operational Stress Control, Suicide Prevention, Substance Abuse Prevention and Family Advocacy programs. Operational Stress Control and Readiness (OSCAR) training is conducted at all levels. It is provided during pre-deployment training to service members deploying for more than 90 days, as well as all commands in garrison. The purpose of this training is to provide the requisite knowledge, skills, and tools to assist commanders in preventing, identifying, and managing combat and operational stress concerns as early as possible.

The Navy Bureau of Medicine and Surgery (BUMED) continues to support behavioral health through various independent contracted programs, such as the PDHRA and the Psychological Health Outreach Program (PHOP). The PDHRA places an emphasis on identifying physical, behavioral, and mental health concerns that may have emerged since returning from

deployment. During CY 2018, Marine Forces Reserve successfully raised current completion totals to nearly 40,870 PDHRA screenings. The PHOP addresses both post-deployment behavioral health concerns and crisis-related interventions by providing our Marines and Sailors access to local resources through a network of contracted behavioral health. These programs are critical to maintain a resilient force by providing a pathway for Marines, Sailors, and families to seek behavioral health assistance.

Signs of operational and combat stress may sometimes manifest long after a service member returns home from deployment. This delayed onset of symptoms presents particular challenges to Reserve Marines who may be isolated from vital medical care and the daily support network inherent in active duty Marine Corps units. Encouraging Marines to acknowledge and vocalize mental health issues is a ubiquitous challenge facing our commanders. We address the stigma associated with mental health care through key programs, such as the Yellow Ribbon Reintegration Program (YRRP). Further, we market all of our behavioral health initiatives and programs through our Marine Forces Reserve portal website and during key Marine Corps forums throughout the year. Your continued support of our behavioral health programs is greatly appreciated.

Marine Forces Reserve Drug Demand Reduction Program (DDRP) continues to focus on reducing illegal drug use and prescription drug misuse within the Reserve community. Marine Forces Reserve relies profoundly on its drug-testing program, which acts as a powerful deterrent against drug use. Each Reserve unit conducts monthly drug testing to screen our Reserve Marines for drugs. The DDRP staff provides quarterly and on demand education and awareness training on the dangers of misusing and abusing prescription drugs as well as information on the proper disposal of old, unused, and outdated medications. Additionally, the DDRP increases leaders'

awareness on the dangers of abusing prescription drugs through annual substance abuse supervisory level training.

Suicide prevention continues to be a high priority for the Marine Corps. Marine Forces Reserve centers its suicide prevention efforts on six initiatives: in-theater assessments, PDHRA, PHOP, Care Management Teams, Marine Intercept Program (MIP), and Unit Marine Awareness and Prevention Integration Training (UMAPIT). The in-theater assessments target Reserve Marines who may be exhibiting or struggling with clinically-significant behavioral issues during a deployment. These Marines are evaluated by appropriate medical authorities for possible treatment with follow-up assistance made prior to returning home. The PDHRA program specifically focuses on identifying issues that emerge after our Marines and Sailors have returned home from deployment. The PHOP secures behavioral health screenings, psychological treatment referrals and provides essential follow-up treatment to ensure our service members' behavioral health needs are met.

Similarly, Care Management Teams focus on support through the VA's Transition Care Management Program. Our Marines are assigned a Care Manager who oversees the referrals and follow-on care of the Reserve Marine's individual health care needs. MIP is an evidence-informed targeted intervention for service members who have had an identified suicide ideation or suicide attempt. MIP includes a series of telephonic voluntary caring contacts in which a counselor reaches out to the Marine and assesses them for risk, encourages the use of a safety plan, and identifies and addresses any barriers to services. The MIP counselors then incorporate these caring contacts into the counseling process. These services are also provided to our Reserve Marines through the PHOP.

Additionally, our Marines, Sailors and family members are able to access behavioral health

programs at Marine Corps installations through Marine Corps Community Services (MCCS) while on active-duty orders. When not on active-duty orders, Military OneSource provides counseling, resources, and support to service members and their families anywhere in the world. The Marine Corps DSTRESS Line is another resource available to all Reserve Marines, and family members regardless of duty status. DSTRESS is a 24/7/365, Marine-specific anonymous crisis call and support center that provides phone, chat, and video-teleconferencing for non-medical, short-term, solution-focused counseling.

### ***Sexual Assault Prevention & Response***

Sexual assault remains a complex and challenging matter that is often interrelated with other readiness challenges, behavioral health issues, and destructive behaviors. For Marine Forces Reserve, addressing the continuum of destructive behaviors and identifying the most effective prevention techniques are top priorities with the goal of eliminating sexual assault within our ranks. To accomplish this goal, we execute a Sexual Assault Prevention and Response Program (SAPR) with seven full-time employees who provide supportive services across our geographically-dispersed force. In addition to the Force-level Sexual Assault Response Coordinator (SARC), each Major Subordinate Command within Marine Forces Reserve has a SARC who manages their Commanding General's SAPR Program from the our headquarters in New Orleans. Together with the SARCs, two professional civilian victim advocates provide support to our Marines, Sailors and families Marine Forces Reserve continues to work diligently to improve our victim response, outreach, and prevention.

Our SAPR staff trains up to 160 uniformed Victim Advocates (VAs) each year at our headquarters in New Orleans. After completing our 40-hour training course, these potential VAs submit an application for credentialing through the DoD's Sexual Assault Advocate Certification

Program. Once credentialed, the advocates are officially appointed by their commanders to serve at their respective Reserve Training Centers. In total, Marine Forces Reserve maintains an active roster of more than 250 SAPR VAs across the country.

Our SAPR personnel respond to Marines, Sailors and dependents who require SAPR services. Our SARCs and SAPR VAs screen for potential safety issues and develop individualized safety plans as needed. They offer advocacy services and referrals, and maintain a data base of nationwide resources for victims of sexual assault who may not reside on or near a military installation. Furthermore, our Marines and Sailors have access to a Victim's Legal Counsel who protect their rights following a report of sexual assault.

Marine Forces Reserve maintains a SAPR Support Line that is manned by the professional SAPR staff. Marine Forces Reserve also actively publicizes the DoD Safe Helpline which offers crisis support services for members of the DoD community. The DoD Safe Helpline is available 24/7 worldwide with "click.call.text" user options and can be used anonymously for confidential support.

Our prevention strategy is holistic and integrated with other programs that support the eradication effort, such as the Equal Opportunity Program, Deployment Resiliency, Safety, Spiritual Readiness Initiatives, and Behavioral Health. Marine Forces Reserve continues to set the example of discipline and respect by supporting a zero-tolerance policy related to assault, and a retaliation-free command climate. Leaders at every level are encouraged to actively engage with our Marines and Sailors to learn what can be done to further support a positive environment that is free from attitudes and behaviors that are incompatible with our core values. All Marines and Sailors receive SAPR training every year to ensure widespread knowledge about our program to include prevention and response

*Quality of Life*

Marine Forces Reserve remains committed to ensuring an appropriate balance and effective performance of our quality of life programs, which are designed to help all Marines, Sailors and their families, whether they are deployed or on the home front. Our force is dispersed throughout the country and away from traditional brick and mortar support resources available at our major bases and stations. Therefore, we strive to provide awareness of, and access to, the numerous support programs available away from major bases and stations. To meet the challenge of deployments, and to maintain readiness, we continue to promote family support through our Deployment Readiness Coordinators. This program is staffed by either civilians or active duty Marines all the way down to the detachment level. Marine Corps Community Services and our Deployment Readiness Coordinators provide a vital link to ensure support reaches those who need it.

Marine Forces Reserve tracks the submission of medical service treatment records to ensure Reserve Component Marines receive timely access to Department of Veterans' Affairs (VA) health care services. Working across all 160 sites, we aggressively target our performance for submission timeliness to ensure our Marines are able to submit timely VA disability benefit claims.

Marine and Family Readiness Programs remain flexible, constantly adjusting to meet the needs of our Marines and their families. A resilient force is primarily achieved by providing robust, relevant, and standardized training to our commanders, Family Readiness Command Teams, Marines and their families. Our Marine Corps Family Team Building (MCFTB) program offers non-clinical primary and secondary preventative education and professional training to support service members and their families throughout mission, life, and career events - ultimately enhancing readiness. MCFTB training events are delivered both, in person and through interactive

webinars, at our 160 sites. During FY 2018, Marine Forces Reserve conducted 113 training events at which 8,691 Marines and family members received valuable information to prepare for and thrive during deployments, and to achieve a positive post-deployment reintegration experience.

A key component to our quality of life and resiliency is the religious ministry support provided by 222 Religious Ministry Team (RMT) members. As Uniformed Members, RMTs support Marines and their families across the full spectrum of military life including combat and humanitarian engagements. 125 RMT personnel are embedded in 46 Marine Corps Reserve units and 97 are integrated in Navy Reserve religious support units that directly support Active Component Marine Corps units. This support includes developing the Commandant's spiritual readiness initiatives, providing divine services across the spectrum of faith communities, advising on spiritual and ethical matters, and delivering pastoral care in a safe, confidential environment. One signature program is the Chaplain Religious Enrichment Development Operations (CREDO) program. The CREDO program provides two transformational workshops: the Marriage Enrichment Retreat and the Personal Resiliency Retreat (PRR). These events equip Marines, Sailors, and their families with practical relationship and communication tools that strengthen marriages and individual resilience while on the home front and during deployments. The PRR curriculum also helps Marines and Sailors set personal goals, make good decisions, deal with stress, and live lives with greater purpose and satisfaction. During FY 2018, fifteen Marriage Enrichment and Personal Resiliency Retreats were conducted with 624 participants.

The Marine Corps emphasizes the importance of readiness for Marines and family members in many areas of life. Personal and Professional Development programs continue to provide training and educational resources to our Marines, Sailors and their families in a variety of areas. One key program that assists commands, Marines, and family members with readiness is

the Command Financial Specialist Program (CFS). The CFS provides assistance on a wide array of financial issues to include budgeting, savings, investing, insurance, Survivor Benefit Program (SBP), VA benefits, retirement and financial counseling to all members of our dispersed forces.

Our Transition Readiness Program emphasizes a proactive approach that enables Marines to formulate effective post-transition entrepreneurship, employment, and educational goals. The Marine For Life Network links our Marines to employment, education, and community resources to support their overall life goals. Tutor.com offers Marines, Sailors and their children access to 24/7 no-cost, live tutoring services for K-12 students, college students and adult learners. Our Marines are provided with remote access to language courses through Mango Languages. This program supports over 70 languages to include English as a Secondary Language (ESL). Peterson's Online Academic Skills Course helps build math and verbal skills to excel on the job, pass an exam, to advance in a career or continued education.

Our Semper Fit program continues to be fully engaged in partnering with our bases and stations to provide quality, results-based education and conditioning protocols for our Marines and Sailors. The High Intensity Tactical Training program provides hands-on, science-based strength and conditioning courses and online physical fitness tools to include instruction on injury prevention, nutrition, and weight management. Our Marines' and Sailors' quality of life is also enhanced through team building, and esprit de corps activities, such as unit outings and participation in competitive events. These programs are crucial to unit cohesion and camaraderie.

The Yellow Ribbon Reintegration Program is an invaluable part of our resiliency efforts. Since its inception in 2010, we have held more than 900 training events for more than 40,000 Marines, Sailors, and family members. In FY 2018, we conducted 51 events with 1,875



participants.

Our Marines, Sailors, and their families, who sacrifice so much for our Nation's defense, should not be asked to sacrifice quality of life. We remain a staunch advocate for flexible Family Programs and Services that evolve and adapt to the changing needs of our Marines, Sailors and their families. The combined effect of these programs and services are critical to the readiness and retention of our Marines, Sailors, and their families, and your continued support is greatly appreciated.

***Supporting our Wounded, Ill, or Injured Marines and their Families***

The Marine Corps ensures the availability of full spectrum care to all wounded, ill, or injured (WII) service members, whether they are Active or Reserve, through the Wounded Warrior Regiment (WWR). Marine Forces Reserve ensures Reserve Marines' unique challenges are addressed through a WWR Liaison Officer who provides subject matter expertise and special coordination with the WWR staff.

The WWR staff includes the Reserve Medical Entitlements Determinations Section, which maintains specific oversight of all Reservists requiring medical care for service-incurred and duty-limiting medical conditions. Reservists facing complex care and recovery needs have access to WWR's network of 45 Recovery Care Coordinators who provide one-on-one transition support and resource identification for WII Reservists and families often living long distances from military installations. WWR also has medical advocates at the regimental staff who are available to assist Reservists in need of medical care coordination and advocacy. District Injured Support Coordinators dispersed throughout the country also coordinate with Reserve units to ensure we keep faith with all Marines.

Marine Forces Reserve will not forget the sacrifices our Marines have made for this great

Nation; and we will continue to work with the WWR to establish resources and programs that address the unique and ongoing needs of our Reserve population.

***Conclusion***

The Marine Corps Reserves is manned, trained and equipped to provide individual Marines and units to the Active Component as part of the Total Force. We are forward deployed supporting Combatant Commanders' requirements, participating in multiple exercises at our training centers and around the world, and often the face of the Marine Corps to our local communities. Along with our Active Component, we are focused on modernization, readiness and manpower to maintain and enhance our ability to increase the lethality and capacity of the service to be the Nation's force-in-readiness. With your continued support, we will remain ready to augment, reinforce and sustain the Active Component. Semper Fidelis!

Mr. VISCLOSKY. Thank you very much.  
General Scobee.

#### SUMMARY STATEMENT OF GENERAL SCOBEE

General SCOBEE. Chairman Visclosky, Ranking Member Calvert, and distinguished members of the subcommittee, thank you for the opportunity to report on the readiness of America's Air Force Reserve. I am joined today by Chief Master Sergeant Tim White. He is the Command Chief for the Air Force Reserve Command.

As a critical component of the total force, the Air Force Reserve provides cost-effective strategic depth, rapid surge capability, and operational support to our Joint Force. Our 70,000 citizen airmen are both interchangeable and integrated with their Active Component counterparts. We fly as one. We train as one. And we fight as one.

The Air Force Reserve's current objective is to prepare to operate in tomorrow's battle space, while providing excellent support to our airmen and their families. To ensure alignment with the National Defense Strategy, we are focused on prioritizing our strategic depth, accelerating our readiness, developing resilient leaders who can generate combat power, and we want to reform our organization to optimize our warfighting capabilities.

The on-time allocation of fiscal year 2019 budget greatly bolstered the Air Force Reserve readiness, and we know you are working hard to ensure the timely allocation for fiscal year 2020 budget. We thank you for your continual support and your diligent efforts to ensure we receive the predictable funding we require to defend this great Nation.

The Air Force Reserve has improved our overall readiness during the past year. We are better prepared at the unit level and our individual readiness has also increased. Our nuclear deterrence forces are mission ready, and we have expanded our mission capabilities by activating our first cyber wing and our first intelligence surveillance and reconnaissance wing. Additionally, we are aligning our space units to meet the future space mission force requirements of our Nation.

We have improved our lethality by modernizing our weapon systems with the National Guard Reserve equipment appropriations, and we thank you for these funds, which we have used to also purchase much-needed support equipment. We remain focused on our personnel programs and reaching our end strength. We are targeting full-time manpower shortage with a variety of initiatives, including converting approximately 1,200 full-time authorizations from Air Reserve technicians to Air Guard and Reserve positions.

The Air Force Reserve has built our success on the hard work of our airmen. Therefore, it is imperative that we ensure our Reserve citizen airmen and their families have the support, resources, and care they need. This committee can help improve the quality of life for our airmen by supporting legislation to authorize our dual-status technicians the ability to receive medical coverage under TRICARE Reserve Select healthcare plan. This initiative would improve healthcare access for our Air Reserve technicians and their families, and it would significantly increase the retention of our Air Reserve technician, which is my most challenging status.

The Air Force Reserve will continue to increase readiness as we posture our force to meet future operational requirements. I thank you for the opportunity to appear before you today and for your unwavering support as we ensure the Air Force Reserve remains prepared to defend our Nation. I look forward to answering your questions.

[The written statement of General Scobee follows:]

# United States Air Force

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Testimony

Before the House Appropriations  
Subcommittee on Defense

## ***Guard and Reserve Hearing***

Statement of  
Lieutenant General Richard W. Scobee  
Chief of Air Force Reserve

March 26, 2019



# BIOGRAPHY

## UNITED STATES AIR FORCE

### LIEUTENANT GENERAL RICHARD W. SCOBEE

Lt. Gen. Richard W. Scobee is the Chief of Air Force Reserve, Headquarters U.S. Air Force, Washington, D.C., and Commander, Air Force Reserve Command, Robins Air Force Base, Georgia. As Chief of Air Force Reserve, he serves as principal adviser on reserve matters to the Secretary of the Air Force and the Air Force Chief of Staff. As Commander of Air Force Reserve Command, he has full responsibility for the supervision of all U.S. Air Force Reserve units around the world.



General Scobee was commissioned in 1986 as a graduate of the U.S. Air Force Academy. He earned his pilot wings as a distinguished graduate of Euro-NATO Joint Jet Pilot training in 1987. He has served as an F-16 pilot, instructor pilot and flight examiner both domestically and overseas in Germany, South Korea and Egypt. The general has commanded a fighter squadron, operations group, two fighter wings and a numbered air force. Additionally, he deployed as Commander of the 506th Air Expeditionary Group, Kirkuk Regional Air Base, Iraq, in 2008.

Prior to his current assignment, General Scobee, as the Deputy Commander, Air Force Reserve Command, was responsible for the daily operations of the command, consisting of approximately 70,000 Citizen Airmen and more than 300 aircraft among three numbered air forces, 33 flying wings, 10 flying groups and one space wing. He is a command pilot with more than 3,800 flying hours in the F-16, including 248 combat hours.

#### EDUCATION

1986 Bachelor of Science, U.S. Air Force Academy, Colorado Springs, Co.  
 1995 Squadron Officer School, by correspondence  
 1997 Master of Business Administration, University of South Carolina  
 2000 Air Command and Staff College, by correspondence  
 2005 Air War College, by correspondence  
 2006 U.S. Air Force Accident/Safety Board President Course, Kirtland AFB, New Mexico  
 2010 Joint Forces Reserve Officers Orientation Course, Joint Forces Command, Norfolk, Va.

2010 Leadership Course, Center for Creative Learning, Greensboro, N.C.  
 2011 Advanced Joint Professional Military Education, Joint Forces Staff College, Norfolk, Va.  
 2014 Dual Status Title 10/32 Joint Task Force Commander Course, Northern Command, Peterson AFB, Colorado  
 2017 Senior Executive in National and International Security, Harvard Kennedy School, Cambridge, Ma.

#### **ASSIGNMENTS**

1. June 1986 - July 1987, student, Euro-NATO Joint Jet Pilot training, Sheppard AFB, Texas
2. August 1987 - October 1987, student, fighter lead-in training, Holloman AFB, New Mexico
3. November 1987 - August 1988, student, F-16 Replacement Training Unit, MacDill AFB, Florida
4. August 1988 - November 1991, F-16 pilot, 526th Tactical Fighter Squadron, Ramstein Air Base, Germany
5. November 1991 - February 1993, operation location commander and air liaison officer, 1st Armored Division, Baumholder, Germany
6. March 1993 - May 1997, F-16 instructor pilot, 19th and 78th Fighter squadrons, Shaw AFB, South Carolina
7. May 1997 - May 1998, F-16 instructor pilot, 80th Fighter Squadron, Kunsan Air Base, South Korea
8. May 1998 - August 2000, assistant Director of Operations and F-16 instructor pilot, 21st Fighter Squadron, Luke AFB, Arizona
9. August 2000 - April 2005, assistant Director of Operations and F-16 instructor pilot, 301st Fighter Squadron, Luke AFB, Arizona
10. April 2005 - July 2006, Commander, 301st Fighter Squadron, Luke AFB, Arizona
11. July 2006 - June 2007, Commander, 944th Operations Group, Luke AFB, Arizona
12. July 2007 - April 2009, Commander, 944th Fighter Wing, Luke AFB, Ariz. (April 2008 - November 2008, Commander, 506th Air Expeditionary Group, Kirkuk Regional Air Base, Iraq)
13. April 2009 - October 2010, Commander, 301st Fighter Wing, Naval Air Station Fort Worth Joint Reserve Base, Texas
14. October 2010 - October 2013, Deputy Director of Operations, Headquarters North American Aerospace Defense Command, Peterson AFB, Colorado
15. October 2013 - October 2014, Director, Air Force Reserve Plans, Programs and Requirements, Headquarters Air Force, Washington, D.C.
16. October 2014 - May 2017, Commander, Tenth Air Force, NAS Fort Worth JRB, Texas
17. May 2017 - September 2018, Deputy Commander, Air Force Reserve Command, Robins AFB, Georgia
18. September 2018 - Present, Chief of Air Force Reserve, Headquarters U.S. Air Force, Washington, D.C., and Commander of Air Force Reserve Command, Robins AFB, Warner Robins, Georgia

#### **SUMMARY OF JOINT ASSIGNMENTS**

October 2010 - October 2013, Deputy Director of Operations, Headquarters North American Aerospace Defense Command, Peterson AFB, Colo. as a brigadier general

#### **FLIGHT INFORMATION**

Rating: command pilot

Flight hours: more than 3,800, including 248 combat hours

Aircraft flown: F-16

#### **MAJOR AWARDS AND DECORATIONS**

Distinguished Service Medal Defense

Superior Service Medal Legion of

Merit with oak leaf cluster

Bronze Star Medal

Meritorious Service Medal with four oak leaf clusters

Air Medal with oak leaf cluster

Aerial Achievement Medal with oak leaf cluster

Air Force Commendation Medal with oak leaf cluster

Army Achievement Medal

Joint Meritorious Unit Award

Meritorious Unit Award

Air Force Outstanding Unit Award with silver oak leaf cluster

Combat Readiness Medal  
National Defense Service Medal with bronze star  
Armed Forces Expeditionary Medal  
Southwest Asia Service Medal with bronze star  
Iraq Campaign Medal  
Global War on Terrorism Service Medal  
Korea Defense Service Medal  
Humanitarian Service Medal  
Air Force Overseas Ribbon - Short with oak leaf cluster  
Air Force Overseas Ribbon - Long with oak leaf cluster  
Air Force Expeditionary Service Ribbon with Gold Border  
Air Force Longevity Service Award with three oak leaf clusters  
Armed Forces Reserve Medal with "M" device  
Small Arms Expert Marksmanship Ribbon with bronze star  
Air Force Training Ribbon

**EFFECTIVE DATES OF PROMOTION**

Second Lieutenant May 28, 1986  
First Lieutenant May 28, 1988  
Captain May 28, 1990  
Major Feb. 1, 1998  
Lieutenant Colonel Sept. 12, 2002  
Colonel Aug. 9, 2006  
Brigadier General Dec. 22, 2010  
Major General March 26, 2015  
Lieutenant General September 7, 2018

(Current as of Sep 2018)



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March 26, 2019

The Air Force is a Total Force.

The Air Force Reserve is a critical component of this Total Force and a vital part of our national defense. Our 70,000 Citizen Airmen are operationally integrated with their Active Component counterparts. We fly as one, train as one, and fight as one.

The Air Force Reserve provides cost effective strategic depth, rapid surge capability, and operational support to the joint force. We supply the manpower and capabilities needed to fill combatant commander requirements. We also provide critical rapid response, allowing the Air Force to quickly react to unforeseen events, such as natural disasters and contingencies, and we will be called upon to supply the manpower required for the high-end fight.

We also provide daily operational support to the joint force by participating in Air Expeditionary Force taskings, filling Active Component manpower shortfalls, and providing manpower augmentation during operations tempo increases. Our personnel train both Reserve and Active Component members in multiple mission areas, to include assisting Total Force pilot production.

In addition to world-wide military operations, the Air Force Reserve partners with and supports a number of federal and civil organizations, including the Drug Enforcement Agency, the Federal Bureau of Investigation, the Federal Emergency Management Agency, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, and a variety of civilian education and research institutions. We participate in and assist with numerous efforts, including humanitarian and disaster response actions, international counter-drug operations, education and technology initiatives, and global scientific research programs.

The Air Force Reserve offers a career extension opportunity for separating Active Component members. The accession of trained personnel, allows the Air Force to retain fully qualified Airmen and saves millions of dollars each year in training costs. The retention of this talent increases the readiness of the Reserve component and sustains the capabilities of the Total Force.

### **Strategic Environment**

For two decades, Air Force operations have focused on counter terrorism and counter insurgency objectives. During ten of the last eleven years, budget cuts and the unpredictable appropriation of funds by Continuing Resolutions and the Budget Control Act degraded readiness across the Department of Defense. The Air Force Reserve was forced to stretch fiscal appropriations, deferring aircraft modernization, infrastructure upgrades, and equipment purchases. These shortfalls, combined with decreased training funds, reduced our overall readiness.

The re-emergence of great power competition necessitates that we rapidly restore our readiness and modernize our force. We must be able to engage in peer and near-peer conflict in the future operating environment. The battlespace of tomorrow will be drastically different from that of yesteryear, as technological advances are changing the nature of conflict, expanding warfare into new domains and increasing the need for certain key capabilities. Therefore, we must enhance critical mission sets and ensure we have the resources to meet emerging requirements.

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*Regardless of where the next conflict occurs or which adversary it features, the Air Force will be at the forefront.* – National Defense Strategy Commission

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### **The Air Force Reserve Today and Tomorrow**

In any future conflict, the Air Force will be at the forefront. Therefore, the Air Force Reserve must be prepared to fly, fight and win, in tomorrow's battlespace and to simultaneously operate in multiple warfighting domains. We must ensure we have the right force mix and the necessary capabilities to defeat any adversary. At the same time, we must sustain our current level of support to the joint force and maintain our readiness to respond to present-day contingencies.

The Air Force Reserve's warfighting ability depends on the timely allocation of funds. Predictable budgets allow us to deliberately program our spending, maximizing the readiness return of expenditures. On time allocations enable us to fully execute our flying hour and Reserve Personnel Appropriation funds, which we rely on to maintain a trained, ready force. Predictable allocations also facilitate modernization efforts, allowing us to sustain weapons systems and to systematically upgrade our infrastructure.

The on time allocation of the Fiscal Year 2019 budget greatly bolstered Air Force Reserve readiness. We know this achievement required considerable effort by Congress, and we thank you for your hard work. In addition to using this allocation to conduct training and complete readiness requirements, we also funded much needed construction, infrastructure improvements, and weapons systems sustainment. However, we still have significant backlogs in these areas, and we continue to face challenges associated with maintaining an aging aircraft fleet.

The Air Force Reserve's ability to support the joint force is directly tied to our integration within the Total Force. Our mission effectiveness is maximized when we maintain parity with the Active Component through the concurrent fielding and upgrading of airframes and equipment. Our interoperability and integration is further enhanced by associations between Active Component and Reserve units, which provide multiple readiness and cost saving benefits to the Total Force.

The Air Force Reserve must grow our capabilities to meet the demands of the future operating environment. In the past year, we activated our first cyber wing and our first intelligence, surveillance, and reconnaissance wing, which will serve as a base for the further expansion of these mission sets. Our Fiscal Year 2020 budget request aligns our space assets with the operational requirements of the Space Mission Force. We will continue to grow these evolving and emerging mission sets, while ensuring we have the proper force mix across the enterprise.

The recruitment, hiring, and retention of full time personnel, particularly pilots and maintainers, is currently the Air Force Reserve's most significant readiness challenge. We are implementing multiple initiatives to remedy the current shortage, including converting approximately 1,200 Air Reserve Technician positions to Active Guard/Reserve over a three year period.

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The Air Force Reserve has built our success on the hard work of our Airmen. They are an incredibly talented, experienced, and diverse force, and ultimately, they are responsible for executing the mission. Therefore, it is imperative that we take care of our Airmen and their families. We are committed to ensuring that our Reserve Citizen Airmen are resilient warfighters and that Reservists and their families have the support, resources, and care they need.

### **Implementing the National Defense Strategy**

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*The Department of Defense will be prepared to defend the homeland, remain the preeminent military power in the world, ensure the balances of power remains in our favor, and advance an international order that is most conducive to our security and prosperity. – 2018 National Defense Strategy*

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#### **Air Force Reserve Strategic Priorities**

The National Defense Strategy is the United States' plan to compete, deter, and win in the future warfighting environment. America's military force must be able to defend the homeland, provide a safe, secure, and effective nuclear deterrent, defeat a powerful conventional enemy, deter opportunistic aggression, and disrupt violent extremists in a cost-effective manner.

To align our efforts with National Defense Strategy objectives and Air Force directives, the Air Force Reserve established three priorities. First, we must **Prioritize Strategic Depth and Accelerate Readiness** to ensure we have the manpower and capabilities required to support the joint force and to engage in the high end fight. Secondly, we must **Develop Resilient Leaders**, who can operate independently and generate combat power in tomorrow's battlespace. Finally, we must **Reform the Organization**, optimizing our warfighting capabilities and internal processes to cost effectively maximize mission capabilities and ensure we provide the highest levels of support to our Airmen and their families.

The Air Force Reserve is proactively implementing these priorities, which will guide future initiatives at all levels of the command. This effort will ensure we are in line with the National Defense Strategy, facilitate mission readiness, and improve all aspects of our organization.

#### **The Air Force Reserve and the Air Force We Need**

Last year, the Air Force conducted an analysis of the force structure and capabilities required to implement the National Defense Strategy, which indicated that the Total Force should grow to 386 operational squadrons.

The Total Force currently has 312 operational squadrons. This number includes the Air Force Reserve's operational squadrons. When conducting the analysis, the Air Force assumed that the current ratio of Active Component to Reserve Component forces would remain constant. This

study was focused on determining the needed combat capabilities, and specified the required number of operational squadrons by mission set, not by component.

For any planned future growth, the Air Force will evaluate which missions are best suited to each component. Although the distribution of mission sets and capabilities is still to be determined, the Air Force Reserve will grow in proportion to the Active Component, adding both operational units and the necessary support personnel to sustain these forces.

### **Associations**

The association of co-located Active Component and Reserve units effectively amplifies readiness by improving the integration and interoperability of Reserve personnel. Associated flying units operate the same equipment, which enables Reservists to train on the Total Force's newest airframes and equipment. This provides multiple second and third order benefits to the Active Component and the Reserve, ultimately reducing operational and training costs for both. Associations also facilitate Reserve support to the Active Component and bolster the Reserve's ability to capture separating Active Component members, retaining their skills in the Total Force.

Our associations aren't limited to flying units. There are associated Air Force Reserve units in multiple mission areas, including intelligence, cyber, and space, and support functions, such as maintenance, training, civil engineering, and security forces. These associations provide the same cost savings, integration, and interoperability benefits garnered by flying unit associations.

Currently, there are approximately 70 associations between the Air Force Reserve and the Active Component. Various Active Component entities have proposed additional associations, which include space, cyber, and intelligence, surveillance, and reconnaissance (ISR) associations. The Air Force Reserve favors adding associations in locations and mission areas which will benefit the Air Force. We strongly support increasing the number of active associations, where the Reserve component is the lead unit and the Active Component is the associate.

### **Nuclear Deterrence**

The Air Force Reserve's Nuclear Deterrence Operations force consists of one nuclear strike wing, seven nuclear command, control, and communications capable command posts, and seven tanker wings with nuclear air refueling missions. We are also in the process of converting two additional wings to tanker operations, which are projected to achieve nuclear capability within two years.

The Air Force Reserve conducted fifteen Nuclear Deterrence Operations assessments in 2018. These assessments validated that our nuclear tasked units were properly equipped and manned, verified that personnel were adequately trained, and confirmed our ability to generate nuclear forces. **The Air Force Reserve's Nuclear Deterrence Operations Forces are mission ready.**

### **Emerging and Evolving Missions**

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Modern technology has expanded warfighting into new domains, revolutionizing how we fight and exposing us to new threats. Technology greatly enhances our combat capabilities, but our increasing reliance on integrated systems also creates potential vulnerabilities, necessitating the protection of critical assets. To retain our military advantage and to guard against new threats, the Air Force Reserve must keep pace with the rapid rate of technological development. We must ensure we have the tools, capabilities, and skills required for future conflict.

We live in a world that is connected by digital systems, which support everything from communications to infrastructure. These systems span the globe. However, there are no borders in the digital world, making the United States vulnerable to attack from any adversary with an internet connection. Therefore, we must protect our information systems, and we must be prepared to engage our enemies in the cyber realm.

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*Today, every domain is contested—air, land, sea, space, and cyberspace.”*  
 ~ 2018 National Defense Strategy

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To optimize our cyber defenses, the Air Force Reserve is shifting to precision cyber security, which protects data at rest, data in transit, and the identity of individuals accessing the data. This focused approach will provide better protection than our current method of attempting to secure every item connected to our networks, which has become unfeasible. We also plan to transition some of our information technology support, service, and sustainment to the private sector, allowing our personnel to focus on mission assurance and active defensive cyber operations.

The ability to rapidly share information between warfighting assets will create unprecedented synchronization in the employment of forces, magnifying our situational awareness on the battlefield, and amplifying our combat effectiveness. This synchronization is dependent on our capacity to gather, analyze and synthesize data. Robust ISR capabilities are critical to the future fight, especially as the geopolitical environment shifts to great power competition.

Cyber and ISR capabilities will only increase in importance as technology continues to advance. To retain our military advantage in combat and to protect against threats below the level of combat, we must have both cyberspace superiority and information superiority. The demand for Air Force Reserve support in these two key mission areas is already high, and we are posturing our force to ensure we can meet these demands.

The recent activation of the Air Force Reserve’s first cyber and ISR wings provides a foundation for future expansion in these mission sets. We built these units to maximize our capabilities within each function. Our newly formed cyber wing is the only wing in the Total Force to operate all Air Force defensive cyber systems, and our ISR wing is the most mission-diverse ISR wing in the Air Force. Furthermore, we capitalize on our Reservists’ civil experience to enhance our mission capabilities and foster industry partnerships. Our diversity and career field expertise allow us to meet all Total Force support requirements in these critical missions, and we are postured to grow our forces to meet future needs.

In any conflict, control of the high ground offers a great advantage. Space is the ultimate high ground. Our adversaries have realized this, and they seek to level the playing field by expanding warfighting operations into space. We must be prepared to defend our space assets and interests.

The Air Force Reserve is already a key contributor to the Space Mission Force. We conduct multiple space functions, including command and control, satellite operations, missile warning and missile defense, counter space operations, and electronic warfare support. We also provide launch and range support, conduct testing and training, and provide manpower for the Combined Space Operations Center. In response to Air Force Space Command needs, our FY2020 budget request rebalances 63 manpower billets into our Space Mission Forces by removing them from other lower priority mission sets. This is intended to right-size our space assets, and will ensure we can meet future United States Space Command support requirements.

## **Rebuilding Readiness**

### **Funding Readiness**

The Air Force Reserve relies on flying hour funding and Reserve Personnel Appropriation (RPA) funds to maintain individual readiness. Flying hour funding ensures our aircrews have sufficient training and maintain required currency and proficiency. RPA funding gives us the ability to provide extra training when needed. We also use RPA funds to temporarily backfill vacancies and to augment our full time force as required to maintain readiness.

The Air Force Reserve executed 99 percent of both our Fiscal Year (FY) 2018 flying hour and RPA budgets, and we are on track to execute all FY 2019 flying hour and RPA funds. The flying hour funding requested in our FY 2020 budget currently matches our anticipated execution. Any decrease in this appropriation request would impact our readiness.

### **Pacing Squadrons**

Pacing squadrons are the operational squadrons required during the opening days of a peer fight. A few of these extremely high priority units are Air Force Reserve squadrons, and some of our associate units support Active Component pacing squadrons. We must be capable of providing the strategic depth demanded by a peer fight, therefore we are focusing resources on these pacing squadrons and supporting units to ensure they achieve readiness within the required timelines.

### **Unit Readiness**

The readiness of our force is paramount. Last year, with the help of Congress, the Air Force Reserve reprogrammed and distributed an additional \$90 million in RPA funding to facilitate the completion of readiness related tasks and training. We also allocated operations and maintenance funds for the purchase of readiness related equipment and training items, to include resources for Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) requirements, Ability To Survive and Operate requirements, and weapons qualification training. We added a thirteenth drill weekend to focus on CBRNE training, weapons qualification, and Self Aid/Buddy Care (SABC)

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training. As a result of these actions, 80 percent of our personnel now meet weapons training requirements and approximately 90 percent meet CBRNE and SABC training requirements.

The Air Force Reserve is a predominantly part time force. We must ensure optimal use of their limited time to maintain both individual and unit readiness. However, over the past decade, the Air Force Reserve has shifted ancillary and support taskings to the individual Reservist. This increased the time Airmen spent on administrative items and reduced the time available for training and mission requirements, impacting readiness.

To restore our readiness, we must reduce the administrative requirements placed on the individual Airman. Last year, the Chief of the Air Force Reserve instructed the force to eliminate unnecessary requirements by directing all Reservists to “cease, re-align or consolidate duties not directly tied to readiness.” To facilitate this effort, we assessed our internal processes and eliminated over 200 self-inspection checklists and several instruction supplements. Both these actions provided our Airmen additional time to focus on readiness and ensured the Air Force Reserve was in alignment with Secretary of the Air Force guidance to reduce ancillary requirements across the Total Force.

The Air Force Reserve’s FY 2020 budget request aims to further reduce the administrative burden on our Airmen, by increasing the number of both full and part time squadron support personnel across the command. The addition of these support personnel will reduce the non-mission related tasks requirements levied on the individual Reservist and allow our Airmen more time to complete training and readiness requirements.

### **Medical Readiness**

In the past year, the Air Force Reserve has made great gains in medical readiness. We streamlined our headquarters level medical case processing, eliminating a backlog of more than 2,000 cases. Timely medical review expedites the recruitment process for critical career fields, such as pilots and medical professionals, and minimizes the time Selected Reserve members spend in a non-ready status while awaiting medical review.

The Air Force Reserve is also increasing full time support in Reserve Medical Units across the enterprise. The additional support will improve the quality of medical case submissions, reducing processing time, and will improve unit ability to complete physicals. As a result, our Airmen will spend less time waiting in the medical clinic and more time training.

We also removed participation restrictions on members with duty limiting medical conditions. Previously, Reservists with duty limitations were not allowed to attend training without approval from the Air Force Reserve Command Surgeon General. This negatively impacted both individual and unit readiness, as the majority of these members were physically capable of being present at drill, completing some training requirements, and assisting with squadron operations. Under the new policy, these individuals will be able to participate in training within the limitations set by medical personnel. Commanders will consider mission requirements, physical limitations, and safety when making the determination to restrict participation for individuals on medical profile.

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### Full Time Manpower

Overall, the Air Force Reserve is slightly below end strength targets and we are experiencing a shortage of full time and part time personnel in certain critical career fields. These vacancies decrease our overall readiness, put undue strain on our full time support and hinder our ability to train our part time force. We have backfilled some of our full time vacancies with RPA support, but this is only a stopgap measure which is dependent on volunteerism. To ensure mission readiness, we must restore our full time staffing levels.

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*Readiness recovery is first and foremost about people.*

– U.S Air Force Posture Statement,  
FY 2020

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Our full time force is a mix of civil service Air Reserve Technicians (ART), which comprise the bulk of our full time support, and Active Guard/Reserve (AGR) personnel. The current manpower shortage is a direct result of the low ART manning. We have a relatively low number of AGR vacancies. This shortage is most critical in the pilot and maintenance communities.

We are short approximately 364 full time pilots. The Air Force Reserve does an excellent job capturing separating Active Component pilots, however, almost all affiliate in part time status, forcing us to rely on new hires to fill full time vacancies. We are currently allocated 96 undergraduate pilot training slots per year. To ensure we use all allocations, we now hold six annual selection boards. We filled 99 percent of our FY 2018 our pilot training slots and are on track to use all FY 2019 slots, having already filled over 60 allocations.

The Air Force Reserve is actively engaged with the Aircrew Management Council regarding national pilot production. We are also working with accredited aviation colleges and universities to develop solutions to the nationwide shortage and have created a pathway program for pilot candidates which is similar to those used by major airlines.

In addition to our pilot shortfalls, we also have a deficit of approximately 1,500 full time maintainers. Our number of trained and fully qualified maintenance personnel has continued to decrease. Our aircraft availability and mission capable rates decreased, a direct result of the lack of trained and fully qualified full time maintainers.

The Air Force Reserve's maintainer shortage is a subset of our ART manning shortage, which shares the same underlying causes. Nearly all of our full time maintenance authorizations are ART positions. In certain career fields and geographic locations, ART salaries and benefits are not competitive with the civilian industry. In addition, the cumbersome and lengthy civil service hiring process has prolonged the duration of vacancies and caused us to lose candidates.

The issues which currently hinder our ART manning are much less prevalent in our AGR force. AGR positions offer both higher salaries and greater benefits, and the AGR assignment process is shorter and more streamlined than the civil service hiring process. As a result, AGR hiring and retention rates are higher, and AGR vacancies are of shorter duration.



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The Air Force Reserve is implementing multiple recruitment and retention initiatives for mission essential and critically manned career fields, such as bonuses and special salary rates. This includes incentives specific to ARTs, pilots, and maintainers. We have also adjusted and revised policies to allow for greater retention in critical career fields, and removed internal barriers to improve recruitment and decrease hiring timelines.

Air Force Reserve readiness depends on sufficient end strength and the adequate manning of all career fields. To improve recruitment, we are increasing the size of our recruiting force, and we now have recruiters dedicated to ART hiring. We are also targeting our recruitment to hire members for critically manned career fields and personnel with in-demand skill sets. In addition, we are offering recruitment bonuses and constructive credit for new hires in certain career fields.

## **Modernizing the Force**

### **Modernization**

The Air Force Reserve owns some of the oldest airframes in the Total Force. The average aircraft in our inventory is 37 years old, nine years older than the average Active Component aircraft.

Older aircraft are difficult to maintain, requiring more time and resources to operate. Maintenance needs increase as an airframe ages, and older aircraft are more prone to corrosion. Sourcing parts for these aircraft can be challenging, as certain components are no longer in production. Eventually, it becomes cost prohibitive and too time consuming to maintain aging platforms. Therefore, fleet modernization, recapitalization, and weapons systems sustainment are critical to maintaining Air Force Reserve mission readiness.

The acquisition of new platforms, such as the F-35 and the KC-46 ensures the Air Force Reserve has the capabilities required for the future fight. The battle management systems on board these platforms are essential for multi-domain operations. We are currently in the process of upgrading certain legacy airframes with the capabilities required for the future fight, which includes these battle management systems. Recent weapons system modernizations have included aircraft radar and targeting enhancements, defensive systems upgrades, and datalink and communication system upgrades.

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*...American technological innovation, and a culture of performance will generate decisive and sustained U.S. military advantages.*

— 2018 National Defense Strategy

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### **Concurrent Fielding**

The Air Force Reserve's operational abilities are tied to our ability to integrate into the Total Force. We are most effective when we can operate interchangeably with our Active Component counterparts. Therefore, whenever possible, we must maintain parity with the Active Component.

The concurrent fielding of new airframes, aircraft upgrades, and other equipment allows us to maintain operational parity and enables integration with the Active Component. The Air Force Reserve can only provide strategic depth and operational support to the joint force in mission areas

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where our personnel are trained on the required weapon system. Therefore, concurrent fielding maximizes our ability to support Active Component missions.

### **Infrastructure**

The fiscal constraints of the past ten years have created a backlog in Air Force Reserve construction and infrastructure improvement projects. We currently estimate 122 future year military construction (MILCON) projects, which will cost approximately \$890 million. We also require approximately \$1.53 billion to fund Facility Sustainment, Restoration and Modernization (FSRM) projects.

Both MILCON and FSRM projects are prioritized based on multiple factors, which include mission impact and facility condition. In FY 2019, the Air Force Reserve received \$122 million in MILCON funds and \$85 million in FSRM funding. We have requested \$61 million in MILCON and \$114 million in FSRM for FY 2020. Both MILCON and FSRM funding will be used to fund mission-driven construction and modernization requirements for Air Force Reserve facilities.

### **Investing in the Total Force (Service Members, Families, and DOD Civilians)**

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*The Air Force Core Value 'Excellence in All We Do' includes providing excellent support to our Airmen and their families. – Lt Gen Richard Scobee*

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### **Yellow Ribbon Re-Integration Program**

Our FY 2020 budget requests \$17 million for the continued funding of the Yellow Ribbon Re-integration Program, which provides support and resources to deploying Airmen and their families. The Yellow Ribbon program began ten years ago as a temporary initiative but has evolved in to a sustainable, life changing program.

Participation in the Yellow Ribbon program is voluntary. The program is comprised of a pre-deployment and two post-deployments events. Reservists who take part are authorized to bring all dependents under the age of eighteen and one adult guest of any relation to events, which provide attendees with tools and access to resources to help mitigate the challenges associated with deployments and build reintegration skills.

These enriching and educational events have been shown to enhance attendees' knowledge of critical resources. Yellow Ribbons participants are better prepared for deployments and to manage the stress associated with deployments. Airmen who attend these events are more willing to continue service, and their families are more supportive of their continued service. In FY 2018, the Air Force Reserve hosted 51 Yellow Ribbon events.

### **Mental Health and Suicide Prevention**

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The personal resiliency of our Airmen and their family members is an extremely high priority for the Air Force Reserve. We have multiple on-base entities which provide wellness-related support for our Airmen and their families. We actively disseminate information about both on and off-base resources to our personnel through multiple channels, including digital communications, unit information boards, and commander's calls.

The recent increase in service member suicides is particularly concerning. In response, the Air Force Reserve is evaluating new methods to prevent suicides, including using algorithms and integrated databases to identify at risk Airmen, and creating protective policies and programs to help these individuals.

To further improve the personal resiliency of our Airmen, we are expanding a program which embeds medical professionals in high risk units. This initiative gives personnel quick and easy access to medical care, including mental health support, provides leaders with information and tools to improve the health of their unit, and may help predict and prevent suicide.

The most common mental health issues among Air Force Reserve members are anxiety and depression, similar to that of the general population. We are proactively addressing stressors associated with military service, and we conduct person to person mental health evaluations during both annual and post-deployment medical screenings to monitor individual wellness.

There is a Violence Prevention Integrator on all nine Air Force Reserve host installations and at Fort Worth Naval Air Station Joint Reserve Base, where we are the lead Air Force wing. All other Air Force Reserve units are tenants on Active Component installations, and are provided this service through the host unit program. Air Force Reserve medical facilities are staffed with a full complement of mental health specialists. We are evaluating requirements for integrated medical support, including mental health support, in operational units.

### **Fiscal Year 2020**

In the past year, the Air Force Reserve enhanced readiness and improved mission capabilities. Our FY 2020 budget request will allow us to continue these efforts. The appropriation and allocation of the requested funds will enable us to provide support to the joint force while we further ongoing preparations for the future fight. We will continue to increase readiness throughout our organization, by training our personnel, upgrading and modernizing weapons systems, improving our infrastructure, and enhancing our interoperability as part of the Total Force. This budget request will boost manning levels, preserve our strategic depth, and posture our force to meet future operational requirements. We thank you for your continued support as we ensure the Air Force Reserve remains a combat ready force that is prepared to fly, fight, and win for years to come.

Mr. VISCLOSKY. Thank you very much.  
Mr. Calvert.

#### SEQUESTRATION

Mr. CALVERT. Thank you, Mr. Chairman.

I hate to ask this question, but we need an answer for the record. If the Congress fails to reach an agreement on the budget, what impact will a second round of sequestration have on your ability to meet your mission requirements? If we could just get an answer from each one of you.

General LUCKEY. So, Ranking Member, as you well know, it would have significant impact, obviously, just to the extent that we have been focusing a lot of our energy over the last several years on the readiness of this force, in terms of additional training days for critical training activities. I know you are familiar with the Cold Steel Program that we instituted a couple years ago. That has been an additive requirement, both from the standpoint of purchasing additional ammunition but also additional training days to get our soldiers trained and proficient, frankly, in some skills that they hadn't exercised in a long period of time. So that is just one example of where I would see a significant impact to the readiness of this force over time.

Admiral MCCOLLUM. Congressman, thank you for that question. Reservists are at their best, as you know, when they are in a good predictable place with both their family, their employer, and their military obligations. Introducing a lack of predictability causes significant churn in the Reserve force.

The programs that we focus on for building warfighting readiness are those additional training days. The ability to build strategic depth would be affected as well. So there would be a significant impact should that occur.

Mr. CALVERT. Thank you.

General JAMES. Congressman, I will parrot the same as my two colleagues have said. So it is readiness. It is predictability for us, as we continue to train to larger level command and control. I think we would step back a little in just more of an individual—from a perspective of readiness to more of an individual training.

Mr. CALVERT. Training.

General SCOBEE. Ranking member, I would agree with my colleagues, but I also say that I can put a fine point on this. A return to sequestration would erase the gains we have made over the last 3 years in the Reserve Command.

Mr. CALVERT. Thank you.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Ryan.

#### SUICIDE PREVENTION

Mr. RYAN. Thank you, Mr. Chairman.

General Luckey, we spent a little time together yesterday, and you were talking about something I found very interesting along the lines of suicide prevention. And I would love for you to share with the committee what you talked about with regard to being underemployed, unemployed or underemployed, and the connection that you saw.

General LUCKEY. So thank you for the question, Congressman. As you know, I am pretty passionate about this, and we are working pretty hard in the Army Reserve, as I know all my colleagues are in all of the services across the Department.

I will just say we have done a pretty good job of trying to figure out where we can find common threads of concern so we can I will use the term focus our energies on some of the soldiers who may be more challenged. I look at a couple different factors, but the one that is probably the most pronounced is about 50 percent, as I think I shared with you, of our soldiers who either effectively commit suicide or attempt it in a very determined fashion, our analysis tells us are either completely unemployed or what I would regard as significantly underemployed.

We have targeted our private-public partnership program in the Army Reserve, as it is essentially a tool to help those soldiers who are underemployed once we have identified them, which, frankly, is part of the key, helping make sure that we are giving them additional energy, additional attention, additional resources to find good, meaningful jobs.

The reason that I raise the issue, as you well know, is I remain concerned, as I said in my opening statement, about life balance for our soldiers and particularly those that are financially stressed because I see it as an accelerant to other stressors in their lives which can lead to self-destructive behavior.

#### SUFFICIENT TRAINING HOURS FOR SPECIALIZED UNITS

Mr. RYAN. I appreciate that, and I appreciate your focus on it. Thank you.

General Scobee, I want to just read—we had some language put in the report last year encouraging the Chief of the Air Force Reserve to review requirements to ensure the specialized units are allocated sufficient training hours to successfully perform both their specialized and tactical missions and are allocated equipment upgrades necessary to address safety concerns associated with these missions.

When deciding which specialized missions to target for equipment upgrades, the committee urges that strong consideration be given to those missions utilizing the oldest equipment. In Youngstown, at the Air Reserve station there, we have the aerial spray unit, as you know. Can you talk to us a little bit about the plans to recapitalize the existing C-130Hs as they age and the maintenance costs escalate?

General SCOBEE. Congressman Ryan, our plan in the Air Force is right now we have a certain—in the Air Force Reserve, we have two units that have J model C-130s. The rest of our units are all H model C-130s, as is Youngstown.

Our plan right now is to go through the upgrades, both the avionics upgrades, AMP 1 and 2 for our C-130Hs as we improve those. If the Air Force has money and they are going to additionally recap H model C-130s, my plan is the same as my predecessor and is we are going to go through our basing process to see where those airplanes would go in.

But our fundamental basis is going to be that we put those aircraft in our special missions, which include the firefighters and the

aerial spray at Youngstown. And then we will look to the corporate process to determine where those aircraft would best be needed. Aerial spray is one of our most interesting missions because it also has a combat-related mission as well with spray, and I think it is vitally important.

Mr. RYAN. I appreciate that.

Mr. Chairman, I yield back.

Mr. VISCLOSKEY. Judge Carter.

#### ENHANCING EMPLOYMENT OPPORTUNITIES FOR RESERVISTS

Mr. CARTER. Thank you, Mr. Chairman.

Welcome all of you. We are glad to see you here. I tried to get one question that might fit everybody, but I can't do it so—

General Luckey, we talked about this when you visited. We visited several times, and I enjoy it every time we do. The full-time support for employment, you just briefly mentioned it, has anybody got any—and I am sure all of you have an issue with keeping your people employed back home while they are serving their country in the Reserve.

Are there ideas out there to enhancing the employment opportunities for our reservists in any of the services? That is one question you can all answer. We want everybody to be gainfully employed while they are serving in the Reserve, and I know that is a challenge sometimes. We don't want to put any more burden on people's families than we have to. Are there any ideas or programs that people are using to help them become more gainfully employed?

General LUCKEY. So I touched on it a minute ago, Congressman, briefly, but so internal to the Army Reserve, we do have this private-public partnership, which is essentially a series of relationships, hundreds of them in fact, with employers across the Nation to enable us to sort of leverage that connection, leverage that foot in the door, so to speak, to help our soldiers find meaningful employment. And we have a number of facilitators out there helping our soldiers build resumes and that sort of thing. So there are things we are doing to get after it.

But my point earlier to Congressman Ryan's question really is, from a concern that I have as a leader of this force, I am particularly focusing those energies on those soldiers that we have identified as either underemployed or unemployed altogether.

The other thing I would say, and I have mentioned this before, I do think there is some goodness in at least thinking about as a matter of sort of national resolve some way for us to essentially acknowledge what I regard as a strategic partnership as part of the national security fabric of the United States of America between the employers of America and the Reserve Components, all represented here at this table, where employers across America get a very strong sense that the patriotism they are exhibiting by continuing to share this talent with us. And I would leave that to the senior elected leadership of the United States to sort of sort through what that might look like. I don't have any silver bullet there, Congressman. But I do think that we should be messaging to this force and to the employers that support this force how critical that partnership remains for national security.

Admiral MCCOLLUM. Congressman, certainly we feel in the Navy and the Navy Reserve that leveraging industry, public and private partnership is so key to making this successful. When I do engagements around the country to see our sailors, we will parse off engagements with cities and organizations, such as Navy League and people that the ESGR recommend that we contact.

Executive visits with cities. Recently, I was in St. Louis, in Detroit, in San Antonio, and I engaged with the employers and talked about this very thing. As a matter of fact, while I was in Michigan, the Governor's Council there said: If you can help articulate the equivalent of the qualifications that the Navy Reserve, your reservists have, we will create a match with what we see in industry in our organization, again, a pursuit to that join-up.

Finally, I certainly believe in point engagement. I will host about a hundred employers to come out to San Diego in June and will allow them to come and see what their sailors are doing. We will have them on the ships and the aircraft squadrons and Navy special warfare, and I will host a reception just to talk about the importance. Previous times we have done this, they have always come back and said: Now we really understand this importance, and we will continue to do more.

Mr. CARTER. Some great ideas.

General JAMES. Congressman, from the Marine Corps, we do a few things. We have a Yellow Ribbon Program that we put on for our inactive Reserves and then our units, Reserve units that are deploying pre and then post. And that is an opportunity for headhunters or employers to come in. We are tied into those local communities.

We also have the Marine for Life Program, which is run by the Reserves, and those are reservists that are out there that are in those communities. And so they can be found on the website, and they reach out and help with connections in the private and the public for employment and also just mentorship.

We also have the Former Marines Network. I don't think it is a surprise that we are a very proud service and we are a Marine for life unless you do really something bad, right? So wherever you go in employment, and I have seen that, is that we know who those Marines are and we take care of each other throughout.

And just from the aviation side, we have contract maintenance. About 50 percent of our Marines are in on a full-time basis. Most of them are down in the barn, as we call it, turning wrenches. And so when we can hire those contract maintenance support teams, we bring them in, and it is a win-win for us or the Reserves when they come in. And we can put them on full time and getting their touch time on their platforms. And then, if we have to use them, put them in the uniform and they go.

General SCOBEE. Congressman Carter, no surprise, all of the Reserve Components, we talk on a regular basis. And the same thing in the Air Force Reserve, all three of my colleagues have talked about, with the exception of the Marine Network. We don't have that. But the rest of the things we are all in lockstep on.

But what is interesting to me as we travel around to our different communities is the strength of the communities that we have our Reserve Components in. That is really where we have

been able to find employment for our reservists. And that has been one of the strong things that I have seen.

So reservists who are successful in what they do, organizations that understand what the commitment of the Reserve Component is, we find them very amenable to bringing on an additional reservists. So underemployment, it is not something traditionally we suffer from, but when we do, we have a good network of our local constituents that really want to help.

Mr. CARTER. You know, these people that employ reservists, it is a certain amount of, I don't know, irritation factor to have them, these people be deployed. It seems like there ought to be something that could be posted, you know, the Army Reserve, the Marine Corps Reserve thanks this employer for sharing with our military.

Because in Texas, we see a lot of people have a sign on their window when you go in or they advertise in their ads we hire veterans. I think that we ought to have some acknowledgement this employer—recognize the employer—hires reservists and cooperates with reservists. Because, I don't know, it just seems like to me they ought to get some kind of recognition because, you know, deployments are getting pretty regular for everybody. And the employers need to be kind of—give them an *atta boy* once in a while. Thank you.

General LUCKEY. Congressman, so I will just say I think the services do that, but I would acknowledge your point. We probably, from a scale perspective, don't do it as aggressively or as often as perhaps we should. So I take that.

Mr. CARTER. Thank you.

Mr. RYAN. Pete, I just want to use an opportunity here to plug a bill for myself.

RESERVE COMPONENT EMPLOYER INCENTIVE, COMPENSATION AND  
RELIEF ACT

Mr. VISCLOSKY. You got it.

Mr. RYAN. Thank you. To share with the committee, H.R. 801, Congressman Palazzo and I have the Reserve Component Employer Incentive, Compensation, and Relief Act, which is a tax credit for employers who hire Guard and Reserve. And General Luckey and I spoke about this yesterday. I think it is one opportunity for us to talk about how we can show some appreciation—

Mr. CARTER. Good idea.

Mr. RYAN [continuing]. For these employers who make a lot of sacrifices to their own businesses, as we all know. So I wanted to share that with the committee.

And, Dutch, I am sure you want to sign onto that immediately.

SEQUESTRATION

Mr. RUPPERSBERGER. That sounds good. You got me. Okay.

I am going to yield my time to Congressman Kilmer, but before I do that, I want to acknowledge Congressman Calvert for his question about sequestration. I think sequestration is one of the most destructive laws this Congress has passed. It cuts everything across the board. As we know, budgeting is about priorities. For years, when we passed it, I have asked all the panels about the impact of sequestration and how it makes us weaker.



And once our military gets their budget, they can't come back and defend it. We have to. So it is still the law. We have to do whatever we can to make our country stronger to do away with sequestration.

I yield to Congressman Kilmer.

MARITIME PATROL AND RECONNAISSANCE MISSION

Mr. KILMER. Thank you to my colleague.

And thank you, Mr. Chair. I am supposed to be chairing a meeting downstairs, so I went from owing Dutch a glass of wine to now two bottles.

Vice Admiral McCollum, I wanted to follow up on something you referenced in your opening remarks regarding the P3C Orion aircraft. I recognize the Naval Reserves operate some aging aircraft over 35 years old at the Naval Air Station in Jacksonville and also in Whidbey Island, which is not in my district but is up north of me.

As far as I know, there is no plan to extend the service life of that. In that case, these commissions, as you pointed out, would—these squadrons would be decommissioned in 2023. The recapitalization of these Reserve squadrons is the top priority for the Navy Reserve and your unfunded list for fiscal year 2020.

I was hoping you could just take a few minutes to explain how the Navy Reserve complement the Navy Active Duty maritime patrol and reconnaissance mission. Could you tell us why recapitalization of these squadrons is the top funding priority in your unfunded list for 2020? How is readiness affected if these Navy Reserve squadrons go away in 2023, and why is the P-8A the right choice going forward for recapitalization?

Admiral MCCOLLUM. Congressman, thank you for that question.

As the Navy Reserve focuses on strategic depth, it is part of the overall equation of the total force of the fighting Navy. The maritime patrol capability of the Navy, in terms of its requirement, warfighting requirement, sits right about 138. And PB 20 brings that total number to 117.

The AC and the RC are interoperable. They work together. They train together, and the standards are the same. When we look at a more lethal Navy Reserve and we look at our defense strategy and then the named competitors with China and Russia, we know that this capability is very important to our capability. And, as I mentioned, that the Navy has established in its unfunded priorities list as its number one lethality requirement in the UPL for this recap.

So 2023 is a line which, just because of the service life of those P3s, that they would sunset. And so the idea is if there are additional resources available, that the recapitalization of these aircraft can begin. A key point about this, above the aircraft itself, and that is leveraging the skill sets of these pilots, who many of them fly in the airline, and their ability. And most of the airframes they fly in the airline are the same airframe as the P8. So there is a return on investment capture of the pilots. And, you know, pilots have a career path, and they have a place to sit and fly and they have flight hours. So, usually, if we can maintain those, they want to stay viable. But we need all that capability in the strategic depth

capability of the Navy for the overall warfighting lethality focus in GPC.

Mr. KILMER. Super. Thank you.

And thank the chairman. I yield back.

Mr. VISCLOSKY. Mr. Crist.

#### DISASTER RESPONSE

Mr. CRIST. Thank you, Mr. Chairman.

And this is for any of you. While the main roles of the Reserve and Guard Components falls under the Defense Department, you are all frequently called upon to help out during natural disasters, especially my home State of Florida not infrequently. How do your exercises, trainings, and leadership structure translate to disaster response?

General LUCKEY. So let me take that first, if I may, Congressman. Thank you for the question.

So, from a training perspective, as you well know, inside the larger national response framework, the Reserve Components of the military do, in fact, train to support on the Army side Army North, which falls under NORTHCOM for the purposes of supporting sort of writ large disasters in the homeland and, therefore, trains to those standards in a series of different exercises.

More discretely, to your question about sort of what are we doing internal to the Army Reserve and to the other services to sort of prepare ourselves and organize ourselves, I would just tell you I go back to the comment that I made earlier in my opening statement about the investment strategy that we have largely leveraging, frankly, the financial support we get from this committee and from the Senate.

From an equipping perspective, the Army Reserve, I will give you just one example. So, between Maria primarily and Irma and then Harvey, so there were three storms in fairly close succession. As you know, one passed right over the State of Florida. A lot of our resources were immediately committed in an immediate response authority, and then some of them continued on to provide support pursuant to requests from FEMA.

We can assume many different things, whether it was filters for our water purification systems or equipment that was consumed in the course of providing relief for our fellow citizens. So part of the investment strategy that we have in the Army Reserve is to essentially recapitalize some of those capabilities so that we are immediately reset for the next season to be able to respond again when the call comes. And as I said, we were recently conducting operations last week in Nebraska. So this is something that is an ongoing challenge for us, and frankly, we are honored to do it.

Admiral MCCOLLUM. Congressman, the Navy Reserve focuses their response in its capability when events do happen. We do it via exercises. We have what we call HUREX, hurricane exercise responses. And we measure the Navy Reserve's response to the locations where we would expect through our, we call it the EPLO Program, the emergency preparedness liaison officers, who then connect with the larger defense support to civil authorities construct.

Additionally, there is an authority that we have to mobilize short-term reservists for homeland defense scenarios in the 12304

Bravo mechanism or the 12304 mechanism, which there are several variants. So the ability to have an authority. We exercise it, and then we select a cadre of officers to be able to respond to that.

Mr. CRIST. Thank you.

General SCOBEE. Congressman Crist, I would just like to echo what my colleagues have said, the great capability that resides in the Reserve Components. Specifically in the Air Force Reserve, we have two capabilities that don't exist anywhere else. One is the aerial spray, which we talked about before, which we use for especially after the hurricanes, mosquito mitigation and things like that. And the other is our firefighters. They exist in the Air National Guard and in the Reserve Component and the Air Force Reserve. Those are great capabilities that we practice and use on a regular basis in order to help protect our citizens.

General JAMES. And, Congressman, for me, for Marine Corps, nothing too far stretched out from what my other colleagues have said, but as our also dual-hatted Marine Forces North, and we run tabletop exercises, computer-based exercises with Northern Command. We have those MEPLos—we call them MEPLos—out there. They are liaisons that are tied in with the interagency.

We also bring, you know, water-based with our Navy Brethren back to, you know, Hurricane Katrina. We have aviation assets for the SAR logistics, and we also can provide this past year in Florida a forward arming our refuel capability there when the fuel is suspect.

We are out in the community. We are Marine Reserves, and so we have been able to utilize our Marines that live in those communities that have been impacted, and they have jumped right in to help within that.

Mr. CRIST. Thank you very much.

Thank you, Chairman.

#### C-40 AIRCRAFT FOR THE MARINE CORPS RESERVE

Mr. VISCLOSKY. Thank you very much.

General James, in the Fiscal Year 2018 Appropriation Act, \$207 million were included for two C40 aircraft for the Marine Corps Reserve. My first question is: I assume there is still a need for that capability for the Marine Reserve.

General JAMES. Yes, sir, I would agree with that. We need that capability.

Mr. VISCLOSKY. And it is my understanding that if you would, the Department is looking at procuring two aircraft, potentially of a different make, for less money.

Would that still, from your perspective with the Marines, meet your requirement, and if so, is there a concern or what would be your timeframe as to when you absolutely need these aircraft?

General JAMES. Sir, the requirement is still there for the Marine Corps. The Secretary of the Navy has asked us to look at more economical alternatives. I will say the utilitarian nature of the airplane is a concern. We need that, not only—it is the passenger side of it.

## SAVINGS WITHIN THE RESERVE BUDGET

Mr. VISCLOSKY. General Luckey, in the Reserve budget, there is an amount of \$29.7 million of savings. I think people assume none of you would ever come in with savings. It is described as savings because of better alignment of resources, business process improvements, divestment and specific policy reforms.

In the budget materials, they talk about business process improvements, better alignment of resources. Could you in some detail explain for the subcommittee what those savings are, what some of those programs, if I am looking at it, what would I see?

General LUCKEY. So I am going to go out on a limb here and tell you sort of what we have done. And the reason I say I am on a limb is because I am going to talk to you a little bit about some of the reforms and some of the places we have looked at cost-saving measures to become more efficient and more effective. Whether that adds up in the totality to the number you just cited, Chairman, I am not going to say that it does. I don't know that it does.

I will tell you, first of all, we have taken a very hard look from a contracting perspective at everything that we are spending money on in the Army Reserve, in terms of, is this a capability that we still need? Do we need it in the same scale or scope? Do we need it 10 years ago? As you well know, some of the things that we were doing 10, 15 years ago inside the Reserve Components of the military, at least from the Army's perspective, were at a scale that in some cases is larger than what we are doing today.

So we have looked at the efficiency of our contracting processes. I would submit that the RFX design, the RFX construct that I talked about, again, in my opening statement, I have discussed with this committee before, puts us in the place where we are targeting our resources, both from a modernization perspective, from a training perspective, and from a full-time support perspective, if those formations and capability sets would need to deploy quickly on very short notice into harm's way, into combat. That gives us, essentially, an ability to look at those things that we have to do first and tailor and target our resourcing strategy to those early quick deploying requirements.

I would also say we have taken a pretty hard look at where we have failed to in time deobligate commitments and then be able to reallocate those funds essentially to reinvest in readiness.

I am not going to sit here today, Chairman, and tell you that we are perfect at that, but I can tell you we take a very, very aggressive approach to making sure we put standards and discipline into the Army Reserve. So we see where we have opportunities to deobligate, we deobligate in a timely fashion, and then we reallocate resources to get after readiness. And we are making significant progress in that regard, sir.

## MEDICAL READINESS

Mr. VISCLOSKY. General Scobee, in the fiscal year 2019 bill, the Air Force Reserve request was given \$9 million because of problems they are experiencing with medical readiness. How is that going in this fiscal year? Would we see some additional or do we

see some additional requests in 2020 to solve the problems you are facing?

General SCOBEE. Chairman Visclosky, I will tell you that is one of the things that has been the biggest successes that we have had this year. So, with the money that you have allocated to us in order to get after medical readiness, two things were causing us problems. One was a huge backlog of getting narrative summaries done for our airmen that had some underlying kind of problem, either from an injury or an underlying issue with their health. I am happy to say that we have cleared that entire backlog out. And so now all of our airmen are getting the care they need immediately. And that was a huge, huge win for us in just 1 year.

So what the money went to was we put additional doctors on our rolls in order to be able to write those summaries and get our airmen characterized in the right care capacity that they were going to need. And that is what we used all that readiness money for.

So, if you look at our readiness from a personnel perspective, on the medical side, we have made huge strides this year, more so than anywhere else. And that is directly a result of the additional moneys that we were given.

Mr. VISCLOSKY. Would some of those positions have to be made permanent to make sure you don't slide into a backlog again? I mean, that is a very good story.

General SCOBEE. Mr. Chairman, you are exactly right. My plan is to continue to do that. So right now with the money you have given me, I have been able to fund that for a 5-year program going forward, and we plan on doing that in perpetuity. But yes, sir.

Mr. VISCLOSKY. Mr. Calvert.

Mr. CALVERT. Thank you, Mr. Chairman. I just want to say I appreciate all of your attendance. And we appreciate you at March Air Reserve base. I think all of you are represented at that base. And the Reserves do a fabulous job not only for our country but for the community. Thank you.

Mr. VISCLOSKY. And I simply would thank you for your service too. And your offices have been very good to deal with with the committee. And I also do thank you for your time, for your preparation and testimony today.

We are adjourned.

[CLERK'S NOTE.—Questions submitted by Chairman Visclosky and the answers thereto follow:]

*Question.* What was the funding from FY18–PB20 for O&M environmental restoration funding PFOS/PFOA? How much was POM'd for in FY18–PB20?

*Answer:* In FY18, the Air National Guard (ANG) executed \$2.4M of O&M funds for PFOS/PFOA requirements. The ANG was appropriated \$11M in FY 19 for ANG installation restoration requirements, not specifically for PFOS/PFOA. The FY20PB request includes \$4.5M for ANG restoration to fund the highest priority ANG installation restoration requirements and does not specifically include ANG PFOS/PFOA.

How much was POM'd for in FY18–PB20?

The Assistant Secretary of Defense, Office of Installations, Energy, and Environment issued a policy memo dated 28 Nov 2017 which effectively made National Guard locations ineligible for Defense Environmental Restoration Account funding effective 1 Oct 2017 until a funding eligibility determination is made by the Office of the Secretary of Defense. Due to the timing of the change in funding eligibility, the ANG was unable to request O&M funding for environmental restoration requirements during the FY18 POM. Our FY18 environmental restoration requirements were included in the Air Force's Defense Environmental Restoration Program's funding request, as it has for the past 30+ years.

In FY19, the ANG was unable to POM for O&M funded requirements because the AF FY 19 POM was already finalized when the OSD policy became effective. Congress provided an \$11M mark and appropriated as a Congressional Add for ANG O&M environmental restoration requirements.

For the FY 20 POM the AF included \$4.5M for ANG O&M for restoration requirements, not specifically for PFOS/PFOA.

[CLERK'S NOTE.—End of questions submitted by Chairman Visclosky. Question submitted by Mr. Ruppertsberger and the answer thereto follows:]

*Question.* How many F-16 currently have AESA installed? What is the timeline for AESA to be installed on all 72 F-16s in the Guard?

*Answer.* None. Install of first 72 starts with the D.C. ANG around September 2019. Should be done by the beginning of 2021.

[CLERK'S NOTE.—End of questions submitted by Mr. Ruppertsberger. Question submitted by Mr. Rogers and the answer thereto follows:]

*Question.* Provide a timeline for the basing decision for the C-130Js.

*Answer.* All C-130J basing decisions flow through the USAF Strategic Basing Process. Currently, the enterprise definition and basing criteria are being vetted by HQ AF staff. We expect SecAF approval of the enterprise and basing criteria by the end of Summer 2019.

[CLERK'S NOTE.—End of question submitted by Mr. Rogers. Questions submitted by Mr. Aderholt and the answers thereto follow:]

*Question.* When is the F-35 scheduled to arrive at Montgomery, AL? Please provide a detailed timeline of all activities including MilCon and EIS.

*Answer:*

Aircraft Delivery: First aircraft arrival is scheduled for December 2023 with 2 aircraft planned. The last aircraft is scheduled to arrive in June 2024.

MILCON Schedule:

- Construct AMU Mx—Design Estimated Completion Date summer-2020
- F-35 Flight Simulator Facility—Design Estimated Completion Date summer-2020;
- F-35 Weapons Load Trainer—Awaiting design contract; design Estimated Completion Date late-2020
- F-35 Engine shop—Approved for design; design Estimated Completion Date mid-2021

*Question.* Are there any issues that will cause delays in the delivery of the F-35 at Montgomery, AL?

*Answer:* Although many variables may impact the delivery of F-35s to Alabama, there are currently no known issues that will cause delays in F-35 delivery. Lessons learned during the fielding of F-35s to Burlington, Vermont (Ops 2) in 2019, should streamline subsequent aircraft deliveries.

*Question.* When is the Environmental Impact Study scheduled to be complete? Is the EIS currently on schedule?

*Answer:* The F-35 Ops 5 and 6 Draft Environment Impact Study is scheduled to be released for public comment in late summer 2019 and will be followed by Public hearings. The Final Environment Impact Study and Record of Decision are anticipated to be provided for SecAF signature by early 2020. The Environment Impact Study schedule experienced about a 4 month delay due to operational data and air quality analysis issues raised during Government review of the draft document. A detailed schedule can be provided as soon as the contract is officially modified.

[CLERK'S NOTE.—End of questions submitted by Mr. Aderholt.]

TUESDAY, APRIL 2, 2019.

**FISCAL YEAR 2020 UNITED STATES AIR FORCE BUDGET  
OVERVIEW**

**WITNESSES**

**HON. HEATHER WILSON, SECRETARY, U.S. AIR FORCE**

**GENERAL DAVID L. GOLDFEIN, CHIEF OF STAFF, U.S. AIR FORCE**

**OPENING STATEMENT OF CHAIRMAN VISCLOSKY**

Mr. VISCLOSKY. The subcommittee will come to order.

Good afternoon to everyone, and thank you for attending. This afternoon, we will receive testimony on the fiscal year 2020 budget request for the United States Air Force.

Before I begin, I do want in particular to thank both of our witnesses for changing your schedule today to move the time of the hearing up, as well as all of the membership.

I would also mention that we anticipate votes will start somewhere between 3:30 to 3:45. It will be the intent until we finish just to have members go to and fro from the House floor and we will continue in that vein. But, again, appreciate people's flexibility.

I would like to introduce our witnesses, Dr. Heather Wilson, Secretary of the Air Force, and General David Goldfein, Air Force Chief of Staff.

Madam Secretary, General, welcome back to the subcommittee.

Secretary Wilson, I regret that this will be our last hearing with you sincerely. I understand happily that you were confirmed this morning as president of the University of Texas-El Paso. Congratulations to you. I think I speak for everyone when I say that your leadership will be missed, as well as the friendship and colleagues you leave behind in the United States Congress.

General, you, of course, are no stranger to the subcommittee. Welcome back as well. We will appreciate your views as we begin to shape the fiscal year 2020 defense bill.

Secretary Wilson, General Goldfein, you have made it clear in your submitted testimony that you believe that the Air Force is too small and underresourced to carry out its mission requirements under the National Defense Strategy with acceptable risk. Taking into account your concerns with readiness, capacity, and capability, the subcommittee is prepared to review your fiscal year 2020 budget request with the scope of the resources that will be provided to the Department.

With that, I would turn to my ranking member, Mr. Calvert, for any opening remarks he would like to make.

## OPENING REMARKS OF MR. CALVERT

Mr. CALVERT. Thank you, Mr. Chairman.

Secretary Wilson, General Goldfein, welcome back to the committee.

As the chairman pointed out, Madam Secretary, this is your last appearance before the subcommittee before you head off to the academic world. We have known each other for a long time, back to the days we used to sit together on the Armed Services Committee when I was an authorizer. I don't want you to be shocked by that, but some things are more important than partisanship here.

But I know you will do wonderful there, and I know that this will not be our last time to work together. So I certainly wish you well. And let me thank you for your hard work. I appreciate your commitment to this Nation and helping our military be a force for peace around the globe.

Likewise, I appreciate your service, General Goldfein. Further, I am going to ask you about the Space Force and the vision for how that will protect our space assets. Not to become overly bureaucratic, I am skeptical of what I have heard so far.

I am also looking forward to hearing more about the Space Development Agency. I would like you to explain how this entity will coordinate with existing space and missile development programs already in existence throughout the Department.

Finally, I am going to ask you about the launch services agreement and the future of the national security space launches.

So we have a lot of topics to cover, so I would like to thank you both for your service. I look forward to your testimony.

And, Mr. Chairman, I yield back.

Mr. VISCLOSKY. Thank you very much.

## OPENING REMARKS OF MS. GRANGER

Ms. Granger, we will be happy to recognize you for any opening statement you would like to make.

Ms. GRANGER. Thank you. Thank you, Chairman Visclosky.

Secretary Wilson, General Goldfein, welcome back to the committee.

Secretary Wilson, this will be your last appearance. I want to thank you for your service and for your commitment to this Nation and to the military. You will be missed. The University of Texas is getting a true professional. From a family that went to A&M, I will say that they need those professional people. Thank you for all you have done to assist the Congress and to keep the Air Force focused on the future.

Likewise, I appreciate your dedication, General Goldfein. I value your counsel and plan to maintain an open dialogue as we build the fiscal year 2020 budget.

I look forward to hearing from both of you about how your budget addresses the near-peer threats outlined in the National Defense Strategy. I also want to hear from you about how you intend to address the pilot shortage.

Finally, I am going to ask that you outline for the committee the current status of Offutt and Tyndall Air Force Bases that have been negatively impacted by natural disasters.



I would like to thank you both for your service. I look forward to your testimony. Thank you for being here.

Mr. VISCLOSKY. Madam Secretary.

#### SUMMARY STATEMENT OF SECRETARY WILSON

Secretary WILSON. Thank you, Mr. Chairman. I would like to put our entire statement in the record if I could and just summarize.

Mr. VISCLOSKY. We have to caution you, brevity will be shorter and it will get you lots of questions. Thank you so much.

Secretary WILSON. Thank you, sir. I will just summarize a few key points.

The budget that we have submitted for fiscal year 2020 aligns with the National Defense Strategy. That is the guidance that the Chief and I gave to the team when they began developing the budget, and we have been consistent about that all the way through.

There are a few things that I would like to highlight with respect to this budget.

Last year when we testified, it was only a few months after the promulgation of the new Defense Strategy, and one of the committees asked us: Well, you know, you always come up here and tell us what is the force that you can afford for the budget you have been given, but what is the Air Force you need to execute the National Defense Strategy? And we didn't know the answer to that question, and we should know the answer to that question.

In the last year's defense authorization bill, the Congress directed us to do the study and the work to assess what is it that we would need to execute the National Defense Strategy to a moderate level of risk and to be able to report that to the Congress. We did that in a classified forum with an unclassified summary on the 1st of March.

It is no surprise probably to those of you in this room that the Air Force we have is smaller than the Air Force that we need. We currently have 312 operational squadrons, the clenched fist of American air power, and in the 2025–2030 timeframe, the Air Force we need to meet the threats that we face and execute the strategy that we have been given has 386 operational squadrons.

So it is not more of the same. It is a number of iterations and force concepts that we modeled and simulated several thousand times to look to what we need to do to meet the threat that we see. We need to evolve and incorporate advanced technology in new ways. But there is no question that the Air Force will be in the forefront regardless of where the next conflict occurs.

Second, this budget also reflects that America is building a more ready and lethal Air Force. We are more ready today than we were 2 years ago because of the resources and the certainty that the United States Congress has given us.

For us, readiness is first and foremost about people. It is also about their training. It is about the maintenance of their equipment and the spare parts and the munitions and the logistics to be able to support an Air Force to meet the threats of the 21st century. We are more lethal and more ready today than we were 2 years ago.

And third, we are fielding tomorrow's Air Force faster and smarter. We just released and just delivered to the Hill our 2018 acquisition report card to all of you, which tries to put in plain language exactly how we are doing with respect to acquisition.

One of the things that you will find is that we have taken advantage of the authorities that you all have given us in 2016 and 2017 to accelerate acquisition. The Air Force set a goal for itself to strip 100 years out of Air Force acquisition in our first year of effort. We are now 10 months into that effort and we have taken 78½ years out of schedules for Air Force programs.

We are taking advantage of the authorities that you have given us to prototype and experiment so that we can move things faster and get capability from the lab bench to the warfighter faster so that we can win.

Finally, I would like to thank all of you for the on-time budget that we have this year. But I also have to say that one of the most important things for the continued readiness of this force is that we must have a supplemental to recover from the devastating storm that hit Tyndall Air Force Base. That storm hit on the 11th of October, and we still have not had any funds in a supplemental to recover from it.

Last week, I had to take initial action, because we are cash flowing this effort out of the rest of the Air Force budget. We had to stop 61 facility projects in 18 States because we don't have a supplemental to recover from this devastating storm, and we just had another storm that hit Offutt Air Force Base.

It doesn't end here. We will have a series of decisions that have to be rolled out over May and June and July all the way through September. If we don't have supplemental funding, the advances that we have made on readiness and the restoration of readiness will be significantly damaged. And I would ask for your help with respect to that.

Chief.

#### SUMMARY STATEMENT OF GENERAL GOLDFEIN

General GOLDFEIN. Thanks, Madam Secretary.

Chairman Visclosky, Ranking Member Calvert, distinguished members of the committee, what an honor it is to represent your Air Force, Active, Guard, Reserve, and civilian airmen who stand the watch and provide top cover for the Nation and our joint and allied teammates.

This hearing is among the first official forums since Secretary Wilson announced her pending departure from the Air Force. And I want to say publicly, on behalf of all airmen and their families, what an honor it has been to work with her every day to make our Air Force more ready and more lethal.

And this budget represents the culmination of our work together to build the Air Force we need to compete and deter, and if deterrence fails, to fight and win. So I want to state for the record that we are a better Air Force because of the leadership and the vision of our Secretary, Dr. Heather Wilson.

Thank you, ma'am.

Chairman, Ranking Member, I went to war for the first time as a young captain flying F-16s out of Shaw Air Force Base in South

Carolina just days after Saddam Hussein invaded his neighbor in Kuwait. At the time, we had 401 operational squadrons and 945,000 Active, Guard, Reserve, and civilian airmen in an Air Force that landed our Nation's initial punch, 401 operational squadrons to defeat a middleweight, non-nuclear power who threatened his neighbor in the region, but who posed little threat to our homeland and our way of life.

Today, we have 312 operational squadrons, down from 401; and we have 685,000 airmen, down from 945,000. We are not the Air Force of Desert Storm.

When General Tony McPeak was the Chief of Staff in 1991, he and his fellow Joint Chiefs were focused on supporting a single combatant commander, General Norm Schwarzkopf, the commander of U.S. Central Command.

Today, should deterrence fail and we find ourselves defending our Nation against a major nuclear power, as the Chief, I will be simultaneously supporting at least three combatant commanders, who will be demanding air, space, and cyber power.

The geographic combatant commander will request forces to support his campaign, which will include backfill for any fighters or tankers or command and control forces he places on nuclear alert.

The next call I will get will be from the U.S. Strategic Command commander, who will tell me how many bombers, tankers, command and control forces he needs to execute his nuclear mission, protecting not only our homeland but also our allies and partners.

And the third call will be from U.S. Northern Command, who will tell me how many fighters, tankers, ISR, and C2 aircraft he needs to execute his plan to defend the U.S.

The Air Force will support these missions simultaneously, not sequentially, while at the same time standing shoulder to shoulder with our joint teammates, maintaining a global presence to deter any rogue nation who might choose to take advantage of our situation while simultaneously maintaining campaign pressure against violent extremism.

This is the stark difference between fighting a middleweight rogue nation without nuclear weapons versus competing, deterring, and, if deterrence fails, fighting and winning a peer fight.

It is why Secretary Wilson and I continue to articulate in every forum that the Air Force is too small for what the Nation is asking us to do.

It is why we reported to this committee that the Air Force we need to execute the National Defense Strategy requires 386 operational squadrons.

And it is why the National Defense Strategy Commission stated, and I quote: "Regardless of where the next conflict occurs or which adversary it features, the Air Force will be at the forefront."

With your support of this budget request, we will continue to rebuild the readiness and lethality of this force, which you supported last year with an on-time appropriation following a damaging sequester and years of budget uncertainty, and for that we thank you.

Chairman, Ranking Member, history doesn't always repeat, but it does rhyme now and then. My father fought as a young F-4 pilot in Vietnam, and he and many of his peers stayed in and rebuilt

the Air Force his son needed to fight and win in Desert Storm, followed by 28 years of continual combat operations, including 10 years of Operations Northern and Southern Watch, air campaigns in Bosnia and Kosovo and Serbia, and continuing through the past 17 years, fighting violent extremism in Afghanistan and Iraq and Syria and across North Africa.

My daughter and my nephews are young airmen today. And with your continued support of on-time budgets, we will build the Air Force they will need to fight and win side by side with our incredible joint teammates in this era of great power competition.

So thank you for the opportunity to testify, and we look forward to your questions.

Mr. VISCLOSKY. Thank you very much.

[The joint written statement of Secretary Wilson and General Goldfein follows:]

**USAF POSTURE STATEMENT  
FISCAL YEAR 2020**

**DEPARTMENT OF THE AIR FORCE  
PRESENTATION TO THE COMMITTEES  
AND SUBCOMMITTEES OF THE  
UNITED STATES SENATE  
AND THE HOUSE OF REPRESENTATIVES  
1ST SESSION, 116TH CONGRESS**



**STATEMENT OF:  
THE HONORABLE DR. HEATHER WILSON  
SECRETARY OF THE AIR FORCE**

**GENERAL DAVID L. GOLDFEIN  
CHIEF OF STAFF, UNITED STATES AIR FORCE**

**NOT FOR PUBLICATION UNTIL RELEASED  
BY THE U.S. SENATE COMMITTEE ON APPROPRIATIONS  
SUBCOMMITTEE ON DEFENSE**

## AIR FORCE POSTURE STATEMENT FISCAL YEAR 2020 PRESIDENT'S BUDGET REQUEST

STATEMENT OF:  
THE HONORABLE DR. HEATHER WILSON  
SECRETARY OF THE AIR FORCE

GENERAL DAVID L. GOLDFEIN  
CHIEF OF STAFF, UNITED STATES AIR FORCE

### STRATEGIC ENVIRONMENT

Great power competition remains the central challenge to U.S. prosperity and security. A rapidly growing China and resurgent Russia aim to coerce their regional neighbors, undermine long-standing alliances, and displace American influence from critical regions around the globe. These great power competitors are challenging U.S. dominance in all warfighting domains: air, land, sea, space, and cyberspace. Additionally, they are confronting us with threats below the level of open conflict, through information warfare, ambiguous or denied proxy operations, and subversion.

To face these challenges, the United States Air Force must compete, deter, and win across the five priority missions of the National Defense Strategy:

- Defend the homeland,
- Provide a safe, secure, and effective nuclear deterrent,
- Defeat a powerful conventional enemy, while we
- Deter opportunistic aggression, and
- Disrupt violent extremists in a cost-effective manner.

In Fiscal Year 2020, we will continue to build a more lethal and ready Air Force, while fielding tomorrow's Air Force faster and smarter.

### AN AIR FORCE IN DEMAND

Last year, Congress appointed an independent and bipartisan National Defense Strategy Commission to study the global security environment and forces necessary to prevail in an era of great power competition. Their conclusion unequivocally stated: "regardless of where the next conflict occurs or which adversary it features, the Air Force will be at the forefront."

*"Regardless of where the next conflict occurs or which adversary it features, the Air Force will be at the forefront."*

*—National Defense Strategy Commission*

As the joint force prepares for peer conflict, the Air Force continues to be in very high demand. Our Airmen perform strategic and vital missions in all domains, across the spectrum of conflict, and from 65 feet below ground to our highest geosynchronous orbits.

More than 21,000 Airmen are deployed around the globe, employing unrivaled air, space, and cyber power from over 179 locations. Last year, our Airmen conducted more than 50,000 sorties and 3,400 precision airstrikes alongside joint and partner forces in the campaign to defeat ISIS. In Afghanistan, the Air Force executed 44,400 sorties in support of our Afghan partners, and targeted Taliban and extremist networks with more weapons than any time in at least 5 years. Our mobility forces transported over 1.25 million personnel, 1 billion pounds of warfighting equipment and supplies, and evacuated more than 5,400 patients for critical medical care. To bolster allies and partners, we increased NATO interoperability and readiness through the European Deterrence Initiative, and Air Force bombers flew over 60 sorties through our Continuous Bomber Presence in the Indo-Pacific. Airmen also delivered 152,000 short tons of relief supplies across Southwest Asia, supporting those who are displaced and suffering, and demonstrating U.S. commitment to building a stable and peaceful region.

The Air Force also performs global, strategic, and critical missions from our homeland. We maintain our nuclear force at the highest state of readiness: last year our Airmen conducted 16,425 intercontinental ballistic missile alert tours and 350 missile convoys across three missile wings and five states. In space, we operate 80 satellites that provide communications, command and control, missile warning, nuclear detonation detection, weather, and the Global Positioning System (GPS) for the world. Our Airmen also support a global intelligence, surveillance, and reconnaissance (ISR) network, and last year completed nearly 57,000 missions, collected over 437,000 hours of full motion video, and produced over 1 million intelligence products for our warfighters and policymakers. Every day, our Airmen stand ready on a moment's notice to intercept airborne threats to our homeland, and they defend Air Force and Department of Defense networks from our adversaries' persistent cyber-attacks.

We can only meet these demands with predictable budgets driven by the National Defense Strategy. In Fiscal Year 2019, the Department of Defense received its first on-time appropriation in over a decade. That agreement required substantial effort by the Congress, and we are grateful for your support and confidence.

However, continued budgetary uncertainty threatens to disrupt the progress we are making. Substantial budget cuts would erase the gains we made over the last three years and inflict substantial damage to our national defense. In 2013, in the wake of sequestration, we were forced to stand down one-third of our combat flying squadrons. We cancelled large-scale exercises and lost over one million work-hours of depot maintenance.

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 our national defense.*  
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***Despite nearly 30 continuous years of combat, no enemy in the field has done as much to harm the readiness of the Air Force than the combined impact of artificial spending restrictions, worsened by operating for 10 of the last 11 years under continuing resolutions of varied and unpredictable duration.***

Let's be clear. We cannot fully implement the National Defense Strategy to protect America's vital national interests with unpredictable and constrained budgets. We must come together to find a way forward.

## THE AIR FORCE WE NEED HAS 386 OPERATIONAL SQUADRONS

The National Defense Strategy calls on us to compete, deter, and win against near-peer competitors and across a wide spectrum of priority missions.

Last year, in Congressional testimony, you asked us what we needed to implement the National Defense Strategy – not “What is the Air Force we can afford?” but “What is the Air Force We Need?” We didn't know, and we should know. You put that question in the 2018 National Defense Authorization Act, when Congress directed us to study the forces and capabilities we require to implement this strategy.

Using our current operational plans and future defense planning scenarios projected into the 2025-2030 timeframe, the Department of the Air Force conducted thousands of simulations and wargames to answer this question. Our analysis produced an unmistakable conclusion: the Air Force is too small for what our nation needs. We currently have 312 operational squadrons – the clenched fist of American air and space power. To implement the National Defense Strategy and prevail over our highest priority competitors, we determined that the Air Force must grow to 386 operational squadrons.

To put this in context, at the height of the Cold War, in 1987, the Air Force had 401 operational squadrons. Four years later it would combat the Iraqi military in Operation Desert Storm, and decisively defeat Saddam's forces in just 43 days. Despite a shrinking budget and force size, the Air Force continued flying combat missions in the region, and added significant new demands and missions in the wake of 9-11.

The independent and bipartisan National Defense Strategy Commission also asserts the need for greater capacity in an era of great power competition. We cannot credibly face our future with the Air Force of today, evolved over two decades for counterinsurgency and counterterrorism operations. We must grow and meet our adversaries from a position of strength.

Our study also shows more of the same isn't the best answer. The Air Force we need must evolve to incorporate advanced technology and wield cutting-edge capabilities in new and innovative ways. Together with our joint partners, we are developing Multi-Domain Operations as our new warfighting framework.

While our land, sea, air, space, and cyber forces have become more joint and coordinated, they are not sufficiently integrated for the future fight. Multi-Domain Operations will integrate U.S. and allied forces across all warfighting domains. This

concept will rely on a joint and interconnected network of sensors, weapons, and platforms. Forces will rapidly share information and present our warfighting commanders unprecedented levels of knowledge. With information superiority, we will simultaneously converge warfighting effects from all domains and produce intractable dilemmas for our adversaries.

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Ultimately, Multi-Domain Operations will be executed by our operational squadrons, the combat power of the Air Force. Not all squadrons are the same size, and not all squadrons fly airplanes. The National Military Strategy directs a balanced “boxer’s stance” of military readiness, and our operational squadrons form the clenched fist of American resolve. But a fist is nothing without the power of the body – our supporting squadrons – behind it. These squadrons repair our aircraft, manage and secure our infrastructure, keep our logistics and supplies flowing, and support our Airmen and their families. Our operational and supporting squadrons will fight together, so they must grow and modernize together.

## AMERICA IS BUILDING A MORE LETHAL AND READY AIR FORCE

Our National Defense Strategy directs a more lethal and ready force, prepared to defeat our adversaries in high-end combat. This past year, we focused the additional resources provided by Congress on our pacing squadrons, the 204 operational squadrons required in the opening days of a peer fight. With these resources, we are more ready for major combat operations today than we were two years ago. More than 90% of our pacing squadrons are ready to “fight tonight” with their lead force packages – the first Airmen to deploy at the beginning of a conflict. When we include their follow-on forces, these pacing squadrons are on track to reach 80% readiness before the end of Fiscal Year 2020, 6 years faster than originally projected. As our front-line squadrons meet their readiness goals, we will also ensure the remainder of our operational squadrons reach the 80% readiness mark by 2022, as we continue to build toward the 386 operational squadrons we require.

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*We are more ready for major combat operations today than we were two years ago. More than 90% of our pacing squadrons are ready to “fight tonight” with their lead force packages.*

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**PEOPLE AND TRAINING.** Readiness recovery is first and foremost about people. Recently authorized increases in end strength helped eliminate a shortage of 4,000 Active Duty maintainers. In two years we closed this gap and are working to build expertise in these young Airmen. While Air National Guard and Air Force Reserve maintainers still face manning challenges, our FY20 budget continues this end strength growth by adding 4,400 Airmen and 5,143 civilians to the Total Force.

To address our aircrew shortage, we are implementing initiatives to increase the number of pilots we train, season them in operational units, and retain experienced aircrews.

Last year we produced 1,211 pilots, 146 more than originally expected. This budget builds on our progress and will produce 1,480 pilots in 2020. We are also exploring how to use new technologies in our “Pilot Training Next” program, where we are using virtual reality and more simulators to train pilots better and faster. As we season these young Airmen, some of our new Active Duty pilots will begin their flying careers with a Guard or Reserve squadron and benefit from the deep experience we have there. We are also pursuing quality of life and quality of service reforms to retain our aircrew. Our new Talent Marketplace gives Airmen greater transparency on their assignment process, and we are reducing the number of year-long deployments to improve stability and reduce the burden on families.

Our Airmen are shifting their focus to great power competition, and we must train and equip them for the high-end fight. This budget proposal includes funds to modernize our live and virtual ranges and infrastructure to provide relevant and realistic training capabilities against our most advanced threats. The Nevada Test and Training Range, the Joint Pacific Alaska Range Complex, the Utah Test and Training Range, the Space Test and Training Range, and several smaller range complexes will receive targeted funding to better replicate the capabilities of our peer adversaries. We are exploring ways to expand contract adversary air – aircrews who are trained to fly as “bad guys” – from a single test case to up to three locations, freeing our Airmen to practice their own skills rather than spend time simulating the skills of our adversaries. This budget includes 1.1 million peacetime flying hours, the maximum amount of sustainable training, to prepare our Airmen to fight alongside allies and partners as vital members of our joint force.

**COST-EFFECTIVE MAINTENANCE AND LOGISTICS.** We are focusing on innovative ways to maintain and supply our aging fleets. Last year, a team of Airmen conducted a detailed sustainment review and produced 45 recommendations to ensure our aircraft and equipment are ready to meet

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Combatant Commander timelines. We are fielding innovative technologies to streamline supply chains, drive engineering improvements, and manage our fleets. We are using data to make our maintenance personnel more efficient and effective, and we are testing analytic tools and monitoring sensors to match industry best-practices, known as “conditions based maintenance.” By being able to better predict when a part will fail, we can improve readiness while saving time and money – initial tests on several E-3 and C-5 components show the potential to reduce up to 30% of unscheduled maintenance. And we’re making reforms cost-effectively. Our Oklahoma Depot is now completing major repairs on our KC-135 fleet 40% faster and at half the cost of recent industry contract proposals.

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 A ready force needs a modernized logistics system to power it. Last year, we established the Rapid Sustainment Office to improve readiness and drive down the cost of repairs by using advanced manufacturing technologies. Through partnerships with universities and industry, this office is identifying emerging technologies that can reduce the cost of maintaining our weapons systems.

We will scale these reforms across the Air Force. This budget includes \$16.4 billion in weapon system sustainment to support our home station and deployed fleets. We are striving to achieve 80% Mission Capable Rates in our F-16, F-22, and F-35 fleets by the end of this fiscal year. We will continue to focus on supply inventory, increasing our maintenance capacity, enhancing our training and proficiency, and moderating our operational tempo to help our maintainers meet this goal.

**AVIATION SAFETY.** We will not compromise safety as we prepare our Airmen and align resources for great power competition. Last year, the Air Force experienced an uncharacteristic increase in in-flight mishaps and fatalities for manned aircraft. The safety of our Airmen remains a top priority, so we initiated several actions to bolster our mishap prevention programs, including additional safety

training and operational pauses to discuss risk. Our mishap rates are decreasing toward historic averages, and we will continue to improve these programs over the next fiscal year. We are thankful for Congress' support and interest in this important issue. We look forward to working closely with our joint teammates and the newly created National Commission on Military Aviation Safety, established by Congress in the 2019 National Defense Authorization Act.

**A SAFE, SECURE, AND EFFECTIVE NUCLEAR DETERRENT.** The Air Force provides two-thirds of our nuclear triad and 75% of our nuclear command, control, and communications capability. We demand the highest standard of readiness from the Airmen who manage and safeguard our nuclear enterprise. The triad remains the ultimate guarantor of American, allied, and partner security, and underpins America's military power and diplomacy worldwide. As our adversaries continue to modernize and expand their nuclear weapons and delivery systems, the National Defense Strategy, Nuclear Posture Review, and National Defense Strategy Commission all reaffirm America's need for a modernized triad of air, sea, and land-based nuclear weapons, tied together by a resilient command and control architecture. These forces deter nuclear and non-nuclear strategic attack, assure our allies and partners, achieve our objectives if deterrence fails, and hedge against an uncertain future. Today, we perform these missions with the smallest and oldest nuclear enterprise in our history. It is imperative that we sustain our existing triad and replace these aging systems. Our budget proposal fully funds our major nuclear modernization programs.

Our Ground Based Strategic Deterrent will replace the aging Minuteman III intercontinental ballistic missile, first deployed in 1970. These ground-based missiles are the most responsive leg of the triad, given their long range and constant state of readiness.

Our Long Range Standoff Weapon will replace the Air Launched Cruise Missile and improve bomber lethality and survivability through 2060. Our modernized B-52, B-2, and upcoming B-21 bombers are the most visible and flexible leg of the triad. They can be deployed to signal resolve, and their sustained flight times and ability to be recalled increase stability and Presidential decision-making time.

Finally, we are modernizing our nuclear command and control system to ensure the President has uninterrupted access to his leadership team and command of nuclear forces, under all conditions, without fail.

Since the end of the Second World War over 70 years ago, every President and every Congress has supported the nuclear triad as a vital element of our national defense. We must continue to do so.

**MODERNIZATION.** America's potential adversaries are rapidly fielding capabilities that approach our own. We must retain our technological edge and equip our Airmen with highly advanced and lethal tools to prevail in high-end combat.

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As we design our future Air Force, we are examining different operating concepts to frustrate our opponents and defeat them in combat. We will need systems that can penetrate contested environments or remain outside these zones and employ long-range weapons and effects. We are investing \$1.5 billion to test and prototype game-changing technologies to cement our warfighting advantage, including hypersonic weapons, directed energy, and adaptive jet propulsion. Our next-generation penetrating bomber, the B-21 Raider, is proceeding on schedule and building on three years of successful development. It will be able to deliver both gravity bombs and the Long Range Standoff Weapon to hold adversary targets at risk around the world. High-end conflicts will require the long-range capability of an advanced bomber fleet, and the B-21 is central to the expanded bomber capacity and capability we need.

Our aerial refueling capability underwrites the global nature of Air Force power and enables the rapid deployment of aircraft. We recently welcomed our first KC-46 tankers and are proposing to buy 12 more KC-46 tankers in Fiscal Year 2020.

The future fight will require a robust network architecture and battle management system. This budget funds our continued transition to the Advanced Battle Management System, a family of systems that will fuse data from multiple platforms across all warfighting domains. Nearly every system on the battlefield will contribute data to this network, and through advanced analytics, commanders will understand the battlespace and be able to direct forces faster than our adversaries. To develop the capability for successful Multi-Domain Operations, we are upgrading legacy command and control nodes and have established an architecture to ensure the many programs that must connect and share information will work together. We are also upgrading and modernizing our electronic warfare systems, organizations, and analysis capability to dominate the electronic spectrum.

*We remain committed  
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- We remain committed to the dual-capable F-35 and its game-changing capabilities, including its ability to deliver nuclear weapons, and will continue purchasing 48 aircraft each year. No other weapons system is designed to fuse information and make split-second decisions inside defended enemy airspace. As the quarterback in the air fight, this aircraft combines the capabilities of our joint, allied, and partner teammates to deter or defeat our adversaries.
- While budget increases are making a significant difference and restoring the readiness of the force, our analysis indicates that we must purchase additional aircraft in the future to fully implement the National Defense Strategy. Our current fighter force of 55 squadrons is too small.

At the same time, our F-15C fleet is aging, with two-thirds of the fleet past its certified service life. This fleet is expensive to maintain, and F-15C capability against advanced threats is diminishing over time. Our budget proposes to replace the F-15C with a modernized successor by purchasing the F-15EX. We propose to buy 80 aircraft over the next 5 years. This decision allows us to benefit from foreign partner investments in the F-15 line to begin cost-effectively replacing our F-15C fleet.

**CYBER DOMINANCE.** Every day, Airmen encounter sophisticated and persistent adversaries in cyberspace, some of whom are now peer competitors in this domain. To meet this challenge, we are producing innovative cyber capabilities to repel these threats, defend our networks, and support Combatant Commanders around the globe. These capabilities also strengthen domestic cybersecurity efforts, and helped counter adversary attempts to interfere in last year's election.

Our FY 20 budget submission advances how we train and equip cyber forces for Multi-Domain Operations. We are investing in new capabilities to identify network threats and vulnerabilities, and are designing countermeasures to mitigate risks to our weapon systems. Last May, our Cyber Mission Forces achieved operational capability four months faster than predicted. We will continue leading joint efforts to supply these Airmen with a new, integrated cyberspace operations suite, the Unified Platform. To fully harness this capability, the Joint Cyber Command and Control system will provide Combatant Commanders cyber situational awareness and battle management of these forces. We face an increasingly contested cyber domain, and these investments will provide the tools we need to prevail in both competition and conflict.

**ACCELERATING DEFENDABLE SPACE.** Our adversaries have recognized the advantages we gain from operating in space, and are developing capabilities to deny us the use of space in crisis or war. They are developing weapons that can blind or jam satellites with directed energy and electronic warfare, target ground sites and infrastructure through cyber-attacks, or physically destroy or damage our satellites with missiles or dual-use, on-orbit spacecraft. While we all would prefer that space remain free of conflict, we will deter and defeat these threats in order to secure the satellite constellations that power our military forces and civil societies.

In January of 2018, we transitioned the National Space Defense Center from an experimentation and planning office with weekday business hours to an around the clock operations center to protect and defend our assets and interests in the space domain. In July, we transitioned the Joint Space Operations Center to a Combined Space Operations Center, integrating the efforts of allies, partners, and commercial industry.

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*Our FY20 budget builds on our advances and further accelerates efforts to protect and defend our ability to operate in space. We propose a \$14 billion investment in our space portfolio in FY20, a 17% increase over our FY19 budget.*  
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In the 2019 budget, we proposed a significant change to our space plans. With the support of Congress, we added nearly \$1 billion to the FY19 Air Force space program. Our FY20 budget builds on our advances and further accelerates efforts to protect and defend our ability to operate in space. We propose a \$14 billion investment in our space portfolio in FY20, a 17% increase over our FY19 budget. It frames our warfighting approach and changes how we prototype and field innovative space technologies to stay ahead of our competitors. This budget includes \$55 million for the demonstration of technology for a proliferated satellite constellation. In partnership with the Defense Advanced Research Projects Agency, we will assess the future of small, low-cost platforms.

The Department of Defense recently submitted legislation to establish the Space Force as a new armed service within the Department of the Air Force. This legislation would consolidate missions from across the Department into a single Space Force. It would establish a civilian Under Secretary of the Air Force for Space and a Chief of Staff of the Space Force who would be a member of the Joint Chiefs of Staff. This proposal capitalizes on the Air Force being the best in the world at space, and given the new era of strategic competition, is the right move to posture us for the future.

Finally, we are devoting greater time and resources to train and develop our space operators as true warfighters. They will be the cornerstone of U.S. Space Command, our newest Combatant Command.

## WE ARE FIELDING TOMORROW'S AIR FORCE FASTER AND SMARTER

An era of great power competition demands we rethink the way we buy things. China is innovating faster than we are, and fielding game-changing forces. We cannot win this contest with an acquisition system from the Cold War. We must move fast to stay competitive, and we are fundamentally transforming what we buy, how we buy it, and from whom we buy it.

The 2016 and 2017 National Defense Authorization Acts restored responsibility for acquisition to the Services, and granted us new authorities to accelerate prototyping and fielding. With these authorities, we are changing the way we buy things to get capability from the lab bench to the warfighter faster.

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 ”

Our experience shows that delegating authority works. Last summer we set a goal to strip 100 years of unnecessary schedule from our program plans. So far, we have saved over 78 years and are closing in on our milestone.

Three contributing factors are making us faster. The first is prototyping. For example, in hypersonics, we are leveraging available technology from across the Department of Defense to build, fly, and buy our nation's first operational boost-glide weapon five years earlier than anticipated. For our Next-Generation Overhead Persistent Infrared Missile Warning satellites, we are competitively prototyping a new sensor, retiring this key risk nearly a year earlier, while also strengthening the industrial base for future programs.

The second contributing factor to increase speed is the use of tailored acquisition strategies. We have empowered our workforce to structure decisions around the specific needs of their programs, as opposed to the generic milestones of the traditional acquisition process. Recently, our F-15 Eagle Passive/Active Warning Survivability Systems split its Milestone C decision into two tailored reviews, accelerating fielding by 18 months at no additional cost.

The third major effort to increase speed to the warfighter is agile software development. The decades-old “waterfall” process for developing software is too slow, very expensive, and often doesn’t work at all. We are making a wholesale shift to agile development, putting acquirers and operators together to make rapid incremental software improvements. We proved the concept with a new tool to plan air refueling at the Combined Air Operations Center at Al Udeid Air Base, where we command the air war against ISIS, Al Qaeda, and the Taliban. Our agile software tool saved the Air Force millions of dollars in fuel each month, reduced the requirement by two tankers and ten aircrews, and delivered a modern software planning tool to operators in months, not years.

We established the Kessel Run Experimentation Laboratory to continue applying agile development for the warfighter and stood up a Program Executive Office Digital to develop and proliferate best practices across the Air Force. So far, major programs like F-22, the Unified Platform for cyber

warfare, and the Protected Tactical Enterprise System are reaping the benefits of shifting to agile development, accelerating delivery of tools to the warfighter.

*Using authorities given to us by Congress is not just faster, it’s giving us better results. We are able to find design flaws earlier in the development period, fix them faster, and ultimately save money with better products.*

Using authorities given to us by Congress is not just faster, it’s giving us better results. We are able to find design flaws earlier in the development period, fix them faster, and ultimately save money with better products. Our B-52 Commercial Engine Replacement Program will use digital models of new engines to compare their performance, with greater levels of confidence in the results. Not only will we save more than three years from normal development timelines, we expect to achieve up to 30% greater fuel efficiency by prototyping these models.

Our recent Light Attack Experiment was conducted under these authorities and taught us important lessons we would not have learned through a traditional acquisition process. This experiment sought to test whether an existing commercial aircraft could perform as a combat capable and cost-effective platform to support the global campaign to counter violent extremism. Key to the experiment was the development of an intelligence gathering and information sharing network that will improve interoperability with allies and partners. Based on available aircraft that met experimental criteria, we focused last year on only one aircraft type and intend to expand the experiment in this budget to include additional aircraft types (rotary, unmanned, turbojet) and improved technologies. Additionally, we intend to continue our close partnership with industry and allies to further this technology as we determine the best strategy going forward. We remain committed to developing a cost-effective and increasingly networked counter-violent extremist capability to deepen these partnerships and directly support the National Defense Strategy.

We are also committed to competition. The Air Force saved over \$15 billion dollars through robust competition with the National Security Space Launch, Global Positioning Satellite III-F, the UH-1N helicopter replacement, and the T-X jet trainer.

Our Space Enterprise Consortium is removing barriers to entry for small business and non-traditional vendors, and these companies now make up nearly 80% of the Consortium's 235 partner organizations. By removing bureaucracy and giving authority to our Program Managers, our Space and Missile Systems Center is awarding prototype contracts in 90 days, twice as fast as traditional contracting.

Technology is evolving faster than ever before, and we are acquiring the intellectual property, data, and software rights to keep pace with this change. When we retain ownership, contractors must compete to sustain and improve these systems, producing better performance and lowering costs. We have already secured these rights in our UH-1 helicopter replacement and T-X jet trainer programs, and we will continue pursuing these ownership rights to flexibly modernize our force.

As we increase competition we are leading innovative approaches to contracting with small businesses and start-ups, and last year we awarded over \$11 billion to such companies. By law, we must spend \$660 million through our small business innovation and technology transfer programs, and want to make partnering with the Air Force easy and energizing. We created a new mechanism to get dollars into the hands of small businesses faster than before. By combining government credit card payments with one-page contracts, we created a small-dollar contracting process that will "pay in a day." Last November, we sought to award 50 small business contracts in 50 hours. We surpassed our expectations and more than doubled our goal, awarding 106 contracts in only 42 hours.

*America's small businesses and start-ups are engines of innovation, and we are developing creative ways to employ their talents.*

We just completed our inaugural Pitch Day to build on this success. We invited entrepreneurs and start-ups to pitch revolutionary solutions to Air Force problems. During the two-day event, 51 businesses won contracts and were immediately paid up to \$158,000, often within 15 minutes of their presentations. America's small businesses and start-ups are engines of innovation, and we are developing creative ways to employ their talents.

Early prototyping informs the Department of Defense and Congress about a program's feasibility before making costly decisions to buy it. We are mindful of the trust placed in us, and are committed to giving you more transparency about how we are using new authorities than what is required for traditional procurement. We will soon release our second annual report on acquisition, giving you all our results, and we will provide you reports on our prototypes and experiments three times a year.



**AN AIR FORCE TO COMPETE, DETER, AND WIN**

The United States faces an increasingly complex global security environment, characterized by overt challenges to the free and open international order and the re-emergence of long-term, strategic competition between nations. To meet these challenges, the Air Force is evolving to project unmatched power through the air, space, and cyber domains. We are prioritizing our readiness to fight tonight and are on track to meet our readiness goals. The new authorities Congress has given us are allowing us to field tomorrow's Air Force faster and smarter. We must rebuild the capacity we lost and field a force that will compete, deter, and win for the American people.

Mr. Calvert.

SPACE DEVELOPMENT AGENCY

Mr. CALVERT. Thank you, Mr. Chairman.

And first let me just say, when it comes to Tyndall and Offutt and let's not forget Camp Lejeune, we need to get this supplemental done, hopefully as soon as possible, and relieve the pressure on those military bases. So hopefully we can do that.

But my question is really about the Space Development Agency, which, as you know, is a new endeavor that would report to Under Secretary Griffin. So you may not be able to answer my questions, but I am going to try to see if we can get some answers anyway. Any information you can provide to enlighten this subcommittee on this new agency would certainly be appreciated.

First, do you have any idea on the missions and authorities of the Space Development Agency?

Secretary WILSON. Congressman, there are some initial concepts.

Let me first say that the Space Development Agency is not part of the President's proposal, but the Acting Secretary of Defense has full authority to be able to organize/acquisition as he sees fit.

I would say that from an Air Force point of view, there are some things that matter to us.

Number one is to keep acquisition tightly connected to the warfighter, because it is the warfighter that needs to drive the requirements. And I am a little bit concerned that the Space Development Agency is separated from the warfighter.

Number two is that we want to have acquisition excellence. The primary project that has been highlighted for the Space Development Agency to start out with is one that the Air Force is funding through DARPA, a low Earth orbit satellite constellation based off commercial technology. We are very satisfied with DARPA's management of that project, and there is always a certain risk if it is given to another group or another agency.

And third, we believe that threat should drive strategy. Strategy drives force posture and concepts of operations. We have done extensive work leading up to the fiscal year 2019 budget on what should be the strategy for a contested domain and prioritized our programs accordingly.

Some of the ideas in the initial concepts being floated by those who are interested in the Space Development Agency are not well aligned with that strategy. My view is that we should push those strategies, explain them, and then prioritize accordingly, and I worry that that kind of testing really has not been done.

Mr. CALVERT. By the way, do you have any idea where the location of this new place may be?

Secretary WILSON. No.

Mr. CALVERT. It is my understanding that the agency will be charged with, like you mentioned, developing, acquiring, fielding next-gen space capabilities, which sounds very familiar to what SMC already does.

Secretary WILSON. Sir, Space and Missile Systems Center, and, of course, the Congress directed us to stand up the Space Rapid Capabilities Office, which we did in September, and they have their first three classified projects.

I would say at SMC, you know, SMC has just gone through a major reorganization to speed up acquisition, with the help of McKinsey. We stripped out three layers of bureaucracy in the Space and Missile Systems Center.

We have also established something called the Space Enterprise Consortium that has over 200 companies engaged in it, many of them nontraditional companies. And we are going 90 days in that consortium, 90 days between requests for proposal and contract award.

Of the 78.5 years that the Air Force has taken out of acquisition, 21 years came out of space programs alone. So that is one of our highest performing program executive offices. I am very proud of the work that they have been doing and I have confidence in them.

Mr. CALVERT. I don't want to sound overly parochial, but, as you know, the SMC has been in California for some time, and the contractors that surround SMC in the Los Angeles area have been there for a long time.

And, obviously, there is a lot of concern about this reorganization and whether—you know, just changing the location doesn't necessarily mean things are going to get better or more efficient.

So I am trying to get some answers, which we are not really—and I know that this is the purview of Mike Griffin. But do you think just changing the locations of things like this is going to make things better?

Secretary WILSON. As I said, the primary project that is being discussed is a commercially based low Earth orbit satellite system. And the Air Force has actually funded through DARPA the initial testing of that system, and we are very happy with DARPA and the way it has been managing that.

I think there is some risk if you start to move major programs around, because people generally don't move with the program that way. But my other concerns are more having to do with what is the strategy to win in a contested domain. And while we rely to some extent on commercial satellite technology for the things that have to survive in combat, a proliferated, unprotected low Earth orbit system is quite vulnerable.

Mr. CALVERT. Thank you.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Ms. McCollum.

#### CLIMATE CHANGE

Ms. MCCOLLUM. Thank you both for being here today. Everybody, thank you for your service.

But, Secretary Wilson, I mean it when I say I wish you all the best as you move on from the Air Force. When I was first here, you were one of the people that I looked up to and I could always have a conversation with, sitting on any of the defense committees, about what was going on. You probably don't remember talking to a first term Member, but I really, really appreciate your kindness and your professionalism to me.

I wanted to ask you both about climate change. And this probably comes not as much of a shock to Secretary Wilson as we had a breakfast back a while ago. Senator Murkowski was there, some

of us were there, and we were talking about what was happening actually in Alaska, and then it was a little broader in topic.

But I am disturbed, troubled, dismayed, I don't know what word to use, when Secretary of State Pompeo said he wouldn't rank climate change as a top national security threat. And I am going to lay out to you why I think it is, beyond our borders, yes, but even within our borders I think it is becoming a national security threat.

Just this year alone, we saw 900 buildings at the Marine base at Camp Lejeune flooded by Hurricane Florence at a cost of \$3.6 billion. Catastrophe, destruction at Tyndall Air Force Base from Hurricane Michael, a cost of over \$3 billion. By the way, I had a conversation with Annapolis when they were here, the academies were testifying, and they are going to have to build a seawall to protect their asset.

But back to the Air Force, devastating floods across the Midwest, including Offutt Air Force Base in Nebraska, a third of which is under water. No doubt, that is going to turn into the billions.

And just today we are seeing the footage of an ice cap in Iceland where tourists are scrambling. So that it was such a shock that this huge piece of ice broke off that tourists were literally filming, thinking nothing was going to happen, only to find out that they started scrambling for the high ground.

A report from Canada says Canada is warming up two times and in northern Canada three times faster than they thought with climate change. And as I mentioned, we had the discussion about some of the things that are happening with permafrost and that in Alaska.

So we are going to be asking to spend billions of dollars repairing vulnerable bases like Tyndall, but there is no guarantee that the Pentagon can develop which will guarantee another hurricane will not come along this year or next year and cause further destruction.

So when the Air Force considers whether to move F-22 training out of Tyndall and it also considers basing F-35 units there, I sure hope that climate change is figuring into your calculus.

So I would like to ask you both your thoughts on whether or not you think climate change is a national security threat even here at home for our military. What is the Air Force going to do, in a budgetary standpoint, to start accounting for some of the things that you are going to have to move or some of the preparedness you are going to have to do? Because, quite frankly, I don't see it in any of the budgets.

So can you describe to me where this decisionmaking is taking place, if it is. And if it is not, we just can't keep moving assets, like fifth-generation fighters, out of a disaster zone only to put them back in their place again.

Secretary WILSON. Congresswoman, let me make a couple of points, and then I will ask the Chief to fill in on some things.

We actually take a look at our infrastructure from a perspective of resilience for a lot of different things, and it may be a little bit different for us because the Air Force fights from its bases. They are our platforms for power projection. The Navy fights from its ships. The Army deploys forward and goes other places. But for us, they are our power projection platform.

So when we plan our bases and look at things, the resilience of the bases, the duplication of power sources, the hardening of our assets is an important thing in the way in which we plan infrastructure. I think, as some of you know, we just released an infrastructure investment strategy to change the way in which we approach our infrastructure and to try to get more value out of every dollar that we spend and to be planning more long term.

The second thing that I would say is that in the wake of a number of adverse weather events over the last 24 months, the Chief and I stood up a team to look at weather and think about it almost the same way as we think about other kinds of adversaries.

The Air Force is responsible for weather forecasting, and I think part of that is because we are the force that has to look at the weather every day. Before you go fly, one of the things you do is check the weather. We are very dependent and vulnerable to it. And we operate globally, everywhere from the South Pole to the North Pole and everywhere in between. So we did set up a special task force to look at weather, weather forecasting and modeling and the science behind it.

Chief.

General GOLDFEIN. Yes, ma'am.

And as this team went out and looked at all the bases where we exist, the Secretary has it exactly right. I mean, we are a land-based force that does global vigilance, reach, and power. And so we are globally present any given time.

We also do weather for the joint team. Many don't know that in Army units the embedded weather capability, our airmen do that, and that we do that for Special Operations Command as well. So keeping an eye on and understanding the impacts of weather is essential to who we are.

Ms. MCCOLLUM. Well, keeping an eye on the weather is great. Glad you do it. I knew what ceiling meant as a kid growing up around air bases. But I want to know where the ceiling is in your budget accounting for this, because just with the storms here, with the figures I have, I have \$6 billion worth of repair. We can't keep affording to do this. And there are probably other things out there that you know you need to move or the permafrost or things are happening, and where is that accounted for in your budget?

I don't care if you call it sea level rise. I don't care what it is. But we need to start pulling that out, because to not start accounting for that is going to catch up with us in the long run with all the other needs that you have to do what you described in your testimony.

So if it is accounted for someplace in the budget, would you please get back to the staff? If it is not, you do what your Commander in Chief asks you to do. Then it is up to us to figure out how we start accounting for that and working with you.

But it is something I am asking all the branches. And it was very enlightening, Mr. Chair, when we found out the challenges that our Naval Academy at Annapolis was going to be facing, because they are literally built on land that was reclaimed from the ocean.

Thank you, Mr. Chair.

Mr. VISCLOSKY. Ms. Granger.

## RECRUITMENT AND TALENT DEVELOPMENT

Ms. GRANGER. Thank you.

I have two questions, but they are related, General Goldfein. You talked about—both of you talked about a larger Air Force. So I would ask you what kind of recruitment and what kind of retention strategies are you going to use to attract the more and most capable workforce? And what kind of reforms or programs are you going to institute to manage the talent and the capabilities and make sure that we have a diverse and lethal force?

I would also say, specifically for pilots and looking at the foreseeable gap in pilot production, how are you going to leverage our industry partners to address that pilot, that increase? Does your budget show that?

But just give us an understanding of how we get to the Air Force that you say and we all know that we need.

Secretary WILSON. Congresswoman, I will take the recruitment and talent development piece, and then I will ask the Chief to talk about pilot production and where we are there.

With respect to the recruitment, the Air Force met its goals last year for recruitment overall, although we did have some holes in specialties like cyber and linguists and a few others. So recruitment is going well.

This year's budget proposal for fiscal year 2020 proposes another end strength increase of 4,400 people and a hiring of about a little over 5,000 civilians, mostly in the depots, to really focus on our depot-level maintenance. So recruiting is going well. We now have to season all those young people who are just coming in.

We are changing a number of the ways in which we manage our talent and the way we assign our people, and there will be even more changes in the coming months. We are shifting to a talent marketplace that matches people to assignments, to give military members more control and more input and more probability of getting what really works for them and their families and much more transparent.

We are also for the first time since the 1980s changing the way in which we assess—the way we evaluate officers. So a new officer performance report will be coming out this summer.

And we are also changing what we call the categories for promotion. The Air Force, unlike the other services, has one really broad category called Line of the Air Force. About 87 percent of officers are in that. And then there are JAGs and Medical Corps and a handful of others on top of it.

But it does mean that we often have shortages in some professions while we have overages in others at different ranks. We have been doing mock boards and coming up with a plan to break that into smaller categories. For example, one of them will be the future force, where acquisition, science, technologists, test and evaluation officers in that group, so that we can have enough all the way through a career and promote to need rather than relying on kind of a lottery to hope that we have enough that get through the screens.

Chief, do you want to talk about pilots?

General GOLDFEIN. Yes. Thanks, ma'am.

First of all, ma'am, you called it exactly right. This is a national-level challenge broader than the Air Force. The problem statement for the Nation is we are not producing enough pilots to adequately service the demand for military, civilian, and business aviation.

So we are working with industry, we are working with academic institutions to provide incentives, and we are working with Congress on incentives to get more young people flying, because we need to produce more pilots to service the demand.

Within the Air Force, we are focused on three areas—how many we produce, how many we experience, and then how many we are able to retain over time—because the investment we make in them, as you know, ma'am, is significant.

We are producing more and we are producing them in different ways. We are going to be up to 1,400—in this budget, if approved, we will be up to 1,480 pilots. That is up from just over 1,100.

So we are producing more pilots and we are looking at different ways of training them, because I grew up in the business of you learn by repetition. And you would sit in your room at night and you would think through the sortie the next day. And it was normally we would call it chair flying, where you went to Target and you got two plungers, and you just sort of close your eyes and you do what we call chair flying.

Today's young pilot puts on a Google or whatever headset, and it is all programmed, and he or she flies the mission 10 times before they go do it the next day. They are learning differently. And so we are able to produce more by not only increasing the numbers, but also increasing the way we do business.

The second is an experience, how do we experience them, which is the number of cockpits, and that is why you see us trying to grow.

And the third business is retention, and that is where we are probably putting most of our effort, because it is a combination of quality of service and quality of life. Congress has been very helpful with financial incentives. But what we hear over and over again is it is not only about the money, it is also about quality of service.

And some of the things that the Secretary talked about, talent marketplace, we are doing those things. But what we hear loud and clear from airmen, from aviators, this is beyond pilots, is what motivates them the most is to be part of a high-powered team led by a courageous and inspirational squadron commander.

So we are focused on when we select and how we develop and how we create the culture in that squadron, our fundamental fighting formation, how do we create the culture so they are part of something really special. And then that decision of whether to stay or go is really hard for them and for their families.

Ms. GRANGER. Thank you.

Mr. VISCLOSKY. Mr. Ruppertsberger.

#### HYPERSONICS

Mr. RUPPERSBERGER. First, Secretary Wilson, Heather, I know. And we also served together on Intel as leaders of the Technical Tactical Committee.

And then you went somewhere else and the next thing you know you are back. So do you have any idea when you are going to come back again?

Secretary WILSON. I like it west of the Mississippi, sir.

Mr. RUPPERSBERGER. Right. Well, that is great.

And I want to tell you, you have been a real professional. It is good to work with somebody that you know.

And I think, General, you gave some great comments about her.

So you are going to go away as a respected individual of Congress and Secretary of the Air Force.

My question, the committee has discussed hypersonics at length, and it is a very important issue when it comes to our defensive capabilities. However, I would like to discuss the roadmap to fielding our own offensive hypersonic weapons.

As you know, the Air Force is currently developing their Air-Launched Rapid Response Weapon, called ARRW, and the Hypersonic Conventional Strike Weapon, called HCSW, and these weapons are slated to reach an early operational capability in 2022 and 2021, respectively. However, both weapons are still in the prototyping phase.

My question, what is the Air Force's plan to successfully transition these prototyping efforts to programs of record? Is industry prepared to be able to manufacture these weapons affordably at scale?

And I have been told, because of our sequestration law, basically, that we are 2 years behind both China and Russia in the technology of hypersonic weapons.

So my question there is, based on where we are now, do you feel—and I guess some of this might go to you, General—based on where we are now and this plan moving forward as it relates to the Air Force, will we be able to catch up to China and Russia by 2021 or 2022?

And I also notice that all of the military has come together on this issue and Griffin is really heading it up at DOD.

Secretary WILSON. Mr. Chairman and Congressman, thank you for the question.

This is actually a great example of how we have used the authorities that you have given us to do things faster and smarter. We have two hypersonics programs that the services are pursuing. So all three services got together. We get together regularly, it terrifies the staff, there is no staff in the room and we work together on ideas that we can do jointly.

Hypersonics was the first one. The Navy had funded an Army test that went better than the Air Force test. So what we decided to do was to cooperate. We have better rockets than the Army did. We are using the Army shell, components from the Navy system, Air Force rockets. We are testing it by dropping it off of a B-52, and we are doing ground launch and sea-based launch at the same time.

Because of that and because of the prototyping authorities you have given us, for ARRW, which is one of our 804 programs, the rapid prototyping programs, we were able to cut 5 years out of the schedule by working together. And the same for hypersonics, we cut another 5 years out of that schedule. So that the Hypersonic



Conventional Strike Weapon, or HCSW, will have its first all-up round flight test in the first quarter of 2021, which is 5 years faster than we initially anticipated.

This is not just faster; it is also better. Instead of spending 3 or 4 years in an analysis of alternatives and getting a pile of papers of reports from Beltway bandits, we are actually going to be able to test hardware and know what the most difficult pinch points are. It is a faster program, it is better, and we are also committed to making it more transparent than our regular acquisitions.

This report that we send up three times a year on every one of our prototype and experimentation programs, and we build in guardrails. In the case of HCSW, any cost growth 10 percent or over the baseline requires an immediate notice to the committees up here on the Hill. So we built these into the programs, so that we are trying to achieve not only speed and performance, but also be more transparent and accountable to the Congress.

Mr. RUPPERSBERGER. General, I talk about the issue with Russia and China and also offense versus defense. If you could—

General GOLDFEIN. Yes, sir. You know, one of the ways you ensure that you can defend against a weapon is you build your own. And so there are parallel efforts not only in offense, but also in defense. And so it is important that we keep both of those going on par with each other as we go forward.

Mr. RUPPERSBERGER. But where do you think—based on what the Secretary just said, do you think that will bring us up to the level where we need to be because we have fallen behind in this technology?

General GOLDFEIN. We have every capability, both technologically and investment-wise, to be able to not only catch up, but to get out in front of them. I think the biggest challenge for us is going to be investment and—

Mr. RUPPERSBERGER. It is up to this committee to fund it.

General GOLDFEIN. Yes, sir.

Mr. RUPPERSBERGER. Thank you. I yield back.

Mr. VISCLOSKY. Mr. Womack.

C-130S

Mr. WOMACK. Thank you, Mr. Chairman, for the time.

And to my colleagues, we have the classes of 1982 and 1983 sitting here in the witness chairs of the United States Air Force Academy in Colorado Springs, which tells me that at some time in the 1970s, late 1970s, somebody just like us rolled the dice on these two individuals and gave them nominations which led to appointments to one of the outstanding service academies on the planet.

And so my point in saying that is not only to congratulate them for great careers, but also to remind us that what we do every year in nominating these young men and women for these positions is something that we all should take really seriously, because one day they could be a service chief or a secretary of a service that means so much to the outstanding military that we have today.

Secretary Wilson, just a quick question on C-130s. Specifically, this committee has provided funding for the C-130 legacy modifications to keep these things flying. I noticed the budget request doesn't have any money for propulsion upgrades. Do we have a

plan to keep these legacy aircraft flying? Are we just going to try to hold out for the C-130 recap to complete?

Secretary WILSON. Sir, let me take your question. But let me also say that Dave Goldfein and I started the same day at the United States Air Force Academy. And about a year ago or so we were walking to an event and I said, "You know, who would have thunk that the class geek and the class clown would end up running the Air Force?" I will let you figure out who the geek is.

With respect to the 130, you are correct that we have some of the specialized 130s in there where we are doing some recap. But we just did not have the budget and the funds available to continue to do that in this year's budget.

And I don't know, Chief, do you want to add something?

General GOLDFEIN. Yes, sir.

You know, following the tragic accident on the C-130, Marine C-130, we identified propeller issues. And so we have replaced all of the pre-1971 propellers. We are now going through—to get to your propulsion questions—we are looking at a new propeller for all of the C-130Hs, and also looking at the propulsion systems for the C-130.

You know, the C-130, we are running out of letters in the alphabet for that weapon system, because it has just been an incredible workhorse. As the deployed commander in Central Command for 2 years, I never had to tell one of my soldier, sailor, airman, Marine Corps buddies no when it came to delivering supplies and equipment, because it was the C-130 that made it happen.

#### PILOT SHORTAGE

Mr. WOMACK. There was a question about pilots a minute ago. And I know that incentives are—the bonus piece is just part of the incentive package.

What else can we do? What do we have left in our toolbox to be able to help with the shortage, maintain these folks in our forces? Because we invest a lot of money and time in them. Do you have recommendations on what more we can do?

General GOLDFEIN. Sir, I can't tell you the importance of the on-time appropriation for us to be able to plan ahead. You know, when I was the air component commander for 2 years forward and I would go out and I would talk to airmen and they would ask—you know, they would ask the question, "Hey, sir, can you tell us again exactly what are we doing here?"

And I had my mini speech. I could talk to them. I could tell them about being standing outside the Pentagon on 9/11 and seeing the airplane hit. But then the question would come to me and say, "Well, why are you the only one talking about it? Why isn't everybody else talking about it back home?"

And so the commitment to the resources to ensure that we can plan ahead is as important as anything else we do.

Secretary WILSON. Sir, I would just add one thing to that, and that is we have got a national shortage of pilots. And the reason the airlines are coming to us is because we are a source of well-trained airmen.

It is really hard for a young kid in Arkansas or South Dakota or Texas to want to become a pilot and to make the number of

hours that are now required by statute in order to get signed on with a regional airline. Yet, the Air Force is experimenting with ways to improve the quality and safety of aircrew that is not about sitting in the right seat beating around a traffic pattern.

I think the Congress might start to look at what are the better ways to train pilots for the civilian airlines that is not just about time and it is about skill development. We are really focused on skill development.

And the way you get on with a regional airline now is you go to Auburn or you go to Embry-Riddle or you go to University of North Dakota and you start through. And then you become an instructor pilot, and you literally sit in the right seat of a Cessna 172 teaching young people how to go around a pattern.

That is not quality training. That is not going to make them safer as a regional jet pilot. We need to get to a place where we are improving safety and competence and not just counting hours until somebody can sign on with a regional airline. That number right now is 1,500 hours, and it is just not realistic.

#### BUDGET PROCESS

Mr. WOMACK. And, Mr. Chairman, the last few seconds of my time here, let me just say this, kind of an apology to the Secretary and to the Chief, because of Congress' inability to do its work on time.

And here we are *deja vu* all over again. I expect that maybe this year we are going to go right back into that pattern of waiting until the last minute to do something. And how awful it is for these planners and these leaders to be trying to make critical decisions about national security all the while Congress is up here—I don't want to be too harsh on us, but I am not sure we can be too harsh on ourselves.

Last year I spent an entire year of my life working on budget process reform, as everybody knows, that we got pretty close to a finish line and had a product that I think that would have helped. It wouldn't have been the perfect solution. And I know I am preaching to the choir.

We have to fix this issue. If we don't do anything else, we have got to give these people an opportunity to better plan. As General Goldfein has just said, if we don't give a budget on time, look at what it does to the morale of the men and women that are putting their hands up voluntarily and saying, "I will go."

So anyway, thanks for indulging me. I will get off my high horse on it and beg and plead with my colleagues to look for solutions to this problem.

I yield back.

Mr. VISCLOSKY. I would agree with you, Mr. Womack. As a matter of fact, our former chair, Ms. Granger, and I had a brief conversation about that very issue before we started this hearing. It is not the committee, as we all know, and someday we will get over this fever.

What I do disagree with you on, though, is the suggestion that the academy rolled the dice on these two individuals. I mean, you could just see the talent when they walked in that room, right?

General GOLDFEIN. Sir, can I just offer that we did start together. One of us graduated in 4 years, went on to be a Rhodes Scholar and a Congresswoman. One of us didn't.

Mr. VISCLOSKY. I will now recognize Mr. Cuellar.

Thank you, General.

#### TRACKING INVENTORY

Mr. CUELLAR. Thank you again for your service.

Let me just ask you, the Department of Defense Office of Inspector General, as you know, found some issues, and I say, quote: "Pentagon officials failed to implement procedures and failed to appoint and hold officials responsible to account for and manage government property for 16 years." One of the Air Force programs, I think they found \$2.1 billion worth of parts that are unaccounted for.

I guess my question is, if this report is correct, how can the Air Force not account for \$2.1 billion worth of parts and materials? And was the contractor, was he responsible to track the inventory of those parts? And, if so, do you all plan to hold the contractor accountable for the failure to track that inventory? Or that contractor was not on contract for inventory management, then did the Air Force mismanage this part of the program for such a long time?

I am just trying to understand \$2.1 billion. I mean, that should concern all of us. I can think of so many things we can do with \$2.1 billion if that report is correct.

Secretary WILSON. First of all, I get all of the IG reports, and we track corrective actions and closure of IG reports. If I remember, the report that you are talking about is the one that is talking about government-provided equipment to a contractor.

So there are circumstances where we have somebody who is building an airplane or building a piece of ground equipment, and there is a piece of government-provided equipment that goes into that. It is really, the way I read that report, it was about proper tracking and auditing of government-provided equipment, and I thought it was a legitimate concern.

We have now gone through our first year of a full audit. And audits to me are a tool to identify weaknesses and where you need to get better. The auditors, which for us are Ernst & Young, identified 347 weaknesses. We have corrective action plans either done or in development for all of those weaknesses, and every month we track whether we are on track to close and fix those problems identified.

So, to me, that is a process of continuous improvement. IG reports or audit reports are ways to identify where you need to improve. And to put it in perspective, I mean, there are a lot of things where we will work with a contractor and give them part of a piece of equipment to put into a larger system. The problem was there was not the proper receipts and accountability for that, and that is a legitimate criticism.

Mr. CUELLAR. So is \$2.1 billion something we can at least follow up on?

Secretary WILSON. Absolutely, sir. And in each of those cases—and in that case particularly—there is a required closure plan. And one of the things I found when I came here was that there were

IG reports, but there weren't corrective action plans. And we have set a standard to say, we want 90 percent of them done within 18 months of the findings.

Mr. CUELLAR. And I know you are going to El Paso soon, but could you, before you leave, can you have somebody follow up with the committee?

Secretary WILSON. Yes, sir.

Mr. CUELLAR. I mean, if it was \$2.1 thousand, it is still a lot of money. If it was \$2.1 million, that would still be a lot of money. But billions of dollars is just—I mean, it is hard to even—

Secretary WILSON. I don't think that they found that the equipment was missing. It was that there were not proper controls and accountability for the receipts and tracking of those pieces of equipment as they went through, in this case, probably a manufacturing line.

Mr. CUELLAR. "Unaccounted for" I think is the term they used. Anyway, can you send us something on that?

Secretary WILSON. Absolutely, sir.

#### DOG TRAINING AND MANAGEMENT

Mr. CUELLAR. If I can have the staff, if we can follow up on that.

And then the last thing, real quickly. Last time we were at Lackland Air Force Base, if you recall, we saw the—as you know, Lackland is the home for the Military Working Dogs program, and we saw some of those little puppies. They are soon going to be more ferocious puppies when they grow up a little bit.

But one of the things we saw there is that the Air Force and TSA, because TSA also has a training there, that they are not working together on dog training and management. In fact, I have to run over to another committee where the TSA person is there also, so I want to ask him.

But can you follow up with them and see if TSA is willing to work with you all? I think the Air Force wants to use TSA-owned training facilities and kennels. And if there is a way we can use taxpayers' dollars where they can allow you to do that, I think that would provide some efficiencies. So I know I am going to go talk to the TSA director right now, but if you all can follow up, that would be good also.

Secretary WILSON. Yes, sir, happy to.

Mr. CUELLAR. Thank you. And, again, I look forward to working with you. I used to chair the budget for higher ed in Texas. We can follow up on tuition revenue bonds and other Texas dollars, I would be happy to work with you on that.

And thank you again for both of you all. Thank you for your service, working with you, Madam Secretary.

Secretary WILSON. Yes, sir.

Mr. VISCLOSKY. Judge Carter.

#### HYPERSONICS

Mr. CARTER. Thank you, Mr. Chairman.

And welcome to both of you. Very proud to have both of you here with us.

Madam Secretary, you are going to be missed. I happen to have toured the fine institution you are taking charge of just very re-

cently when I was out at El Paso. I was with a former football player who happens to be my chief of staff who played football for UTEP. And by the way, he was a good one.

Anyway, we went around the campus and he showed me all the things that were new just since he got out, and he got out in the early part of this century. And he mentioned that the person who is the president had been there forever and that she was leaving.

And now I know you are taking the position of somebody that has become a legend there on that campus, and you are the perfect person for that. You are one of the most competent people I have ever known. I am sure that university is going to be in great hands. And even though you are taking the place of someone that is a legend, you will be a legend, too. So thank you for being with us.

Now, let's talk about hypersonics again. I want to follow up a little bit. Dutch and I are both interested in this a lot and mainly because we feel like we are behind. And it is interesting that you have got the ARRW and the HCSW, and it has been accelerated. That is good news.

Testing is going to be accelerated to where we say we have got a product we can work with. But then what is the Air Force's plan to transition successful hypersonic prototyping efforts to programs of record? And can these weapons be affordably manufactured and scaled? Because the real world is we got to fight people with these things. Do you have any information or any insight on that?

Secretary WILSON. Congressman, let me get back to you and lay out for you the plan that we have and what is in the budget in the 5-year plan. We have accelerated the design in testing well inside the 5-year plan, which is new.

And honestly, one of the challenges of the new authorities you have given us is that it is changing the way we budget things, because we are not just peanut butter spreading things out over a 12- or 15-year timeline. We are moving very quickly to get and test the capability, and it changes the way we have to do our budgeting. It is a challenge.

Mr. CARTER. One of the things the director of Operational Test and Evaluations said, as well as the Air Force Assistant Secretary of Acquisition, pointed out the unique challenges posed by testing hypersonic weapons, particularly the open air testing needed to ensure these weapons could perform in realistic environments.

Does the Air Force have a plan to ensure these weapons are tested rigorously before being declared successful and put into production?

General GOLDFEIN. We do, sir. And without going into classified—

Mr. CARTER. I understand.

General GOLDFEIN [continuing]. I was just at Air Force Research Labs. I was looking at some of the testing they are doing there.

And I think, if we could, can I commit to come by and talking to you, perhaps on a classified level, to walk you through where we are going relative to testing in a realistic environment, which is what I think you are driving at?

Mr. CARTER. I would love to do that. And when we do, give me a heads-up and I will include my friend Mr. Ruppertsberger.

General GOLDFEIN. Yes, sir.

Mr. CARTER. Thank you.

Mr. VISCLOSKY. Mrs. Kirkpatrick.

#### IMPACT OF BORDER WALL TRANSFER

Mrs. KIRKPATRICK. Thank you, Mr. Chairman.

My question, Secretary, has to do with the border wall transfer. If that happens, what will be the impact on the Air Force needs?

And specifically, I understand that the Air Force needs to reprogram funds in order to fulfill must pay operation and maintenance bills for fiscal year 2019, such as the Secretary of Defense's mandate to increase readiness rates for fighter aircraft, as well as the bills for immediate recovery from last year's storms, which you mentioned.

The defense appropriation bill caps the amount of transfers between accounts at \$4 billion for base funding and \$2 billion for OCO. I am concerned that if the DOD uses up a large amount of this transfer authority to fund the supposed emergency on the border, this will necessarily endanger your ability to meet yourunforeseen needs. Can you address that for me?

Secretary WILSON. Congresswoman, I think some of it will depend on what categories the funds come from and move from. But you are correct that we do need to do some reprogramming this year. But more urgently is the need for the supplemental to recover from the storms.

Hurricane Michael hit on the 11th of October and just smashed Tyndall right in the teeth. And we expect in just fiscal year 2019 operations and maintenance, as well as what we call FSRM facilities, it is kind of rehab money, for Tyndall is about \$750 million. Our initial estimate on Offutt is \$350 million just in fiscal year 2019.

And military construction, we won't be able to get any military construction out of the ground at Tyndall, but just the planning funds at Tyndall is about \$150 million, and that is for just fiscal year 2019 money.

Without those funds, we are going to have to take that out of other places in the Air Force. And by middle of May, we are going to have to start slowing down aircraft repairs, we are probably going to have to stop recovery at Tyndall and slow things down there, because we are cash flowing this out of other accounts in the Air Force. It is a significant issue.

#### DISASTER RECOVERY

Mrs. KIRKPATRICK. How long do you think that recovery is going to last?

Secretary WILSON. I think that the recovery at Tyndall, much like Keesler, which had a similar event, Keesler took 3 to 5 years for the full recovery. And at Tyndall we had a couple of buildings that weren't damaged at all, including the headquarters, Air Operations Center there. But we had several buildings that were really significantly damaged, and 95 percent of the buildings had some damage.

So the idea of doing the construction over a 3- to 5-year period is reasonable. The thing that we did decide to do, though, was to

rebuild it as a robust F-35 base as well as the testing that we do there.

Mrs. KIRKPATRICK. Thank you.

I yield back, Mr. Chairman.

General GOLDFEIN. Ma'am, could I just offer that Marines are in the same situation we are with Camp Lejeune. They had a storm that hit them hard as well. So the supplemental, we are hoping that it will include Tyndall, Offutt, and Camp Lejeune.

Mrs. KIRKPATRICK. Okay. Thank you. I yield.

Mr. VISCLOSKY. Mr. Diaz-Balart.

#### F-15 EXS VS F-35S

Mr. DIAZ-BALART. Thank you very much, Mr. Chairman.

General, what a privilege to have you here, and thank you for your service to the Nation. And you are at a bit of a disadvantage because those of us that served with the Secretary in the House and got to know her and then have continued to work with her know that, frankly, if there is a tougher, a smarter, a person with more integrity anywhere in this planet, frankly, I haven't met her.

So it is a privilege, Madam Secretary, to be your friend and to serve with you. So thank you for your service as well.

We talked a little bit—about a couple times about, you know, the fact that we are now dealing with the potential of a contested airspace, and with, you know, close-to-equal peers. And so—but according to the Air Force posture statement, the Air Force, again, we need to evolve to incorporate advanced technology, and obviously to deal with cutting-edge—those cutting-edge capabilities.

But we have been hearing about this purchasing of F-15EXs, again, with no stealth capability. Basically 70 percent of the technology is from the 1980s. It would seem to me, from all the numbers that I have seen—and I am, you know, I don't—just the math will bear it out that if we go to the F-15s, our conversion timeline to the fifth generation, which is crucial, will be dramatically slowed down.

And so, I would just like to hear your comments because, you know—and I have yet to speak to an air person, an airmen who tells me that they would rather be in an F-15 than an F-35. When you look at—because it is not like you just buy the F-15 then continue to buy the F-35s. Something has got to give, and it seems to me that the big loser is the fact that our timeline to convert to the fifth generation Air Force is dramatically hurt. So am I wrong there, and if so, where?

General GOLDFEIN. Now, sir, let me walk you through, if you could, the logic that we used. First of all, you won't find a stronger proponent for the F-35 than this chief of staff at the Air Force, because it is not only a game changer, but it is the quarterback of a significant investment that we are making in penetrating capability.

Sometimes we are guilty of putting charts together that show big red domes over, you know, enemy territory like we can't get in. No country can put a big red dome over themselves. The best thing they can do is put up a block of Swiss cheese, because there is holes there and it is our jobs to know where they are and get in and exploit them.



The F-35 is part of that penetrating team that we are investing. And you will see over \$135 billion in the Air Force budget over the FYDP in penetrating capability, which is F-35, F-22, B-21, X-37, RQ-170. It also—it works with the Navy and the Army as well. So this is about being able to penetrate and persist inside of enemy airspace, and we cannot back off the F-35, and we have not.

The challenge we find ourselves in is that we need capacity to be able to do all the missions I outline in my opening statement. And we have four fourth-generation aircraft that have to fly into the 2030s to give us capacity, F-15E, F-16, A-10, and F-15C. One of them is not going to make it. It is the F-15C.

And so, we find ourselves in a situation where we have to build capacity as we go from our 20/80 percent mix today, 20 percent fifth gen, 40—or 80 percent fourth gen, to a reverse of this by 2040. Because we want to get to 80 percent fifth gen and 20 percent fourth gen, but the F-15C is not going to make it.

So when we looked at the cost analysis, and looked at how we could—how could we, on top of a program of record, that we don't back an inch away from with the F-35, how do we place those F-15Cs? An F-15 variant to replace an F-15 allows you to have the same support equipment, same hangars, same base, same maintainers, same operators, minimal transition costs, and we don't lose the time associated with that.

It also helps us to get at our target, which is 72 aircraft a year, which is what we need to be able to drive aircraft aged from its current 28 average years to 15, to which—what we think we can manage by about 2040 timeframe. So the F-15C is about capacity. We are not taking a dime out of the F-35, nor would we, to buy F-15s, but we have got to fulfill this capacity shortfall with the F-15C.

Mr. DIAZ-BALART. And, General, I would like to—because I then—because what I have seen, and I am—obviously maybe wrong, is the fact that I don't see how, mathematically, you can do them both, the F-35 and the F-15. Because, again, you know, we are dealing with limited amount of money, and so I just—again, I would like to see how you get to, you know, the 80/20 as quick as possible.

And it would seem to me that if there is a capacity of purchasing more F-35s, they can build them, that we, in essence, should be pursuing that. And, again, I would like to continue that conversation, because I am not convinced that purchasing—again, great airplane, obviously, the F-15, but it is old technology.

General GOLDFEIN. Certainly.

Mr. DIAZ-BALART. It is antiquated technology, particularly if we are dealing with, you know, China and Russia as potential adversaries. And so, I would like to follow up with that, Mr. Chairman.

Mr. VISCLOSKY. Mr. Crist.

#### MILITARY HOUSING

Mr. CRIST. Thank you, Mr. Chairman.

Secretary, as you know, we have a mold problem with our military housing in many parts of the country, including at MacDill Air Force Base just outside of my district. I know you toured MacDill recently to inspect the situation and meet with some of the families

affected, for which I am very appreciative that you took the time to do that.

Can you talk a little bit about how we ended up here, what actions you are taking to correct the situation and keep it from repeating itself? And also, what authorities or support from our committee and Congress you might need to hold bad actors accountable and protect our servicemembers and their families?

Secretary WILSON. Certainly, Congressman. We—in the wake of the hearing that was held in the Senate and the concerns expressed about military housing, we directed a 100 percent review of all Air Force housing, and by the chain of command.

So, in some cases, it was in person. In some cases, if somebody said, you know, my house is fine, you know, first, sir, I really don't want you coming. It was—but we did—we were able to do 100 percent review of that housing. We thought that was important.

We also asked our inspector general to look at our system of how we are managing this, and do people understand what their responsibilities and authorities are with respect to housing, and make some recommendations to us. We have just gotten those recommendations, and they will be coming up to the Hill to brief the committees and so forth before we move forward on the content there.

One of the things that we have proposed, and it is jointly with all three service secretaries, is a tenant's Bill of Rights to make it really clear what rights the tenants have. I believe that we have sent a copy of that up to each of the oversight committees—it is in draft form—asking for your feedback. And we would encourage your feedback before we try to go forward and negotiate this Bill of Rights with the contractors that run our housing for us.

And finally, the one thing that we have found that was really clear to me at MacDill and other places is a lack of clarity on who is responsible for what. So what is the civil engineering squadron responsible for? What is the base commander responsible for? When you have active engaged leadership, you usually have fewer problems. And that is true on the company side, as well as on the Air Force leadership side.

And the final thing I will say is this: The thing that bothered me most or concerned me most about the hearing and the testimony with airmen and their families was what appeared to me to be a breakdown in trust, that some airmen seemed to be afraid that if they complained, they would be punished. That is a trust issue with leadership.

And the chief and I are absolutely committed to trying to rebuild that trust that people have with their leadership, that if they have a problem, they can raise that problem with their chain of command and they will be taken seriously and helped.

General GOLDFEIN. And I would just add, there is also trust to the American people and the parents of airmen, because they have shared with us and expect us to take care of them.

Mr. CRIST. Yes, sir.

General GOLDFEIN. And we have got to do it.

#### KC-46 PROGRAM

Mr. CRIST. Right. Well, thank you. Thank you both very much.

I wanted to shift to the issue of the refueling tanker program. As you know, refueling aircraft include the KC-46, KC-135, and the KC-10, support our overseas operations, and are a key component of our force readiness.

Just today, I heard you are, once again, halting the KC-46 deliveries. I am concerned by the delays and the problems with the KC-46 program, issues with maintaining the KC-135 fleet, and what this means for Air Force Mobility Command and the refueling wings around the world, including the 6th Air Mobility Wing at MacDill Air Force Base.

Can you update us on the short-term and long-term plans for our refueling fleet?

Secretary WILSON. I will defer to the chief on a couple of the plans, but let me just explain what happened most recently with the KC-46. We started accepting the KC-46, taking them off the line in Everett, Washington. They are coming down into the—into their first bases and starting to train crews.

We did have a report from our—from the Defense Audit Agency, the folks who were out there looking at the manufacturing lines that there was foreign object debris in some of the aircraft. We then went out, we did deeper dives and inspections.

And that is a manufacturing discipline issue on the line that you can't leave—you know, if you drop a wrench, you have to find the wrench. You have to wipe down surfaces so you don't have small pieces of aluminum that over time, get in the midst of things and cause serious problems in aircraft. It is manufacturing discipline, and we saw a breakdown there. We are working with Boeing on it. The most recent issue was we opened up some closed compartments like, you know, in the compartments inside wings to see if those had been inspected and wiped down.

They were better than some of the open areas, but they weren't what we would expect. We expect excellence in the manufacture of our aircraft, and we are working with Boeing on corrective action plans to get what we are—what we expect.

General GOLDFEIN. And, sir, I would just offer quickly that I went out and I flew that airplane and put it through the ringer out there. And now, when I was looking at it, I was looking at four things: Number one, how well does it fly? Number two, how well does it communicate? Number three, how well does it defend itself? And then the four, how does it—how well does it perform in the business of tanking, having been on the receiving end for most of my flying career and having been pulled out by some really courageous tanker crews?

What I saw was, and as you might imagine, I think you should expect this, the Secretary and I are pretty tough customers. And what we did find was some deficiencies in the remote visual system that is being used. I think eventually, it is going to be a great system, but we would—we refuse to accept the airplane until Boeing, the company, agreed to fix that system to specifications, which they did.

And so as we go forward, we are going to continue to be tough customers and hold them to account. But I can tell you that everything I saw in that airplane indicates to me, as the chief, that that is going to be a spectacular weapon system for us.

Mr. CRIST. Yes, sir. Thank you.  
Thank you both very much. Thank you, Mr. Chairman.  
Mr. VISCLOSKEY. Mr. Aderholt.

#### STP-2 MISSION

Mr. ADERHOLT. Thank you, Mr. Chairman.  
And good to have both of you here today. And I think all of us who served with the Secretary were very proud of our time to serve in the House with her, and we look forward to following her career as she continues on, but to welcome both of you here today.

I want to ask about the STP-2 mission. It is my understanding that it is an example of how the sticker prices offered in the commercial world are not what the U.S. taxpayer always pays when those rockets are used for government admissions.

I was hoping maybe you could tell us the total price that the Air Force agreed to pay for the STP-2 mission, and, you know, do you have that number there offhand?

Secretary WILSON. I don't have the number per mission. I do—I can tell you that the unit cost of launch has gone down 24 percent since 2012, so the cost per pound basically. And a couple of reasons for that, competition works, and, also, advances in technology.

Mr. ADERHOLT. And the reason I ask that is because I understand that after paying half or more of that price back in 2012, whatever the price was, that actually, having to wait until there is a Saudi Arabian satellite launch before we can get it, is there—

Secretary WILSON. Sir, I am going to have to get back to you on that.

#### LAUNCH SERVICE PROCUREMENT COMPETITION

Mr. ADERHOLT. Okay. All right. Yeah, if you could get back with some of that, it would be helpful. The—because it was my understanding that we are having to wait until after a Saudi Arabian satellite launch before we can—before the Air Force can move forward on that, so I would be curious to know.

Let me move on about the launch service procurement competition. At least I understand that the next round in our launch contract competition will be that, and previously launch providers won awards in the tens of millions from the rocket propulsion system accounts.

Also, it is my understanding that any provider with launch vehicles which are already certified can enter this competition, even if the provider did not win one of the launch service agreement development awards, which were awarded in October. Is that correct?

Secretary WILSON. Yes, sir, that is correct.

Mr. ADERHOLT. And it seems to me that the launch service procurement competition and the launch service agreements process of down-selecting to two providers needs to continue on schedule in order to secure the early work, which is part of the—each national security launch mission.

What potential harm would be done to the national security if there are further delays in the launch service procurement competition, including our desire to finally transition off the Russian propulsion?

Secretary WILSON. Congressman, let me talk a little bit about launch. It is one of the missions we do in space. You know, most of the missions that we talk about are the ones that are coming off satellites, but one of the other things the Air Force does is handle launch.

We no longer build rockets. We buy launches. But as the members of this committee know, there was a point in our history not so long ago where we were losing the ability to have assured access to space, because for very heavy launches, the government is really the only buyer.

And so, we had to come up with a strategy to continue to be able to have assured access to space, which was defined by Congress as having at least two providers, and to stop using the Russian RD-180 engine by 2022. So that is the goal set for us by statute to get beyond the Russian engine by 2022.

The heavy lift is our most competitive and our most difficult problem, and we need to get this RFP out, we think by April, in order to make a decision in 2020 and then get beyond the Russian engine by 2022.

So it is an open competition, but the timeline is driven by the desire from a policy level, and from the Congress, that you have directed us to get beyond the Russian engine by 2022.

Mr. ADERHOLT. Okay. And just one last question. Why is it important that candidates who are providing for these launch services be willing to commit to servicing all of the nine reference orbits?

Secretary WILSON. The reason is because there is a lot of competition for the low-Earth orbit constellations. But in the— for heavy launch into higher orbit, takes a much larger rocket. And so—and there is really not—at least not at this point—a commercial use for those rockets.

So the way the approach that the Air Force has taken is to say, Look, we need any of the providers to us to be able to cover the entire family of systems. We need to have assured access to space to all orbits, and we really can't let companies pick and choose, because we will never get someone to do competitively those heavy launches.

General GOLDFEIN. Sir, can I just offer that I think it is really important for us to remember that we almost launch in the 1990s. We had a series of spectacular failures in the 1990s, and therein lies what came together was the—that unified the Launch Alliance.

And since that timeframe of them coming together, we are 76 for 76, 100 percent successful launches. So this is also about making sure that assured access to space is also making sure that we can properly certify these companies to be able to deliver very exquisite payload.

Mr. ADERHOLT. Thank you.

Thank you, Mr. Chairman.

#### NUCLEAR MODERNIZATION PROGRAM

Mr. VISCLOSKY. Thank you very much.

The chair would ask a question at this point in time about the nuclear modernization program. I have a couple. My understanding is the Congressional Budget Office has an estimate that the total enterprise would be about \$494 billion, a significant sum of money.

Some would suggest as a portion of the Department's budget over 10 years, it is not that large. I would disagree with that assertion, and I am not suggesting you support it.

But the reality is, these costs are borne disproportionately by a relatively small subset of the Navy and Air Force acquisition accounts. For the Air Force also, the peak of these costs are going to be overlapping to a degree when you have this bow wave for aircraft replacement.

Do you have confidence as far as the CBO estimate and the ability of the Department, General, to work the modernization program in, as well as making sure we have the appropriate aircraft? I mean, it is a tough slog for you. I understand that. Could you explain that to the committee?

General GOLDFEIN. Sir, I will tell you that right now, the recap and modernization of each leg of the triad and the nuclear command and control is on a just-in-time portfolio, just in time in terms of when we absolutely need it. General Hyten testified to that a little bit earlier this week as the STRATCOM commander.

If you look at the threat that we face, Russia just completed their modernization of their triad this year. And if you look at what they are saying publicly, and read what the Chief of Defense is saying, they talk openly about inserting and—inserting nuclear weapons into a campaign, because they know they cannot defeat us and certainly can't defeat NATO conventionally.

So our modernization and recap of the triad is just in time because in—certainly in the missile leg, key parts of that program expire right about the time that we bring on the new ground-based strategic deterrent to replace it.

So I would never, as a—from a warfighting perspective, ever advise that we would unilaterally either disarm, or not proceed forward with the nuclear recap modernization the way it is laid out coming out of the Nuclear Posture Review in the budget that we put forward. And what you will see is that we have fully funded our portions, which is the missile leg, the bomber leg, the long-range standoff missile, and our portions of the nuclear command and control.

Mr. VISCLOSKY. If I could ask a follow-up question, and obviously, over a decade-long program, costs are going to change through no one's fault or problem. But the Pentagon's Cost Assessment and Program Evaluation Office had a range for the ground-based strategic deterrent.

And my understanding is the Department is proceeding on the low end of that, but that the Air Force's estimate originally was lower. There is a new assessment, as I understand it, as to what the cost will be for that portion of the triad. Do you know when that estimate is going to be completed, and do you have any sense of where it is going to come down, Madam Secretary?

Secretary WILSON. Mr. Chairman, I don't have a sense of when it is going to be completed, but we can find that out for you.

Mr. VISCLOSKY. Okay. That answers that question.

Mr. Calvert.

#### HEAVY LAUNCH VEHICLES

Mr. CALVERT. Thank you, Mr. Chairman.

Since that discussion on launch capability was taking place, you mentioned that heavy launches—the only customer is the government for that. In order to have assured access to space for those important payloads, wouldn't it make sense for the government to pay for the certification costs for heavy-launch vehicles and make sure that we have that capability?

Secretary WILSON. Congressman, we have taken an acquisition approach that helps these companies to get to where they need to go with respect to developing the technology. We down-selected from four to three this last year, and are moving forward with those.

As for, you know, different parts of this that we might pay for, I would hate to go down that road, because right now, we have been asked, Well, should we just keep all four going? The answer is, we got—the funds that you put there for us are committed to the three successful bidders at this point.

Mr. CALVERT. And what happens if only one of those three are capable of doing heavy launch?

Secretary WILSON. We are required to have two sources of supply in order to have assured access to orbit.

Mr. CALVERT. And the one that isn't—wasn't selected to have any resources directed there, would they commit to bid for that work?

Secretary WILSON. They are not required to bid for that work, but it is an open competition for the next phase.

Mr. CALVERT. Thank you.

Mr. VISCLOSKY. Mr. Aguilar.

#### PFAS AND PFOA

Mr. AGUILAR. Thank you, Mr. Chairman.

Thank you, General and Secretary.

Secretary, we wish you the best in your future endeavors as well. Madam Secretary, I am going to ask a question out of—over my skis because it is related to New Mexico, and I know that this is something that you have been working on. Air Force site inspections have shown contamination levels for the groundwater below Holloman Air Force Base in New Mexico are 18,000 times higher than what is considered safe by the Federal Government.

Evidence also shows that contamination levels at Cannon Air Force Base are also extraordinarily high. And yet, in February, the State of New Mexico had to issue a notice of violation against the Air Force due to lack of quick response by the Air Force.

What is the reason for the delayed response? I know weeks ago, you also had a call with the congressional delegation. Can you give us an update on what is going on in New Mexico, and how do we resolve this urgent matter?

Secretary WILSON. What we are talking about, the contaminant is PFAS and PFOA.

Mr. VISCLOSKY. Madam Secretary, if you could defer, I didn't understand the gentleman's question.

Mr. AGUILAR. I asked for what is going on with this issue related to the contamination in New Mexico at the Air Force—

Mr. VISCLOSKY. Oh, I am sorry. Go ahead. I am sorry.

Secretary WILSON. The contamination we are talking about is PFAS and PFOA. Many of you have it in your districts or in your

States. It is a chemical that was used in firefighting foam. The EPA came out with it as a potential contaminant. At the time that we were using it, we were using it according to directions. It was not considered to be a contaminant.

They have listed it as an emerging contaminant. The Air Force and the other services immediately went out and assessed, All right, where do we have this? Has there been any impact on the ground or the groundwater? We replaced 100 percent of our firefighting foam. We assessed 297 different installations, and did detailed site inspections of 110 installations.

Our first priority is to make sure that there is safe drinking water, and we have got 21 locations where we have provided alternative water supplies. One of our challenges—and so where we have found problems, we have also started the planning, and, in some cases, implementation to prevent any further problem or migration of the material, and then remediation.

One of the problems is there is no set standard yet for cleanup; what does clean mean and what is it in terms of parts per million? That standard is not set by the military. That is set by the EPA.

One of the other challenges and problems is that we can provide clean drinking water for human consumption. We can also take action to prevent further migration of a plume, but we cannot, under current law, provide, for example, remediation for agricultural purposes.

So this is a—and the final thing I would say is, this is not just a military problem. We know about our problem, because we were proactive and we went out and found it, because we knew we used this chemical and we went out and assessed every one of our sites.

Less than 4 percent of this chemical was sold for firefighting foam. It is used in waterproofing on shoes. It is used on the wrappers for fast food. It is used in Teflon-coated pans. So it is used very widely, and 96 percent of it is used for industrial and consumer goods uses that haven't even assessed where the problem is.

So this is a national problem. The EPA has not set cleanup standards yet. The Air Force has moved forward aggressively where we know we have it to provide clean drinking water, to do the assessments, and to start both the remediation and the stopping the migration of the plume where we found it.

Mr. AGUILAR. What does future liability look like for remediation and cleanup?

Secretary WILSON. It is very hard to say because we don't have a standard for cleanup.

Ms. MCCOLLUM. Would the gentleman yield?

Mr. AGUILAR. I would, ma'am.

Ms. MCCOLLUM. I am sorry.

Mr. VISCLOSKY. Go ahead.

Ms. MCCOLLUM. So we—I have, in my congressional district, water units that are being treated to clean this up. So this is an issue that we have been working on in Minnesota in my congressional district for a while.

The question I would put to the two of you, it was widely in the newspaper, and I asked this of Mr. Wheeler today, he was in front of my committee, there was reports that the DOD was looking to have some standards put in and have some standards put in lower.



We do have standards that we are cleaning up water, too, for drinking levels that is being reviewed. It has been ratcheted up. It may come out that there are no safe levels.

So to your knowledge, the reports that we were reading in the newspapers, is the Department of Defense actively pursuing with the EPA to set a standard and a standard that would bring some relief to the Department of Defense and—

Secretary WILSON. We want a standard. And I think the Congress has also told the EPA that they need to move forward and set a standard. My view is that standard needs to be set based on science and a standard that applies to all.

But I read the same article that you did in the paper. We aren't asking them to raise or lower their standard. We have—it is not what we do. We don't do human health research. That is—the EPA has to tell us what is the standard to which—and that needs to be based on human health research. But that was a surprise to me in the paper, too.

Ms. MCCOLLUM. Thank you. I thank the gentleman for yielding.

We need to—there was, I heard, in the last omnibus bill, some people from industry looking to have a standard put in, which they were only responsible for cleanups to a certain point.

And I think this is an adult conversation we all need to have in Congress about what to do, not only in the private sector, but in the public sector as we are dealing here as—if there turns out to be no safe standard, we have got a real issue with what has happened to a lot of our drinking water.

With that, I thank the gentleman for yielding.

And I am sorry to the chair if I jumped ahead of you.

Mr. VISCLOSKY. No.

Mr. AGUILAR. One last question, Madam Secretary. In spite of all of this, the fiscal year 2020 environmental restoration, no matter the standard, the fiscal year 2020 environmental restoration line item requests a \$63 million reduction from fiscal year 2019 enacted levels of \$365 million. So why recommend lower levels for environmental restoration within the budget, given all the uncertainty in the potential liability that we know?

Secretary WILSON. The Air Force fiscal year 2020 budget is an increase from what we requested in 2019. You are correct that Congress enacted a higher level than was actually requested. I have asked our folks, and they say that the amount of money that we have in there is sufficient to be doing the things that we are doing with respect to—I think it is really frustrating for people that the pump-and-treat things take so long. That has been the nature of that kind of remediation. But my folks tell us that the money that is in the budget is sufficient to continue the cleanups that we have underway.

Mr. AGUILAR. Thank you.

Thank you, Mr. Chairman.

EPA

Mr. VISCLOSKY. Thank you.

For the record, it is my understanding—and Ms. McCollum was correct, and the question was raised last week at a hearing—that the acting Secretary of Defense, in testimony at some point this

week, was asked the same question and indicated the Department is not pressuring the EPA to have a lower standard. So I think we are all agreed on that.

The—I would implore you, however, to pressure EPA. As a matter of fact, I testified before Chairwoman McCollum's subcommittee this week—last week to—on the issue of EPA coming up with the standard.

If anybody has dealt with this problem over his life in Gary, Indiana, I have done this. You are absolutely right that this is a national problem, but we should deal with this. Mr. Calvert's referencing technology wherever that might be implemented and the committee is very, very concerned about this.

The question I would have is my understanding is you have completed the 202, 203 preliminary site assessments. 189 installations have been recommended for site inspection, which is the second step on the circle. Are you prohibiting taking that step until you have the EPA standard, or do you proceed with step two?

Secretary WILSON. Sir, we are proceeding with step two on the detailed site assessments. And when we find that the contamination is higher than the parts per million in the recommended level, even though there is not a cleanup standard, we take action to provide water for people, and also to do the civil engineering assessments to make sure that it doesn't migrate, and figure out what we need to do to make sure it doesn't migrate.

Mr. VISCLOSKY. Okay. I appreciate the gentleman bringing it up, and I appreciate your response and do encourage you just—we should address this because these take forever under the best of circumstances.

I would recognize Mr. Kilmer. I believe we have the first vote.

#### UNMANNED AIR VEHICLES

Mr. KILMER. Thank you, Mr. Chair.

And thanks for being with us.

I know the Air Force research lab is working on fielding a prototype unmanned autonomous combat air vehicle with the ominous program name of SkyBorg, which, I think, is in line with my favorite 1980s action film. But I want to ask about these unmanned systems.

It seems clear that China is enhancing its capabilities. It seems that our ability to sort of keep up with them will be exceedingly costly, and it seems like low-cost, unmanned air vehicles and other unmanned systems may be a viable strategy as a way of offsetting China's growing capabilities.

I was hoping you could talk about these technologies and about the Air Force's investment in these technologies. Is it adequate? You know, maybe start there, and I may have some follow-up.

Secretary WILSON. Let me start out and then I will ask the chief to fill in here. But the idea of having low-cost attritable systems where you don't try to build them to last for 20 years, and you accept that there is going to be some damage to them, or some loss is something the Air Force is experimenting with.

And, you know, the experiment I think you referred to is, was one that was from our kind of Loyal Wingman program, where you would carry it in, or close to where you are trying to get to, and

then let it off. And it is semiautonomous, if you will, so it is an interesting technology, and it is one that we want to push forward and keep experimenting with and potentially deploy.

General GOLDFEIN. Sir, I would just offer that the future of air superiority we have got to be able to do five things: We have got to—first of all, we have got to penetrate. Then once we have penetrated enemy defenses, we have to persist. Once we are penetrating and we are persisting, we have got to protect what is there, not only in the air, but also what is on the ground, at sea. We have got to protect what is inside of this enemy air space.

And then we have got to proliferate. And we have got to punish, because we are in there to hold targets at risk. The proliferate piece, and I am going to keep this at an unclassified level, is somewhat what you are talking about here, which is how do we ensure that we—that as we come in, you know—I like to think that as part of the penetrating joint team, if our adversary was ever to see an F-35, which is highly unlikely, I would love to send him a two-word message: We are here. Not I am here. We are here. Because that F-35 has been designed to be able to be the quarterback inside of enemy airspace to call the audibles, to fuse information in a way that no other weapon system is designed to do. And a Loyal Wingman and unmanned attritable aircraft are going to be a key component of that future force.

#### NEW SERVICE TECHNOLOGY

Mr. KILMER. Maybe that is a good segue, because, General, last year you wrote an op-ed about winning in the multi-domain battle space. And you wrote, “Whoever figures out how to quickly gather information in various domains and just as quickly direct military actions will have the decisive advantage in battle.”

So it seems like coming out of that there is sort of two things we need to do well: One, optimizing our ability to collect information from all of the domains, air, sea, cyber, space, you name it; and then second, a way to process that information so that it is usable on the ground.

Can you talk about what we are doing to achieve that goal? And am I right to assume that investments in AI and machine learning are part of that second piece of the equation? And can you talk about the investments that are being proposed in that regard?

Secretary WILSON. I would start out and then pitch it over to the chief. We are about to come out with a new science and technology strategy that will be different from what the Air Force has done in the past. Instead of just listing a list of technologies, what it will encourage and guide the Air Force to do is to try to master speed, time, and complexity, and to identify place—not just follow where the adversary is going, but identify where they can’t go and get there faster.

On the complexity part of it, you are correct that the ability to ingest massive amounts of information, figure out what is going on, and give decision quality information to a commander that can make something else happen, is going to be part of the success and future of warfare.

The exponential growth in knowledge, in information is something that we are going to be coping with. And if we master that

and the ability to—for a sensor to decide what is important out on the edge rather than sending this massive quantity of data back, will enhance our ability to fight in a very complex environment.

General GOLDFEIN. Sir, what you just described—just to add to what the Secretary is saying—what you just described so well is exactly the story behind advanced battle management system.

And when we came to this committee last year and argued for fundamentally changing the way we do battle management by moving from a platform-centric approach, which is what we were doing with Joint STARS and to an advanced battle management fusion of sensors, that was the most important dialogue, I would offer, we had as an Air Force.

But it is the most important dialogue we had as a joint team, because this connection of all sensors to all shooters to be able to provide the decision quality information that we need to provide—to bring forces to bear on the adversary, probably in my mind, not probably—in my mind, it defines deterrence in the 21st century.

Mr. KILMER. Very good.

Thank you, Chairman. I yield back.

Mr. VISCLOSKY. Thank you very much.

Mrs. Bustos.

#### POTENTIAL REPROGRAMMINGS

Mrs. BUSTOS. Thank you, Mr. Chairman.

And thanks to both of you.

Secretary Wilson, I am very happy about your new job for you, but sad that you are leaving us. I have really enjoyed getting to know you, and your staff has been absolutely wonderful for us to work with. I am a new member to this subcommittee.

And, General, thank you for your service as well.

I am going to make this hyper-local, which I like to do. We have talked about this before, but I represent Peoria, Illinois, and the Air National Guard base is there.

In fiscal year 2019, Peoria's Air National Guard was awarded \$9 million for a firehouse. And I have been assured by Assistant Secretary McMahon that projects expected to be awarded in fiscal year 2019 will not be considered for potential reprogramming under the President's emergency declaration.

And so what I wanted to ask you is if you could commit to me that you or anyone in your command will not issue any guidance or take any action that would delay the awarding of projects, like the one in my district that I just mentioned, for the purposes of making that money available for border wall construction.

Secretary WILSON. Let me—we have not given any guidance at all on delaying anything with—for that reason. But I would say that I did have to give guidance last week on 61 projects slowing those down because of the—because of Tyndall.

Now, those were not military construction projects. They were renovation projects, and they were in 18 States. I don't know if that one—that would be—yours is—if yours is MILCON, that would not have been affected by my directive last week.

Mrs. BUSTOS. Okay. All right. Do you know if it was MILCON, by the way?

Secretary WILSON. Honestly, we gave the list of all of the projects, so my guess is that your staff looked and it is probably not on the list that I did last week. We have given no guidance to slow anything down. We are moving forward and with normal operations.

#### AIR MEDICAL EVACUATION SQUADRON

Mrs. BUSTOS. Okay. Very good. Thank you.

Do I have time for one more question? Are we okay before votes? Okay. All right.

One other question for you then, please. When we visited in my office, when you were nice enough to come by, I mentioned that the 182nd Airlift Wing in Peoria is under consideration for a new Air Force air medical evacuation squadron.

As you know, I think Peoria would be an absolutely great choice for this. And the 182nd has maintained the highest C-130 mission capability rate of all of the C-130 units that are assigned to the Active and Reserve components.

So Peoria is close to Scott Air Force Base, as you are aware, which houses the 375th Air Medical Evacuation Squadron. Plus, I am proud of the high-quality medical professionals that the colleges in central Illinois produce. They would be highly capable of serving as medical techs and nurses in the new squadron.

So I am wondering if you have a timeline for when the down-select and ultimate choice will be made for the new location for the air medical evacuation squadron?

Secretary WILSON. Congresswoman, we do these in a very kind of—try to be very transparent about it. I can't remember the date and the timeline on that, but I can get it to you and bring it to your office. It is—we have a strategic basing process that sets our criteria that tries to just make the best decision we can for the Air Force.

I always accept that when I make one State happy, there are 49 States that are unhappy, so we just try to—we don't put any thumbs on the scale. We just try to make this straight-up decision based on the criteria that we brief. And I will get you the timeline.

Mrs. BUSTOS. Okay. Illinois likes to be very happy. Thank you very much.

With that, I yield back. Thank you, Mr. Chairman.

#### COST ESTIMATES FOR THE SPACE FORCE

Mr. VISCLOSKEY. Thank you very much.

Madam Secretary, the early study State cost estimates for Space Force is \$500 million per year. Do you think it is realistic?

Secretary WILSON. Mr. Chairman, when we started going through this and looking at the various options for the Space Force, we looked at everything from a Medical Corps, a JAG Corps kind of model all the way up to a completely independent department with all the bells and whistles associated for that.

We also looked at the cost of a unified combatant command, which the Congress has already authorized, and which is moving forward. And General Jay Raymond has been nominated to be the first commander of that unified combatant command.

The—where the President's proposal ended up was kind of in the middle of those two that said we are going to set up a force inside the Air Force. So it would have a member of the Joint Chiefs and the support for that new joint chief, but it would be inside the Air Force and leverage off of the budgeting legal support acquisition and so forth of the Air Force itself.

That is probably—that is much more cost effective than the standalone kind of service. So I am not sure if that is—answers your question specifically. We think that based on what we project, the additive cost of just the inside the Air Force model is pretty accurate.

Mr. VISCLOSKY. Okay, General.

General GOLDFEIN. Sir, just to add, you know, we had a really robust debate for months within the Department on where we would land in support of the President's guidance. And it was everything from a separate service, separate department, from which where we made some initial cost estimates down to a JAG Corps, Med Corps, and everything in between.

Where we landed, which is a service within the Department of the Air Force, for me as a warfighter, is a recognizable model because it follows the Marine Corps model. The challenge we have now and the challenge for Congress is that the details associated with what that force looks like, we just started that work, and it is weeks old.

And so we are working through the planning of the details. There is 1,000 decisions now associated with what that force looks like within the Department of the Air Force, and we are working through that now, and the costs will be built as associated with that.

Mr. VISCLOSKY. Thank you.

Ms. Kaptur.

#### AIR NATIONAL GUARD UNIT IN TOLEDO, OHIO

Ms. KAPTUR. Thank you, Mr. Chairman.

Along with many of my colleagues, I just wanted to say to Secretary Wilson, all the very best to you in the years ahead. Thank you for your stellar service as a Member of the House, and for truly your extraordinary service as Secretary of the Air Force. And we wish you the very best in the future. Good luck. Thank you.

I want to ask either of our witnesses in future procurement and basing of F-35s to come online, how could the 180th Army Air Guard Wing, fighter wing based at Toledo, which has the northern command responsibility, be best positioned to compete? Knowing everything you know about what has happened in the past versus what is going to happen in the future, what can an Army Air Guard Wing do to compete?

General GOLDFEIN. Could I just say, ma'am, I will start off that if General Milley was sitting here, he would love the fact that you are calling it an Army Air Guard. This is our Air National Guard unit that is there, and I will turn to the Secretary in terms of the details of our basing process because this happens under her authority.

But we score out and we put—and we are very transparent about this, but we score out bases based on how well they meet the re-

quirements for operational synergy ranges, runway, you know, all of the support activity that is in the community. And we are very transparent with the community in terms of what that scoring looks like. And then that is all preserved—that is then presented to the Secretary for decision, ma'am.

#### HYPERSONICS

Ms. KAPTUR. You know, I just wanted to say that you are short on fighter pilots as I look at your recruitment. And I can guarantee you the reason they didn't make first cut is because they were not close enough to a training base, not because they weren't good enough. That is a strange thing.

And I ask myself, well, planes fly faster now, so what is it that they are not near? What is it they don't have when their performance is as good as any unit in the array, right, of the Department of Defense? So I just want you to take a look at that. I don't know. There is something not right. And, so, I just have to advocate for them because they are close to my heart, okay.

I wanted to move to the—thank you for listening. I want to move to hypersonics for a second here. The Air Force has a \$576 million request for hypersonic prototyping, and I have several questions. What role did the Air Force play in the Department selecting the three sites for funding? What were some of the factors that were weighed in the site selection? And how are cost and construction timelines factored in? And is the Air Force aware that there may be other facilities that are cheaper and take less time to construct and bring online for test capabilities? And have you toured any of those available sites?

Secretary WILSON. Congresswoman, are you talking about wind tunnels?

Ms. KAPTUR. I am, but also attendant facilities to that.

General GOLDFEIN. Yes, ma'am. So we take a look at all of the facilities. Right now, we are putting fairly significant focus as a department on wind tunnels and testing for hypersonic purposes. Our Air Force research labs, and as the Secretary mentioned earlier, that this is one particular area where all the services are working together to make sure that we are not duplicating our efforts, but we are actually merging our efforts to accelerate as fast as we can the business of hypersonics, because we know we have got to speed up.

Secretary WILSON. Congresswoman, in general, we try to be competitive with our award of research funds, our funds for equipment to build things like wind tunnels. I couldn't, sitting here, remember for you the three sites that are chosen or the criteria for selection for those, but I can follow up and get those to you.

Ms. KAPTUR. Do those wind tunnels already exist?

Secretary WILSON. I—honestly, ma'am, I don't know the details of it. I can—I know we have some wind tunnels that exist. We have got one at Arnold. I know that we have one at—in Indiana. And I would be—I am stretching to find the other one.

#### MENTAL HEALTHCARE

Ms. KAPTUR. Okay. Well, I will tell you what, I would really be grateful if you would look at one called Plum Brook, which is an

adjunct to the NASA research facility at Brook Park, Cleveland, Ohio, and tell me why that one either qualifies or does not qualify for consideration.

My third area of questioning very quickly, the military finished 2018 with another sad statistic, the highest number of suicides among Active Duty personnel in at least 6 years. What can we do more of to help ensure we provide access to better mental healthcare and maintain that continuum of care, especially for those in the Guard and Reserve components where the numbers don't look that good?

General GOLDFEIN. Yeah. Thanks, ma'am.

You know, we hit 100 last year. We are on track for 100 this year. So we are—the Secretary and I have been very focused on this. What we believe is going to have the most impact is to follow a model that special operations command is using very successfully where they embed healthcare providers at the unit level so that they forge those relationships. So when someone is looking for help, they are not asking a stranger for help, they are asking someone they actually know.

And so we call it Task Force True North. It has been very successful at several bases. Now we are working on the next tranche of this, which is to push it across the Air Force to make sure that there are no bystanders in this business, that in the business that—when we talk about suicides, that someone who is either contemplating that has got the care they need, and we have that embedded at the unit level.

So that is the way we are approaching it. We have not been successful to date, and we are not—and we are very serious about moving out.

Ms. KAPTUR. I will just end with sharing this conversation we had with the heads of the Air Force Academy, West Point, and Annapolis. They were up here a couple weeks ago. And I asked them why they couldn't increase the number of admissions to train health professionals that will ultimately work in the various branches.

And they were very dismissive and said, Well, we admitted five people that might be a doctor or whatever. I was actually very disappointed in their reply because people like myself would be willing to plus-up their accounts, because we know the country is 100,000 doctors short in this area, and many multiples of that of advanced practice nurses.

So whether we are talking regular force, whether we are talking Guard and Reserve, whether we are talking our veterans facilities and in the civilian sector, this country is under-doc'd and under-nursed in these important behavioral science areas.

So if you can have any influence on them, I think we could do a lot, and then those individuals would likely serve people in the military for quite a long while. And we need to fill that pipeline, be more creative, because these individuals are not being produced in our society at the level that we need them.

I thank you very much for listening. If you have any further comments on that, I would be very open to them.

Secretary WILSON. The one thing that I would say is one of the things that has been successful with special operations is it is not



just the medical professionals who are embedded in the squadrons. It is the chaplains, it is kind of the wrapping around, and physical therapists as well, trainers, so that you have the helping professions in the squadrons.

And one of the other things that is interesting to me—and I—you know, every suicide, every death, every accident in the service the chief and I get an email. It is an op rep, an alert, and the details of that. And it is stubbornly high. About 100 airmen we lose a year to suicide, 100 airmen. That is more than we lose in any of our conflicts now. We are losing more people to suicide.

But the interesting thing to me, I have been at this job for 2 years, we have yet to lose an airman who is forward-deployed in austere conditions in a combat zone. What is it that is protective about that sense of meaning being in a lousy place away from home all those kind of things that doesn't exist in our squadrons at home and how do we replicate it?

And I think part of it is, there is a sense of purpose, and there is a team around you that is looking out for you. And we need to recreate that sense of belonging and purpose and care in our squadrons here at home.

Ms. KAPTUR. Thank you, Madam Secretary.

Mr. VISCLOSKY. All right. I want to thank both of you, one, for your service, for your preparation for your testimony today.

General, I am still trying to figure out which of the two of you you were referring to earlier.

And, Madam Secretary, truly I think on behalf of Mr. Calvert and I, just the day I got onto this committee Joe McDade said there are good people and there are not-so-good people. You are one of the good people. You have been a delight to work with, and good luck to you in your career.

Secretary WILSON. Thank you, sir.

Mr. VISCLOSKY. Thank you very much. We are adjourned.

[CLERK'S NOTE.—The following questions and answers are for the record:]

#### IMPACT OF BORDER WALL TRANSFER ON AIR FORCE NEEDS

The fiscal year 2019 Defense Appropriations bill caps the overall amount of transfers of funds between accounts that are funded in the bill (which does not include Military Construction). The caps are \$4 billion for base funding and \$2 billion for Overseas Contingency Operations (OCO) funding. The Administration's plan to implement the border wall through the use of Defense funds pursuant to a presidential emergency declaration reportedly includes \$2.5 billion to be executed through the Counterdrug account. While over \$1 billion in base and OCO funding was appropriated to this account for FY19, only about \$238 million remains.

On March 25, DOD submitted to the Committee a reprogramming action to transfer \$1 billion in the Counterdrug account to support the Department of Homeland Security on the southern border, specifically for the "construction of additional physical barriers and roads . . . in order to impede any drug smuggling activities." The \$1 billion is coming from Army military personnel accounts, largely due to the Army's inability to meet its 2019 end strength goals.

DOD has indicated its intent to execute this transfer without prior approval by the congressional defense committees, thereby violating a longstanding agreement embodied in the reprogramming rules that are included in the Committee's report. However, this transfer will still use up one-quarter of the Department's base general transfer authority for the year, which will deprive the services of flexibility to fund must-pay bills and unforeseen needs.

Secretary Wilson, I understand that the Air Force needs to reprogram funds in order to fulfill must-pay operation and maintenance bills for FY19, such as the Sec-

retary of Defense's mandate to increase readiness rates for fighter aircraft, as well as the bills for immediate recovery from last year's storms. The Defense Appropriations bill caps the amount of transfers between accounts at \$4 billion for base funding and \$2 billion for OCO. I am concerned that if the DOD uses up a large amount of this transfer authority to fund the supposed "emergency" on the border, this will necessarily endanger your ability to meet your unforeseen needs.

*Question:* Are any of your reprogramming requests being held up by OSD or OMB right now, and is it because of this use of \$1 billion in transfer authority to fund the border wall? (OPR: SAF/FMBP)

*Answer:* The Air Force submitted an Omnibus reprogramming request to OSD the week of 29 April 2019. Our understanding is OSD and OMB are planning on submitting the consolidated request to Congress in May.

*Question:* How will the use of transfer authority for the wall impact the ability of the Air Force to meet the needs of hurricane and flood recovery, as well as other unforeseen bills that may arise?

*Answer:* Natural disaster supplemental appropriations have so far provided ~\$1.7 billion of an estimated \$4.3 billion in additional authorizations and appropriations required to recover Air Force installations damaged by natural disasters. This included \$670 million in Operations and Maintenance and \$1.0 billion in Military Construction. Congress also provided an additional \$200M in reprogramming authority to aid in recovery efforts.

These initial funds restore Tyndall Air Force Base to a minimum level suitable to support the missions that have already returned and prepare the installation for the arrival of a new flying mission. The Air Force continues to require funding in FY20 and beyond to fully recover Tyndall AFB and Offutt AFB.

*Question:* The transfer authority we provide under Section 8005 comes with the explicit condition that it "may not be used unless for higher priority items, based on unforeseen military requirements". The department is claiming that the border wall is a "higher priority" justifying its use of this \$1 billion. However, I must ask you: what are the higher priority items for the United States Air Force?

*Answer:* The Air Force faces significant unfunded requirements due to storm damage, the year of execution DOD mission capable rate initiative, emergent operational needs, fact-of-life shortfalls and critical weapon system needs. While we can internally resolve or defer a portion of these shortfalls, we need support from OSD and Congress for a \$1.1B supplemental to recover from storm damage as well as reprogramming for several critical Readiness and Modernization needs to avoid significant impact to our operations.

#### SPACE FORCE AND SPACE PROGRAMS

DOD is proposing to establish a Space Force as a new military service. The Space Force would be organized within the Department of the Air Force, similar to how the Marine Corps is within the Department of the Navy. DOD says that creating the Space Force is a strategic priority to unify and integrate space across the Department because of increasing threats to U.S. space systems from adversaries, particularly Russia and China.

Creating a new military service will require authorization. If approved by Congress, DOD's goal for FY20 is to standup the Space Force headquarters at an estimated cost of \$72 million. Over the next five years, DOD would transition 15,000–18,000 space personnel from across DOD into the Space force at an estimated cost of \$2 billion over that time.

#### *Justification for Space Force*

*Question:* Secretary Wilson, DOD's proposal for the Space Force says establishing a separate military service for space is a strategic priority and is needed to unify national security space efforts and address increasing threats. However, in the past, DOD's focus has been on integrating space into the existing services, not separating it out. Can you explain the rationale for creating a new military service for space? (OPR: SAF/SP)

*Answer:* Space is now a warfighting domain—our competitors have observed the advantages we gain from operating in space and are fielding a full range of anti-satellite weapons in an attempt to deny our use of space in crisis or war. Furthermore, they are fielding space systems so their own forces can benefit from the use of space. While we remain the best in the world at space, and our current structure has been aggressively meeting these challenges, this structure was developed before space was a contested domain. The President's proposal would elevate the influence of space leaders in the Pentagon for the long-haul.

*Question:* Can you provide examples of specific problems or issues that cannot be solved within the current organization, but could be solved by a Space Force?

*Answer:* The organizational change put forward in the President's proposal elevates and institutionalizes the influence of space leaders in the Pentagon for the long term. A dedicated Military Service within the Department of the Air Force will: unify, focus, and accelerate the development of space doctrine, capabilities, and expertise to outpace future threats; institutionalize advocacy for space priorities within the Pentagon; and further build a distinct space warfighting culture. It also places a 4-star general as an equal member of the Joint Chiefs of Staff, to provide the requisite advocacy and expertise regarding the role of space power in national defense.

#### *Space Force Plan*

Secretary Wilson, DOD's Space Force proposal outlines the plan but leaves many important questions unanswered, such as:

*Question:* What happens to the space organizations of the other services, such as the Army Space and Missile Defense Command and Navy's space and Warfare Systems Command?

*Answer:* The DoD is currently conducting the detailed planning to determine the specific transfers to the Space Force. Generally, the Department has proposed that the preponderance of space capability would be in the Space Force. However, because space is integral to joint warfighting capability, each Service may retain a cadre of space experts to promote and to integrate space-related capabilities, integrate space into the planning and operations of its forces, and use some space capabilities specifically designed for its respective domain.

*Question:* The proposal says the Space Force will assume responsibilities for "all major military space acquisition programs." Are there non-major space programs that won't fall under Space Force? (OPR: SAF/AQS; OCR: SAF/SP)

*Answer:* Yes, although DoD envisions consolidating the preponderance of existing military space programs under the Space Force. Other DoD Components may retain organic space capabilities uniquely required to support their core mission (e.g., terminals and localized electronic warfare equipment). The DoD is currently conducting the detailed planning to determine the specific programs that should transfer to the Space Force.

*Question:* How was the size of the proposed Space Force determined?

*Answer:* The projected size of the U.S. Space Force at Full Operational Capability (fiscal Year 2024) is 16,451. This includes transfer of an estimated 14,551 existing billets, plus the addition of an estimated 1,900 billets for new requirements. The projected total is comprised of approximately 66 percent military and 34 percent civilian authorizations. The Department determined this was the appropriate manning level to capture billets transferred from existing space functions within the current Services, mostly from the Air Force. It also INCLUDES billets for the U.S. Space Force staff, positions supporting the Joint Staff, and elements to enhance expertise, culture, and ethos (e.g., education and training, personnel, warfare center, and doctrine center). To support cost effectiveness, the U.S. Space Force will remain highly dependent on existing U.S. Air Force institutions and systems. For example, the Headquarters Air Force Secretariat will provide equal support to the Space Staff and the Air Staff. In addition, the Air Force is projected to provide all Base Operations Support for Space Force units.

*Question:* The early steady-state cost estimate for Space Force is \$500 million per year. Is this realistic? (OPR: SAF/FMC; OCR: SAF/SP)

*Answer:* Yes, \$500 million per year is realistic as a steady state "additional" recurring cost for a Space Force. The recurring cost estimate includes: Space Force Headquarters, a Warfare Center for Space, Education and Training Requirements, and a Doctrine Development Center. The estimate does not include: current Space funding, growth in Space operational capability, the Space Development Agency (SDA) or U.S. Space Command. As such, the estimate only addresses the organizational change. The \$500M was estimated based on a set of assumptions about the degree to which the Space Force would leverage the Department of the Air Force. The more integrated with the Air Force, the lower the cost; the less integrated, the higher the cost. The Space Force Planning Task Force is refining the assumptions and associated cost estimates.

*Question:* What is the process for deciding what will be transitioned to the Space Force and what will not? Who will make these decisions? (OPR: SAF/SP)

*Answer:* Decisions on specific transfers will be made by the Secretary of Defense, in consultation with affected Services. The Department of Defense has set up a planning task force underneath the Air Force that includes all of the Services and the relevant Department of Defense agencies. This team is accomplishing the de-

tailed planning necessary so that within 90 days of enactment in law, we would stand up the initial elements of the U.S. Space Force. That planning task force is led by a two-star general and includes members from across the Department.

*Question:* The proposal says that the Space Force will “leverage the Air Force infrastructure.” Can you share with the subcommittee what infrastructure and support the Air Force would be providing to the Space Force? Why should the Air Force be paying for the Space Force’s infrastructure? Do you have an estimate for the fully burdened cost of the Space Force, including infrastructure to be provided by the Air Force? (OPR: SAF/FMC; OCR: SAF/A4C)

*Answer:* Many infrastructure functions that are not core to the Space Mission can be more efficiently performed by the Air Force. Centralized infrastructure support expected to be provided by the Air Force includes: energy management; environmental management, hazardous waste management, real property development and management, and housing privatization operations. These centralized functions are performed by the Air Force Installation and Mission Support Center (AFIMSC). AFIMSC is also expected to provide centralized support for Security Forces, Contracting and Services (food, fitness, lodging, etc.). Related to these centralized functions, the base level Mission Support Group functions are expected to remain in the Air Force. Additionally, other functions are expected to remain with the Air Force, (e.g. Medical, Judge Advocate, Chaplain, Audit, etc.). At this time, there is no decision on management of the United States Space Force Military Construction requirements. Since space forces will be located on existing Department of Air Force installations and the cost of Base Operations Support is not expected to change, the Air Force expects that Base Operations Support will be covered within its existing FYDP. The Space Force Planning Task Force is refining the assumptions and associated cost estimates.

#### *Missile Warning Satellite (Next-Gen OPIR) Cost and Oversight*

Last June, the Air Force approved the acquisition plan for a new series of missile warning satellites, called Next Generation Overhead Persistent Infrared (Next-Gen OPIR). These satellites provide early warning of missile attacks, and track launches from North Korea, Russia, China, and others.

The total cost of the program (five satellites and ground control) is \$14–\$15 billion through the life of the program. The Air Force intends to request a \$632 million reprogramming to keep the program on track in FY19. This is in addition to the \$643 million appropriated in FY19, and \$1.4 billion requested for FY20.

Next-Gen OPIR is being carried out under streamlined acquisition authority, called Section 804 authority, which exempts the program from some key reporting requirements on cost and schedule, raising questions about whether use of this authority is appropriate.

*Question:* Secretary Wilson, the Air Force has embarked on a program to develop a new series of missile warning satellites, called Next-Generation Overhead Persistent Infrared (Next-Gen OPIR). DOD approved the program start last year, and this year the Air Force is requesting \$632M in reprogramming on top of the \$643 million appropriated in FY19, totaling nearly \$13 billion for FY10 alone, and is requesting \$1.4 billion in FY20. My understanding is that draft cost estimates for the total cost of the program are in the \$14 to \$15 billion range to deliver five satellites and a ground control system. Further, the program is being carried out under streamlined acquisition authority, called Section 804 authority, which is exempt from key reporting requirements on cost and schedule. Can you please explain why this streamlined authority is appropriate for this program and what controls and processes are in place to keep the Committee fully informed? (OPR: SAF/AQ; OCR: SAF/SP)

*Answer:* Section 804 authorities are being used to accelerate the Next-Gen OPIR sensor to deliver in five years. This is the highest-risk, most technically challenging portion of the program in order to meet USSSTRATCOM’S 2025 launch requirement. Operating under Section 804 authority enabled rapid contract award to Lockheed Martin (Geosynchronous Earth Orbit (GEO) satellites and Northrop Grumman (Polar satellites) in August and June 2018 respectively; Lockheed Martin has subsequently completed their system requirements review. Additionally, the payload contractors have been energized at rapid pace, successfully completing System Design Reviews for the first GEO satellite in April 2019. By utilizing the Section 804 authorities, the program has already saved approximately 12 months of schedule. Whereas, under a traditional DoD 5000.02 program, we would not likely be on a contract.

Just because Next-Gen OPIR is operating under Section 804 authorities doesn’t mean it lacks acquisition rigor or transparency. In fiscal year 2019, the program increased transparency by adding Budget Procurement Activity Codes to provide addi-

tional transparency to the GEO satellite, Polar satellite, and Ground System acquisition activities. As for documentation, attached is a list of how the program is meeting the intent of the statutory and regulatory requirements imposed on a typical Department of Defense (DoD) Major Defense Acquisition Program. Finally, with respect to reporting, the Service Acquisition Executive established cost and schedule guardrails which are documented in the Acquisition Decision Memorandum. The program is required to report to Congress seven times a year through tri-annual reports and quarterly Congressional reports. These reports inform the DoD and Congress of program progress and will be the avenue used to track the program against the schedule and cost guardrails set in the Acquisition Decision Memorandum.

*Question:* What is the \$632 million reprogramming needed for, and what is the impact if it is not received? What are the highest risks for this program? (OPR: SAF/AQS; OCR: SAF/SP)

*Answer:* The \$632 million reprogramming is needed to support the accelerated schedule to meet the warfighters 2025 delivery date by purchasing long-lead items and key components and increasing engineering, design, and other staff for both the prime contractor and payload contractors. Approximately 50% of the funding would be applied to the purchase of long-lead items and key components and 50% would be applied to headcount increase. If the \$632 million is not funded, then the schedule will slip two years, pushing the initial launch capability from 2025 to 2027. Additionally, if the program schedule extends, the prime and payload contractors will have to maintain an adequate workforce size to support the required work, driving an increase in program cost.

The highest program risk from a technical point of view is the design and development of the sensor. To mitigate this risk, the program has two payload vendors under contract with competing designs. The program is also using proven technologies with high technical readiness levels in order to reduce the technical risk. The use of Section 804 authorities to get on contract earlier, carrying multiple payload vendors, and utilizing high technical readiness levels components and subsystem design reduces risk and enables the program to meet the warfighter's 2025 need date.

#### *Weather Satellite Gaps*

Secretary Wilson, the current Air Force weather satellites on orbit are nearing their estimated end of life, and DOD faces potential gaps in its ability to monitor weather or military operations. Two Space Rapid Capabilities office space missions were intended to demonstrate technologies and provide residual operational capabilities in the near term—Operationally Responsive Space (ORS)-6 and ORS-8. ORS-6 has been delayed and the Air Force recently canceled ORS-8.

*Question:* What is the impact of the delay and cancellation of the ORS efforts to the risk of potential gaps in weather monitoring? (OPR: SAF/AQ; OCR: SAF/SP)

*Answer:* The Compact Ocean Wind Vector Radiometer (COWVR) sensor was to fly on the ORS-6 satellite as a technology demonstrator and provide residual operational capability for ocean surface vector winds and tropical cyclone intensity. ORS-6 was cancelled in May of 2018 due to unresolvable issues with the spacecraft bus software. The COWVR sensor is now planned to be hosted on the International Space Station to complete the technology demonstration in 2021, resulting in a smaller sensor than other microwave sensors that can be utilized in potential future missions. The Weather System Follow-On-Microwave (WSF-M) program is expected to field capability in FY24, aligning with the current need date defined by Defense Meteorological Satellite Program (DMSP) availability.

ORS-8 was the short-term solution to meet the urgent need for cloud characterization and theater weather imagery, but was terminated due to delays in the contract award. Rather than filling a gap in on-orbit weather sensors, these delays would have resulted in a capability overlap between ORS-8 and the Air Force's long-term solution to meet this requirement—the Electro-Optical/Infrared (EO/IR) Weather System (EWS).

To reduce this potential overlap, the Space Rapid Capabilities Office (SpRCO) and Space and Missile Systems Center (SMC) concluded the most beneficial option was to cancel the ORS-8 program and focus on the EWS acquisition. In order to address the original intent of the ORS-8 program, the Air Force intends to accelerate acquisition activities for EWS, allowing it to launch up to six months earlier. This will help to ensure the weather gap that ORS-8 was originally intended to fill is minimized.

The EWS acquisition strategy is pending approval and has an expected initial launch capability of FY24.

*Question:* What is the Air Force's long-term strategy for meeting validated requirements for weather data? (OPR: AF/A3; OCR: SAF/SP)

Answer. The USAF is currently devising a new long-term strategy for satellite weather which will move away from the legacy approach of a small number of large satellites with multiple instruments, which has led to complex and costly satellite missions that require years to develop, procure and launch. Moreover, the large amount of capability packed into each individual large satellite presents a significant portion of the overall capability, meaning that if any one mission were lost or delayed, it could result in a significant degradation of the overall system. The new strategy will move to a larger number of smaller, lower-cost satellites with a smaller number of lower-cost weather sensors on each satellite. The strategy plans to provide these capabilities through a combination of (a) USAF missions, (b) USAF-owned sensors hosted as a payload on commercial satellites, (c) data purchases from commercial solutions, and (d) the continuation of leveraged data from US (e.g., NOAA, NASA) and international/allied partners. This strategy will result in our overall satellite weather capability being distributed over a larger number of smaller satellites, each of which can be more easily and cheaply upgraded or rapidly replaced if lost, thereby adding a substantial amount of resiliency and cost stability to the overall system. The transition bridge from the legacy architecture to the desired end-state of a disaggregated constellation of small satellites will be a series of rapid prototype missions to quickly build and launch new small sensors, and test and evaluate the use of that data end-to-end within the USAF weather observing and forecasting enterprise.

AIR FORCE OVERSEAS CONTINGENCY OPERATIONS (OCO) REQUEST

At the behest of OMB, the fiscal year 2020 Defense budget request distorts the request of Overseas Contingency Operations by reclassifying \$98 billion of base funding (13.6 of DOD's total request) as "OCO for base requirements". This, when combined with \$66 billion in normal OCO funding, results in a total FY20 OCO request of \$164 billion versus an enacted FY19 level of \$69 billion. For the Air Force, this results in a total OCO request of \$42.3 billion, which includes \$29.5 billion in "OCO for base requirements". This includes about 43 percent of the Air Force's total operation and maintenance request, and also results in the entirety of the Air Force's ammunition procurement request (\$2.6 billion) being in OCO.

*Question.* Secretary Wilson, the Administration has designated \$29.5 billion of the Air Force's budget, about one-quarter of your budget, as Overseas Contingency Operations due to its decision to reclassify a large amount of base funding as OCO. How does this impact your ability to budget and plan for future years? (OPR: SAF/FMBP; OCR: AF/A8)

Answer. Since the \$29.5 billion is categorized as OCO for Base Requirements, it has not impacted our ability to budget and plan for future years, as the FY20 Air Force budget request (including base and OCO) includes a total top line of \$165.6 billion. The future year requirements and associated funding levels assume the total FY20 request is supported.

F-15EX REQUEST

The Air Force's budget request includes \$1.12 billion to procure 8 new-build F-15 fighter aircraft, dubbed F-15EX. This is the first year of a programmed purchase of 80 F-15EX aircraft over the FY20-24 future years defense plan:

	FY20	FY21	FY22	FY23	FY24
Quantity .....	8.00	18.00	18.00	18.00	18.00
Procurement (\$B) .....	1.05	1.65	1.69	1.72	1.75
R&D (\$B) .....	0.07	-	-	-	-
Total (\$B) .....	1.12	1.65	1.69	1.72	1.75

This would be the Air Force's first procurement of new "fourth generation" fighter aircraft since fiscal year 2001. The Air Force currently operated 234 F-15 C/D aircraft and 218 F-15E Strike Eagle aircraft. Due to structural integrity problems the F-15C/D fleet is expected to begin aging out in the late 2020s. The F-15EX request is intended to solve this problem while addressing total fighter aircraft capacity issues. The model of F-15 currently in production for foreign partners such as Saudi Arabia carries several capability upgrades and is expected to have a service life of 20,000 hours.

*Question.* Secretary Wilson, you have made public comments that the F-15EX request was not the Air Force's idea, leading some to conclude that this is something the Air Force did not agree with, and does not want, but was imposed upon you by higher-ups within the Department of Defense. Our understanding is that while

the idea originated within OSD, the Air Force ultimately did agree to it. Can you please clarify this? Does the Air Force support this request or not? (OPR: AF/A8)

Answer. It is true that our initial FY20 POM submission did not include the F-15EX; however, several key pieces of analysis and information became available during Program and Budget Review (PBR) to support the FY20 PB position to procure the aircraft. We must procure 72 fighter aircraft a year to account for aging aircraft retirements and to meet the National Defense Strategy. This requirement, combined with current budget realities and the global missions of the Air Force demand a mix of 4th and 5th generation force structure to balance near and mid-term readiness with future needs.

*Question.* If Congress did not fund the F-15EX, what would the Air Force propose to do about the F-15C fleet—in other words, what is Plan B? Is this Plan B funded in your budget request? (OPR: AF/A8)

Answer. In the event Congress does not fund the F-15EX, the Air Force will consider all options with regard to the F-15C fleet, to include the Service-Life Extension Program. The latter option will require significant additional funding which would still not address the enhanced capabilities the fleet would need for tomorrow's fight.

*Question.* General Goldfein, it has been suggested that because the F-15EX lacks the features and capabilities of “fifth generation” aircraft, it is therefore irrelevant to the National Defense Strategy and its emphasis on “great power competition”. What is your view? (OPR: AF/A8)

Answer. On the contrary, our analysis shows in the 2030 timeframe, sufficient fighter capacity is critical in a fight with a near-peer. A mix of F-15EX—with its increased range and weapons carriage capability, as well as, a more advanced on-board electronic warfare suite of avionics making the aircraft more survivable—with F-35 is our best option given present resources.

#### PILOT SHORTAGE

At the end of fiscal year 2018, the Air Force reported a total force pilot shortage of 1,937, with the most serious shortfall occurring in the fighter pilot inventory.

*Question.* General Goldfein, nearly 6 months into fiscal year 2019, can you tell me how the Air Force is doing in meeting its target for pilots? Specifically, can you speak to the fighter pilot shortage? (OPR: AF/A3)

Answer. We do not calculate overall shortage numbers within the fiscal year primarily due to the open window for aircrew to accept the Aviation Bonus, which does not allow us to accurately project status mid-year. We are programmed to produce more pilots in FY19 (1,341) than we did in FY18 due to streamlined undergraduate pilot training syllabi.

*Question.* How does your fiscal year 2020 request seek to address the pilot shortage? (OPR: AF/A3)

Answer. Increases in sustainment, flying hours, and readiness accounts support pilot recovery efforts. Critical investment areas address a balanced approach of increased production and retention initiatives, including: expansion of Contract Adversary Air, increased undergraduate pilot production through streamlined syllabi, targeted aviation bonus policies, and increased administrative support in operations squadrons.

*Question.* In the last several years, commercial airlines have experienced significant growth. To address their own pilot shortage the commercial air industry offers significant bonuses and premium pay and benefits—forcing the Air Force to compete with the private sector to retain its pilots. Do you have sufficient resources to provide the recruitment and retention incentives necessary to keep and train highly qualified pilots? (OPR: AF/A1)

Answer. Currently, recruiting resources are sufficient for pilots. For retention incentives, the Air Force is appreciative of the increase to congressionally mandated caps for Aviation Incentive Pay and the Aviation Bonus as part of the 2017 NDAA. As stated in the OSD report to Congress earlier this year, these increases have yet to show a meaningful decrease in attrition across the services; however, we recognize there must also be improvements to quality of life and quality of service in order to retain our talent. The Air Force remains committed to working with our sister services and OSD to examine what improvements to retention incentives would best serve to increase readiness while also remaining good stewards of the taxpayer's dollar.

*Question.* Commercial pilots have far less time away from home and their families. Aside of pay-based incentives, how is the Air Force competing in terms of benefits? (OPR: AF/A3; OCR: AF/A1)

Answer. We are examining and implementing multiple initiatives to increase retention to levels needed for long term career field health. Air Force initiatives to increase retention of experienced pilots are focused on Quality of Service and Quality of Life: revitalizing the squadron, increased admin support staff, and targeted, proactive talent management.

*Question.* Women currently represent about 6.5 percent of Air Force pilots. How is the Air Force examining its policies and benefits to attract more female recruits? (OPR: AF/A3; OCR: AF/A1)

Answer. Air Force accession sources (Reserve Officer Training Corps and Air Force Academy) are examining their application messaging, policies, and procedures to remove barriers that disproportionately affect female recruits. For example, they have worked to increase the diversity of the pilot selection boards and to commit to bias mitigation training in board members in order to combat implicit prejudices. In addition, accession sources are working to diversify recruiting events so that potential female recruits can see women succeeding as military pilots. They are also working to allow more cadets under 5'4"—a barrier for many female recruits—to apply for flying positions. In addition, the Air Force is collaborating with external partners, including RAND and the Federal Aviation Administration, to build a more diverse pipeline to aviation careers.

*Question.* Many female pilots feel they must make a choice between flying fighters or having a family. How is the Air Force making it easier for female pilots to take leave to have a family while also providing the opportunity for women to maintain proficiency while on leave in order to remain competitive for assignments and promotions when they return to full-time service? (OPR: AF/A3; OCR: AF/A1)

Answer. The Career Intermission Program was developed to improve long-term retention of high performing Airmen by allowing pursuit of personal or professional goals that could be challenging while serving in an active status. Feedback from the field indicates that the statutory service commitment for participating in the Career Intermission Program (2 months for every 1 month on intermission, per Section 710 of Title 10, U.S.C.) is the main barrier to program use and causes some Airmen to separate from the service entirely. The Air Force seeks flexibility in legislation so that the Service Secretary can tailor the commitment in an effort to increase the program's appeal within targeted populations.

In addition, the Air Force has recently modified rules for flight simulators, allowing those simulators to count for "operational flying credit", ensuring professional flying milestones can continue to be met even if the member is not flying due to pregnancy.

#### PFOS/PFOA CONTAMINATION

The Air Force is the largest DOD user of the firefighting foam, known as AFFF, which contains the chemicals PFOS and PFOA. These chemicals have been linked to an increased risk of cancers and other serious health effects, and have contaminated groundwater near hundreds of military bases, commercial airports, and chemical plants.

Since May 2016, when the EPA established a Lifetime Health Advisory (LHA) level of 70 parts per trillion for PFOS/PFOA in drinking water, the Air Force has identified 203 installations requiring Preliminary Assessments, the first step of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. 202 of the 203 preliminary assessments have been completed, and 189 installations have been recommended for Site Inspection (SI), the second step in CERCLA.

*Question.* I understand the Air Force is in the process of conducting Site Inspections for 203 Air Force sites that have been identified for cleanup under the CERCLA process. How many of those site inspections have currently been completed? (OPR: SAF/IE)

Answer. The Air Force identified 203 installations for Preliminary Assessments. 189 locations required Site Inspections. The Air Force has completed 114 of the 189 Installations identified for Site Inspections.

*Question.* The Air Force's FY20 Environmental Restoration budget request proposes a \$63 million reduction from the FY19 enacted level of \$365.8 million. This account funds activities beyond PFOS/PFOA cleanup. Can you please tell me what you have spent on PFOS/PFOA cleanup in FY19? (OPR: SAF/IE; OCR: AF/A4, SAF/FMB)

Answer. The Air Force plans to spend \$126.27 million on PFOS/PFOA cleanup in FY19, of which \$46.49 million has already been obligated.



## AIR FORCE FUNDS OBLIGATED/PLANNED ON PFOS/PFOA

(Amount in \$M)

Component	FY19 (Obligated/Planned)
BRAC .....	\$18.30 (\$8.10 obligated/\$10.20 planned)
ANG O&M Restoration .....	\$24.50 (\$2.40 obligated/\$22.10 planned)
DERP .....	\$83.47 (\$35.99 obligated/\$47.48 planned)
Totals .....	\$126.27

*Question.* Why is the budget proposing a 17 percent reduction to this account in FY20? (OPR: SAF/IE; OCR: AF/A4)

*Answer.* The FY20 President's Budget Defense Environmental Restoration Program (DERP) and Base Realignment and Closure (BRAC) request for PFOS/PFOA is 2% greater than the FY19 President's Budget request. However, it is a 17% reduction from the total amount received following congressional additions to both accounts. The FY20 President's Budget addresses our highest risk requirements (both PFOS/PFOA and other contaminants) and shows an increase from the original FY19 President's Budget request.

*Question.* How much of your proposed FY20 request will be spent on FFOS/PFOA clean up? (OPR: SAF/IE; OCR: AF/A4)

*Answer.* The Air Force plans to spend \$56.11M in FY20 for PFOS/PFOA. We have \$12.41 million in requirements funded under the Defense Environmental Restoration Program (DERP). The Base Realignment and Closure program plans to spend \$14.7M. For sites ineligible for DERP funds, we have \$29M in Operations and Maintenance-funded requirements.

*Question.* Is your FY20 request adequate and could you do more in FY20 to address contamination?

*Answer.* The Air Force FY20 budget request is adequate to protect human health, principally funding and executing mitigation actions to ensure no one is drinking water that exceeds the EPA's Lifetime Health Advisory (LHA) due to Air Force activity. If additional resources were made available, we could execute an additional \$100 million in Defense Environmental Restoration Program (DERP) requirements, \$54 million in Base Realignment and Closure requirements, and \$29 million in Air National Guard Operations and Maintenance requirements in FY20.

*Question.* What do you estimate the Air Forces' total obligation for clean up to be?

*Answer.* The safety and health of our Airmen, their families, and our community partners is our priority. AFFF is the most efficient extinguishing method for petroleum-based fires and is widely used across the firefighting industry, to include all commercial airports, to protect people and property. AFFF accounts for less than four percent (4%) of PFOS/PFOA chemical use, whereas the majority can be found in other industrial and consumer-goods such as nonstick cookware, stain-resistant fabric and carpet, and some food packaging. The Air Force used AFFF according to the manufacturer's directions and once the LHA was established began transitioning stockpiles and fire trucks to C6 AFFF. PFOS/PFOA contamination can be attributed to both the Department of Defense and civilian actions which requires a "Whole of Government" approach to respond to an issue impacting communities across the United States.

The Air Force has spent \$351.35 million on PFOS/PFOA from FY13 through FY18 and plans to spend \$126.27 million in FY19. The AF is evaluating the initial results of PFOS/PFOA investigations and will be able to better estimate future obligations as these efforts are completed.

## AIR FORCE CLEAN-UP FUNDS OBLIGATED/PLANNED

(Amount in \$M)

Component	FY13-18	FY19
BRAC .....	\$129.90	\$18.30
ANG O&M Restoration .....	[Included in DERP] *	\$24.50
DERP .....	\$221.45	\$83.47
Totals .....	\$351.35	\$126.27

\* Prior to legal determination concerning ineligibility of DERP funds.

F-35A JOINT STRIKE FIGHTER

The Air Force’s FY20–24 budget plan flat lines F-35A production at 48 aircraft per year, a reduction of 30 aircraft compared to the previous year’s plan, as shown below:

	FY20	FY21	FY22	FY23	FY24	Total
FY19 Plan .....	48	54	54	54	60	270
FY20 Plan .....	48	48	48	48	48	240
Change .....	0	(6)	(6)	(6)	(12)	(30)

*Question.* Secretary Wilson, can you explain why the Air Force currently plans to buy 48 F-35A aircraft per year through the future years defense plan despite, in light of the fact that you say you need 72 new fighters per year? (OPR: AF/A8; OCR: FMB)

*Answer.* Current budget constraints prevent the Air Force from procuring more than 48 F-35s per year. We intend to mitigate the impact with the acquisition of 8 F-15EXs in FY20 and 80 over the FYDP. The FY20 Unfunded Priorities List (UPL) request—if funded—will increase the F-35 quantity from 48 to 60 by procuring 12 additional aircraft in FY20 and an additional 12 aircraft in FY21.

*Question.* Was this decision determined by the inclusion of the F-15 request? (OPR: AF/A8)

*Answer.* No. F-35 procurement was not, and will not be, impacted by acquisition of the F-15EX.

*Question.* Did cost factors—such as operating costs, or the costs of retrofitting aircraft to accommodate upgrades under development—weigh in this decision? (OPR: AF/A8)

*Answer.* While the Air Force has committed funds to modernize earlier F-35 models, the reality is in the current budget environment, an all 5th generation fleet is simply unaffordable.

*Question.* General Goldfein, the unfunded requirements list you recently submitted to Congress included funding for advanced procurement of F-35 long-lead parts to support an increase of F-35 production to 60 jets in the FY21 budget. If Congress supported that request in a timely fashion, would you commit to asking for these 60 aircraft in FY21? (OPR: SAF/A8; OCR: AF/10)

*Answer.* Yes.

*Question.* Secretary Wilson and General Goldfein, you have expressed some concern about the F-35’s operating cost and the need to bring it down more aggressively. Could you provide more detail about what you are seeking, and how you plan to make it happen? (OPR: AF/IO)

*Answer.* We are absolutely concerned that the F-35 fleet we need is ready and sustainable at a cost we can afford. We are working with DoD leadership and the Joint Program Office to ensure we continue to increase readiness and reduce operating costs. The following are some specific actions we’re focused on:

- Urgently fix Autonomic Logistics Information System. Agile software development is an industry best practice that needs to be fully brought to bear using the Kessel Run organization.
- Accelerating program organic repair capability by early 2024 is essential to reducing sustainment costs and increasing parts availability.
- Maturing F-35A reliability and maintainability is essential to reaching affordable sustainment levels. The program recently identified 30 reliability projects that would yield over \$3.9B in life cycle cost avoidance.

NUCLEAR MODERNIZATION

The Air Force operates two legs of the nuclear triad (land-based missiles and bombers) and approximately three-fourths of the nuclear command, control, and communication (NC3) system. Currently the Air Force has three major nuclear weapon system modernization efforts underway: the Ground based Strategic Deterrent (GBSD), the B-21 Raider bomber, and the Long Range Standoff (LRSO) cruise missile. The cost of each major effort in the FY20–24 future years defense plan is laid out below:

	(\$M)	FY20	FY21	FY22	FY23	FY24
GBSD .....		570	1,528	2,540	3,040	3,078
B-21 .....		3,004	3,048	2,942	2,662	2,264

	(\$M)	FY20	FY21	FY22	FY23	FY24
LRSO .....		713	475	359	396	433

### *Nuclear versus conventional modernization*

The costs of nuclear modernization will be substantial and will impose budget pressure at a time when conventional modernization and new capability development will also be in demand. The Congressional Budget Office (CBO) estimates that total nuclear modernization costs—including DOD and Department of Energy warhead programs—will be nearly a half-trillion dollars (\$494 billion) in the 2019–2028 timeframe. While DOD officials tend to minimize these costs by comparing them to the entire Defense budget, in reality these costs are born disproportionately by a relatively small subset of Navy and Air Force acquisition accounts. If not controlled, such costs are a potential threat to conventional force modernization. For the Air Force, the period of peak costs for nuclear modernization largely overlap a projected bow-wave of aircraft replacement costs as estimated by CBO.

*Question:* Secretary Wilson and General Goldfein, the costs of nuclear modernization could severely compromise the Air Force’s ability to grow and modernize as you have indicated you need. How will the Air Force ensure that the costs of nuclear modernization programs stay within cost estimates and do not consume the Air Force’s conventional modernization budget? (OPR: SAF/AQ; OCR: AF/A10)

*Answer:* The Air Force is dedicated to both nuclear and conventional modernization programs. Significant effort is always given to keep complex weapon system programs affordable and within cost estimates and the Air Force is committed to our modernization priorities.

### *Uncertainty in GBSD cost estimates*

In 2016, the Pentagon’s Cost Assessment and Program Evaluation (CAPE) office produced a cost estimate for the GBSD program that ranged from \$60.8 billion at the low end to \$97.5 billion at the high end, in constant dollars, versus an Air Force estimate of \$47.4 billion. By departmental direction, the Air Force currently is funding the program to the CAPE low end estimate. The greatest divergence between the Air Force and CAPE estimates comes after the production phase begins in the mid-2020s, due to uncertainty over industry capacity to build the requisite number of missiles per year. New knowledge gained during the current technology maturation phase (under contract with both Boeing and Northrop Grumman) should inform a more refined estimate, but it is unclear when this new estimate will be provided.

*Question:* Secretary Wilson and General Goldfein, up to now we have seen widely divergent cost estimates for GBSD from the Air Force and cost estimators in the CAPE office of the Secretary of Defense. I understand that a new cost estimate is being worked on now, and that this may provide more clarity. When will that estimate be done? (OPR: SAF/AQ; OCR: AF/A10)

*Answer:* The Office of Cost Assessment and Program Evaluation is scheduled to complete the new cost estimate in June 2019.

*Question:* How is the Air Force planning to control costs on GBSD without sacrificing the capabilities that are important to the warfighter? (OPR: SAF/AQ; OCR: AF/A10)

*Answer:* GBSD is pursuing a program approach that utilizes low-risk, mature technologies, incorporates contract incentives, and emphasizes “smart commonality” with the Navy, Space community, and Missile Defense Agency to control costs. It is leading the Department in using digital engineering to trace design changes to cost impacts and how to mitigate them. The weapon system also incorporates a modular, open architecture to facilitate system maintenance / modernization and reduce life cycle costs. The Air Force intends to own the technical baseline up front, key interfaces, and necessary data rights to aid cost effective modernization.

*Question:* It is my understanding that the analysis of alternatives that justified the GBSD program determined that the 60-year cost of GBSD and a Minuteman III life extension were roughly equal; however, this analysis predates the higher CAPE estimate. At the same time, GBSD presents an opportunity to reduce lifecycle costs through an open architecture that allows for easier upgrades and updates. Do you believe that GBSD is still the most cost-effective means of preserving the land-based leg of the triad? (OPR: SAF/AQ; OCR: AF/A10)

*Answer:* Yes. Minuteman III is based on 1970s technology and was designed with a 10 year planned service life. Systemic age-out of critical components and attrition as well as design limitations inherent to the 45-year old system prevent it from being cost-effectively life extended. The analysis of alternatives and supporting intelligence threat assessments concluded that GBSD would provide a system more readily adaptable to meet evolving threats that will begin to appear as early as the

mid-2020s. In addition to providing the capability to counter these threats, GBSB delivers the opportunity to significantly reduce the total cost of ownership by adopting modern design features, known facility improvements, and modernized Weapon System Command and Control architecture.

#### HYPERSONICS

The Air Force's total budget for hypersonic weapons research and prototyping is \$807 million, a slight increase over the FY19 total of \$795 million. The Air Force funds numerous efforts in hypersonic from basic science and technology up to demonstration and prototyping efforts. The Air Force is utilizing rapid prototyping authorities to pursue two hypersonic weapon concepts:

- Air-Launched Rapid Responses Weapon (ARRW, or "Arrow"): this would be an accelerated, weaponized version of a system, known as Tactical Boost Glide (TBG), that the Air Force is testing in partnership with DARPA. The goal is to reach an "early operational capability" by 2022.
- Hypersonic Conventional Strike Weapon (HCSW, or "Hacksaw"): an air-launched, solid rocket powered, exo-atmospheric weapon. The goal is "early operational capability" by 2021.

#### *Are hypersonics being adequately resourced?*

As of the fiscal year 2019 budget, the Air Force had not adequately resourced the ARRW and HCSW prototyping efforts in its budget plans. A combined \$351 million shortfall ARRW and HCSW in FY18/19 was remedied only by a combination of reprogramming and congressionally added funding. That shortfall was expected to grow to \$455 million in FY20 under current budget plans.

*Question:* Secretary Wilson, the Air Force's FY19 budget did not match its accelerated plans for prototyping hypersonic weapons. Has the Air Force fully funded these efforts in the fiscal year 2020 request? (OPR: SAF/AQ; SAF/FMB)

*Answer:* Yes. The FY20 PB funds the HCSW effort in FY20. The Air Force is working the future year funding requirements (FY21–22) for HCSW in the FY21 POM process as it is not currently funded in the FYDP.

#### *What will come after the prototyping efforts?*

Currently it is unclear how the Air Force plans transitioning successful hypersonic prototyping efforts to programs of record, what operational requirements or quantities of such weapons will be, or the unit costs that need to be met in order to make hypersonic weapons worth the capability gained.

*Question:* Secretary Wilson, what is the Air Force's plan to transition successful hypersonic prototyping efforts to programs of record? Can these weapons be affordably manufactured at scale? (OPR: SAF/AQ)

*Answer:* Air Force Global Strike Command (AFGSC) is the designated lead Major Command (MAJCOM) for the operational posture of a hypersonic weapon. Currently, AFGSC is anticipating and planning for a completion of hypersonic weapon prototype efforts (the design, engineering, testing, initial production) in the FY22 timeframe. As Middle Tier Acquisition (MTA) Phase A, Rapid Prototyping efforts, the efforts will transition to MTA Phase B Rapid Fielding or a Program of Record.

The industrial base, to include prime contractors and suppliers, will be stressed in the coming years to accommodate the needs of all of the hypersonic activities within the three Services and Missile Defense Agency. Both of the ARRW and HCSW prototype efforts have established industry base and laboratory work needed to acquire low rates of assets for AFGSC. The size of an eventual inventory will be determined by AFGSC, ultimately driven by warfighter need. At this time All-Up Round (AUR) costs are based on early estimates being refined by AFCAA. Once a procurement quantity and timeline are determined, a more accurate average AUR cost can be determined.

#### *Testing Hypersonics*

Hypersonic weapon systems pose several development challenges including an adequate ground and flight test infrastructure to ensure that systems meet performance expectations. On November 5 2016, the Director of Operational Test and Evaluation noted the challenge of building an infrastructure for hypersonic testing and identified 43 capability gaps in ground and flight testing. More recently, Will Roper, the Air Force Assistant Secretary for Acquisition, was quoted as saying that the Air Force is only starting to "get our head around" the scope of adequate test capability needed to support these rapid efforts. This raises the question of how the Air Force will be able to declare, with confidence, the success or failure of hypersonic efforts in the 2021–2022 period.

*Question:* Secretary Wilson, the Director of Operational Test and Evaluation, as well as the Air Force Assistant Secretary for Acquisition, have pointed that the unique challenges posed by testing hypersonic weapons—particularly the open-air testing needed to ensure these weapons can perform in realistic environments. Does the Air Force have a plan to ensure these weapons are tested rigorously before being declared successful and put into production? (OPR: AF/TE; OCR: SAF/AQ)

*Answer:* ARRW and HCSW will conduct an appropriate level of testing consistent with their scope as rapid prototypes with leave-behind “as-is” operational capability. These rapid prototyping programs, comprised of 7 test flights for ARRW and 6 test flights for HCSW, should provide sufficient data upon which to base a limited operational capability declaration decision after their All-Up Round operational environment flight tests.

The Department of Defense is investing in the test and evaluation capabilities required to more rigorously test hypersonic weapons, but these test capabilities are still in development. For instance, a clean-air, Mach 7+, variable speed wind tunnel capability is on schedule to be available after completion in 2023. These test capabilities will be available to support future spirals of ARRW and HCSW and other hypersonic programs.

#### AIR FORCE DISASTER RECOVERY

Three Air Force installations have been severely damaged by natural disasters: Tyndall AFB, Florida, by Hurricane Michael; Joint base Elmendorf, Alaska, by an earthquake; and Offutt AFB, Nebraska, by flooding. The most recent estimates indicate a current year budgetary shortfall of \$899 million for damage assessments, repairs and repair plans. The Department of Defense is requesting FY19 supplemental funds for these and other Service installations hit by natural disasters in the past year in the amount of \$1.7 billion.

The Department has requested \$467 million in FY20 “OCO for Base” activities for the Air Force to address only the costs of repair at Tyndall AFB; it is unclear what funds may be needed to address additional needs at Offutt AFB.

The Air Force has advised the Subcommittee that in FY20 there is an estimated shortfall for Tyndall of \$360 million and \$400 million for other related damage costs.

The Committee approved a recent reprogramming of \$600 million (\$200 million for the Air Force and \$400 million for the Marine Corps) on March 26. The Senate supplemental bill includes \$600 million, including \$400 million for the Air Force and \$200 million for the Marine Corps; its passage is still pending.

*Question:* Secretary Wilson, I understand you have spoken recently about the disaster recovery needs of the Air Force. Further, I understand there is a shortfall in FY19 of \$899 million. Could you explain to the Committee what costs these funds would cover? How are you covering immediate costs? What, if any, facilities sustainment, renovation or modernization activities are you funding at this point, separate from these three disaster areas?

*Answer:* The Air Force requires \$750 million in FY19 Facilities Sustainment, Restoration, and Modernization (FSRM) and Support funds to continue recovering Tyndall AFB, Florida. These funds will enable the return of base operations while ensuring personnel do not continue to work in degraded facilities. Our FY19 estimate for FSRM and Support funding required at Offutt AFB is \$120 million. We have cash-flowed funds from within our Operations and Maintenance budgets to cover the immediate costs for Tyndall and Offutt recovery, as well as for Joint Base Elmendorf-Richardson. Other FSRM activities funded from centralized accounts have been suspended. Without supplemental funding now, the Air Force must cut critical facility and readiness requirements, driving Air Force wide operational risks and negatively impacting the recovery of Tyndall and Offutt.

*Question:* Given the fact that the flooding in Offutt AFB just occurred, when will the Air Force be able to provide the committee with a list of projects for repair? Or do you believe the preponderance of the programs will be military construction projects?

*Answer:* Our revised FY19 estimate for FSRM and Support funding required at Offutt AFB is \$120 million, which was refined as facility damage assessments were completed.

Additionally, flight simulators and equipment supporting RC-135 training and operations was damaged. Without an additional \$234 million to replace this equipment, training capacity and ability to continue filling operational taskings will be negatively impacted. Separately, on 18 April 2019, the Air Force provided Congressional committees with a preliminary \$298 million list of parametric cost estimates for the 60 facilities we expect to be replaced by military construction projects.



TUESDAY, APRIL 8, 2019.

**FISCAL YEAR 2020**

**UNITED STATES ARMY BUDGET OVERVIEW**

**WITNESSES**

**HON. MARK T. ESPER, SECRETARY OF THE ARMY**

**GENERAL MARK A. MILLEY, CHIEF OF STAFF, U.S. ARMY**

**OPENING STATEMENT OF CHAIRMAN VISCLOSKY**

Mr. VISCLOSKY. The subcommittee will come to order.

This afternoon, the committee will receive testimony on the posture of the United States Army and the fiscal year 2020 budget request for the Army.

Our two witnesses are the Honorable, or Dr., Mark Esper, Secretary of the Army, and General Mark A. Milley, the Chief of Staff of the Army.

We welcome you both back to the subcommittee and thank you for your service.

General Milley, I would also like to take this opportunity to congratulate you on your nomination to be the next Chair of the Joint Chiefs of Staff.

In the recent past, there have been some discussions over the continued need for U.S. land power. Such speculation was clearly wrong. Continued insecurity in Afghanistan and throughout the Middle East, the rapid modernization of Russia and Chinese military capabilities, and a defiant North Korea all underscore the need for a strong, capable Army.

The committee has made significant investment in Army readiness over the past several years to ensure soldiers in all components are prepared for whatever our unpredictable world brings. We have already seen the impacts of that investment through increased training, improved maintenance availability, and increased flying hours.

The Army's fiscal year 2020 budget request once again prioritizes readiness but also focuses resources on future modernization efforts in order to support the National Defense Strategy. This investment in the future is intended to prepare the Army to face great-power competition and is led by the recently created Army Futures Command.

However, downpayments in future high-tech weaponry come at an expense, primarily in the form of the elimination or reduction of 186 existing procurement programs. Many of these programs are on time, on budget, and bring essential capabilities to our soldiers.

The Army proposes to trade those programs for investments in future modernization, which does bring a certain amount of risk.

I strongly support the need to modernize the Army but clearly have concerns about the path of the 2020 budget request.

The Army has struggled mightily with modernization programs over the last two decades. We have always been told this time it is different. Yet several high-profile Army acquisition programs were ultimately canceled after significant investment of taxpayer dollars due to an incomplete requirement process.

Given the nature of the threats, we cannot afford to replicate the past. I do look forward to hearing about how the Army's acquisition strategy for 2020 will break this cycle.

Another challenge the Army faces is recruiting future soldiers. The manning levels that were authorized and appropriated in fiscal year 2019 do not appear to be able to be reached, creating a significant surplus in funding.

We have seen similar scenarios play out over the past several years. However, fiscal year 2019 is different. Instead of using the additional funding to invest in Army and other military priorities, we have learned that \$1 billion in surplus funding will be used to finance the President's border wall.

I should note that this committee denied that proposal, but the Department moved forward with their plan anyway, breaking a historical agreement between this committee and the executive branch.

Gentlemen, I have seen unfunded needs for the Army and across the services, including readiness, improved facilities, and your stated goal of modernizing the force. Those needs are great. This committee wants to be your partner in achieving your goals. But it appalls me when the funding that Congress appropriates to enhance our military superiority is used to finance nonmilitary functions via a unilateral decision by the President of the United States.

With that, I thank you again for appearing before the committee today to discuss these important issues.

We will ask you to present your summarized statements in a moment, but first I would like to recognize the distinguished ranking member, Mr. Calvert, for his opening comments.

#### OPENING REMARKS OF MR. CALVERT

Mr. CALVERT. Thank you, Chairman Visclosky.

Secretary Esper, General Milley, thank you both for your service and for being with us today.

I would also like to congratulate you, General Milley, on your nomination to be the next Chairman of the Joint Chiefs of Staff. It is well-deserved, reflects great credit upon you and the United States Army.

It is evident from this budget request that the Army is in the midst of a significant paradigm shift from counterinsurgency to the near-peer threats emphasized in the National Defense Strategy. From the establishment of Army Futures Command to the relocation of resources, this shift is reflected most dramatically in the Army's modernization plans.

While I understand the reasoning for these changes, I have some concerns with their scope and speed. Given the resources at stake, it is critical that the Army gets this right. So I look forward to



hearing from you about how your budget request aligns resources with the Army's modernization strategy.

I will also be asking you about how Army Futures Command will interact with the traditional Army acquisition and requirements communities.

Finally, I will be interested in hearing from you both about the risks that we are assuming in the near term by shifting resources away from current capabilities to future priorities.

Thank you both again for your service. I look forward to your testimony.

Mr. Chairman, I yield back.

Mr. VISCLOSKY. Thank you very much.

Gentlemen, your full testimony will be placed in the record, and members have copies at their seats.

My intent is to complete two rounds of questions for each member present. In the interest of time, I would strongly encourage you to keep your summarized statements to 5 minutes or less, to be complete but succinct in responding to questions.

Secretary Esper, I would ask that you go first, followed by General Milley, but would just suggest, because we will be having votes shortly, that we will simply continue the hearing, given our location, and go back and forth so that we can proceed.

Mr. Secretary, go ahead.

#### SUMMARY STATEMENT OF SECRETARY ESPER

Secretary ESPER. Yes, sir.

Chairman Visclosky, Ranking Member Calvert, and distinguished members of the subcommittee, thank you for the opportunity to appear before you today.

I want to first thank Congress for helping us reverse readiness decline that developed following several years of budget uncertainty. Because of the strong support provided in the fiscal year 2018 and 2019 budgets, we have increased the number of fully ready brigade combat teams by 55 percent over the past 2 years.

However, while I am confident we would prevail against any foe today, our adversaries are working hard to contest the outcome of future conflicts. As a result, the Army stands at a strategic inflection point. If we fail to modernize the Army now, we risk losing the first battles of the next war.

For the past 17 years, the Army bore the brunt of the wars in Iraq and Afghanistan. For over a decade, we postponed modernization to procure equipment tailored to counterinsurgency operations. Our legacy combat systems, designed for high-intensity conflict, entered service when I joined the Army in the early 1980s. While they dominated in past conflicts, incremental upgrades for many of them are no longer adequate for the demands of future battle, as described in the National Defense Strategy. We must build the next generation of combat vehicles now before Russia and China outpace us with their modernization programs.

Despite Russia's looming economic difficulties, they are steadily upgrading their military capabilities. In addition to field testing their next-generation T-14 Armata tank, they continue to advance the development of their air defense and artillery systems. And

when combined with new technology such as drones, cyber, and electronic warfare, Russia has proven its battlefield prowess.

We have no reason to believe that Moscow's aggressive behavior will cease in the short term. Russia's blatant disregard for their neighbors' sovereignty, as demonstrated in Ukraine and Georgia, is a deliberate strategy meant to intimidate weaker states and undermine the NATO alliance.

In the long run, China presents an even greater challenge. They continue to focus their military investments in cutting-edge technologies such as artificial intelligence, directed energy, and hypersonics. Beijing's systematic theft of intellectual property is also allowing them to develop capabilities cheaper and faster than ever before.

To deter the growing threat posed by great-power competitors and defeat them in battle if necessary, we must leap ahead to the next generation of combat systems, and we must do so now.

Over the past year, the Army took a major step forward in reorganizing its entire modernization enterprise with the establishment of Futures Command. In doing so, we stripped away layers of bureaucracy and streamlined our acquisition process while achieving unity of command and greater accountability. Guided by our six modernization priorities, Army Futures Command is hard at work developing the systems needed to maintain battlefield overmatch in future conflicts.

When we reviewed our budget this time last year, we felt that it was unreasonable to ask Congress for the additional \$4 billion to \$5 billion needed annually to fund our modernization without first looking internally to find the necessary resources.

As a result, the Army's senior leaders took an unprecedented initiative to comprehensively review every Army program. Our goal was simple: find those programs that least contribute to the Army's lethality and reallocate those resources into higher-priority activities.

After over 50 hours of painstaking deliberations, we eliminated, reduced, or delayed nearly 200 programs, freeing up over \$30 billion over the next 5 years. We then reinvested this money into our top priorities: those systems and initiatives we need to prevail in future wars.

The Army will continue to ruthlessly prioritize our budgets to provide a clear, predictable path forward that will achieve our strategic goals. That process is underway now as we develop next year's budget.

Support for the Army's fiscal year 2020 budget is critical to building the Army the Nation needs and demands. Those who are invested in legacy systems will fight to hold on to the past while ignoring the billions of dollars in opportunity created by our investments in new technologies and what it means for the Army's future readiness. While change will be hard for some, we can no longer afford to delay the Army's modernization. We believe we are following the sound guidance conveyed to us by many of you.

In this era of great-power competition, we cannot risk falling behind. If left unchecked, Russia and China will continue to erode the competitive military advantage we have held for decades.

The Army has a clear vision, which I ask be entered into the record, and a sound strategy to maintain battlefield overmatch. We are making the tough choices. We now need the support of Congress to modernize the force, and it starts with the fiscal year 2020 budget. The bottom line is this: We owe it to our soldiers to provide them the weapons and equipment they need to win decisively in future battles.

Thank you again for your continued support. I look forward to your questions and appreciate the opportunity to discuss these important matters with you today.

Mr. VISCLOSKY. Thank you very much.

General Milley.

#### SUMMARY STATEMENT OF GENERAL MILLEY

General MILLEY. Chairman Visclosky and Ranking Member Calvert, distinguished members of the committee, thank you all for the opportunity to join Secretary Esper here today.

And it remains an incredible privilege for me to represent all of the 1 million soldiers in the regular Army, the National Guard, and the U.S. Army Reserve that are arrayed in 18 divisions, 58 brigade combat teams, and deployed with over 180,000 soldiers today in 140 countries around the world on freedom's frontier.

While much of our testimony today and your questions are going to focus on the Army's challenges and how to make us stronger and more lethal, it is important to note up front for the committee, for the entire Congress, for the American people, our allies, and perhaps most importantly for our adversaries, that the United States Army is a highly capable, globally deployable force today. We can go on short notice. We can go anywhere in the world. We have the training, equipment, people, and leaders to prevail in extended ground combat against anyone, anywhere, anytime. And there should be no one who doubts that.

I concur with Secretary Esper's comments on the threats posed by China and Russia. And they are, in fact, rising. The international order and, by extension, the United States' interests are under increasingly dangerous pressure.

China is a significant threat, as the Secretary outlined, to the United States and our allies in the mid- and long terms. I would categorize China as a revisionist power seeking to diminish our influence, U.S. influence, in the Pacific and establish themselves as the controlling regional power in Asia. And they are setting conditions to challenge the United States on a global scale in the coming decades.

Russia seeks to return to global great power and will continue to challenge the United States not only in Europe but also in the Middle East, Asia, Africa, and the Arctic as well as the Western Hemisphere. Russia continues to undermine NATO as an alliance and to sow dissent throughout the European continent and, as we all know, in our own homeland through a variety of means. Russia remains the only current existential threat to the United States and will likely become, in my view, increasingly opportunistic in the near term.

So what will this budget do? In the last 17 years, our strategic competitors have eroded our military advantages, as outlined by

Secretary Esper. And with your help, starting 2 years ago, we began to restore our competitive advantage, and our recent budgets have helped improve readiness and lay the groundwork for future modernization. And we ask, with this budget, that you sustain those efforts.

Our goal remains 66 percent, two-thirds, of the regular Army, the Active Duty Army, the brigade combat teams, and 33 percent of the National Guard and the U.S. Army Reserve to be at the highest levels of readiness. We are not there yet. Those numbers, those levels of readiness are what we need to be able to execute the National Defense Strategy. And with continued, consistent, predictable congressional support, we can reach those levels of readiness sometime, we think, in 2022.

Specifically, this budget will fund, in terms of readiness, 58 brigade combat teams and 6 security force assistance brigades for the total Army; 32 combat training center rotations, to include 4 for the National Guard, which is twice as many as recent years; increased prepositioned stocks in both Europe and INDOPACOM; and many, many other readiness initiatives.

In terms of modernization, this budget is really going to fund future readiness in terms of across our 6 modernization priorities, which include 31 specific programs, 50 high-priority programs, and another 100 which we consider must-funds. In short, this budget will increase the Army's lethality in the near term and set conditions for increased lethality of the Army in the future.

And, lastly, I want to highlight that this committee, Congress as a whole, has provided us tremendous support over the last several years. And we, both the Secretary and I, and the entire Army's leadership are committed to applying our resources deliberately and responsibly, understanding that they have been entrusted to us by Congress and the American people.

Collectively, you and us, we must ensure that we maintain our solemn obligation to the American soldier to never send our sons and daughters into harm's way unless they are properly trained, fully manned, and have the best equipment money can buy and are extraordinary well-led.

We believe that strength provides deterrence and preserves the peace in terms of great-power competition and the awful potential for great-power war. The only thing more expensive, in my view, than deterring a war is actually fighting a war, and the only thing more expensive than fighting a war is losing a war. This budget will ensure that none of those nightmare scenarios ever come true.

Thank you again for your continued support to our soldiers and their families, and I look forward to answering your questions.

[The written statement of Secretary Esper and General Milley follows:]

RECORD VERSION

STATEMENT BY  
THE HONORABLE MARK T. ESPER  
SECRETARY OF THE ARMY

AND

GENERAL MARK A. MILLEY  
CHIEF OF STAFF  
UNITED STATES ARMY

BEFORE THE

HOUSE APPROPRIATIONS COMMITTEE - DEFENSE

FIRST SESSION, 116TH CONGRESS

ON THE POSTURE OF THE UNITED STATES ARMY

APRIL 9, 2019

NOT FOR PUBLICATION  
UNTIL RELEASED BY THE COMMITTEE

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## Introduction

America's Army stands ready today to deploy, fight, and win our Nation's wars. The Army has made great progress in recent years, recovering from depleted levels of readiness following extended periods of sustained conflict and reduced defense spending. Our near-peer competitors, however, capitalized on this period to advance their own positions by modernizing their militaries and reducing the overmatch we held for decades. Aligned with the National Defense Strategy (NDS), the Army is pursuing a path to ensure we stay ahead of our competitors and remain ready and lethal into the future.

The Army's *Vision* and *Strategy* outline the force needed to prevail over the threats of the future, along with the plan for building that Army. To accomplish this, the Army's efforts are focused on three priority areas: building readiness for high-intensity conflict against strategic competitors; modernizing our doctrine, equipment, and formations to conduct multi-domain operations; and reforming our personnel system, business processes, and fiscal management to ensure our resources are put towards the highest priority activities. Additionally, the Army will continue to take care of its people, live the Army Values, and strengthen our alliances and partnerships to sustain long-term success in wartime and peace.

We are grateful to Congress for the strong and timely support provided to the Army in the Fiscal Year 2019 (FY19) appropriations. Receiving this funding on time reduced risk to short term readiness and allowed us to make significant investments towards our six modernization priorities. In order to achieve the defense objectives in

the NDS and meet our goals as outlined in the *Army Vision*, we must receive predictable, adequate, sustained, and timely funding in the future. The Army's total FY20 budget request is \$182.3B, consisting of \$150.7B for base requirements and \$31.6B for Overseas Contingency Operations requirements. This request provides the resources the Army needs to build readiness, while modernizing for the future.

## Strategic Environment

The Army faces a global security environment that continually grows more competitive and volatile. The challenges are many: the reemergence of great power competition; a resilient but weakening post-World War II order; accelerating technological advancements empowering state and non-state actors; and persistent threats to the Homeland. The Army must be ready now, and in the future, to confront this challenging strategic environment. We must have an Army prepared for high-intensity conflict, modernized to extend overmatch against near-peer adversaries, and trained to fight as part of the Joint Force alongside our allies and partners, all while sustaining our ability to conduct irregular warfare.

The modern battlefield encompasses all domains – air, land, sea, space, and cyber-space – and is increasing in geographic scale. Near-peer competitors, like China and Russia, are aggressively pursuing modernization programs to erode American overmatch. They have developed sophisticated anti-access and area denial (A2/AD) systems, fires, cyber, electronic warfare, and space-based capabilities that generate layers of stand-off to disrupt the deployment of military forces, deny the build-up of combat power, and separate Joint Force capabilities in time and space. These capabilities may embolden more aggressive behavior in the conventional realm. China's military modernization program aims to transform the People's Liberation Army into a modern, mechanized, Information Age force in the next one to two decades and a world-class military capable of strategic force projection and warfighting by mid-century. Their military strategy seeks to protect Chinese interests outside of Asia and into Europe, the Middle East, and Africa. Furthermore, Russia is likely to threaten our interests for the next 20 years as they attempt to regain control of historic spheres of influence and shape European economic and security structures in their favor. Although we may not face China and Russia directly, we are likely to face their systems and methods of warfare as they proliferate military capabilities to others.

Regional state adversaries, namely North Korea and Iran, also present significant challenges as they pursue advanced capabilities and weapons of mass destruction to gain regional influence and ensure regime survival. Additionally, transnational terrorist organizations continue to pose a threat to our Homeland and our interests, as well as

our allies and partners. The Army must be prepared to defeat and deter highly capable adversaries while disrupting violent extremists and simultaneously defending the Homeland.

Today, the Army contributes to our Nation's efforts to counter these challenges by providing Combatant Commanders over 179,000 Soldiers in more than 140 countries, including 110,000 Soldiers deployed on a rotational basis. This includes over 30,000 Soldiers supporting operations in the Middle East and Afghanistan; 8,000 Soldiers supporting NATO operations and the European Deterrence Initiative; and over 17,000 Soldiers providing a forward American presence on the Korean Peninsula. Additionally, Army forces remain prepared to respond to other contingency requirements, both abroad and at home. Concurrently, the Army is investing in the research and development of the next generation of weapons and equipment needed to stay ahead of our adversaries. Through a disciplined prioritization of resources, the Army will remain postured to defend the Nation in an increasingly dangerous world.

## Readiness

America's Army stands ready today to defeat any adversary that threatens our Nation and our national interests. We have made great progress in rebuilding warfighting readiness, which remains the Army's number one priority as we increase lethality to prepare for the future. Ready forces must be organized, trained, and equipped for prompt and sustained ground combat. This ensures the Army can deploy, fight, and win decisively in high-intensity conflict against any adversary, anytime, and anywhere. Over the past year, the Army balanced our force structure, increased manning in combat units, filled equipment shortfalls, and improved deployability to build readiness across the force. From September 2016 to December 2018, we increased the number of ready Brigade Combat Teams from 18 to 28, and more broadly, increased readiness across all Army units by nearly 11%. We achieved these readiness gains despite sustained operational demand for Army units. Our FY20 budget request sustains this momentum, so the Army can achieve our readiness objectives by 2022.

The Army has implemented several readiness initiatives to reorganize for high-intensity conflict against near-peer competitors. We are increasing combat readiness by working to fill our operational units to 100 percent of authorized strength this year and 105 percent of strength by the end of 2020. Furthermore, we reduced the non-deployable rates of Soldiers from 15 percent in 2015 to six percent today. We anticipate achieving our goal of five percent non-deployable Soldiers by the end of this year. This equates to thousands more Soldiers ready to deploy in support of global



contingency operations. We also rebalanced our force structure to increase lethality by initiating the conversion of two Infantry Brigade Combat Teams to Armored Brigade Combat Teams, our most potent battlefield formation. Furthermore, we plan to modestly grow the Regular Army to 480,000 with associated growth in the Army National Guard and the Army Reserve in 2020. This growth will allow the Army to fill critical gaps in the near term in cyber, air and missile defense, and fires while we develop the necessary force structure and end strength needed to execute Multi-Domain Operations.

Another critical element of readiness is training. We overhauled Army basic training to develop more lethal, disciplined, and resilient Soldiers. This includes extending Infantry One Station Unit Training from 14 weeks to 22 weeks. Initial reports show a significant reduction in attrition and injuries with significant improvements in physical fitness, land navigation, and marksmanship skills based on the additional training time and a reduced Drill Sergeant to trainee ratio. Other branches may see similar adjustments through FY24.

Army collective training focuses on high-intensity conflict, with an emphasis on operating in complex terrain, electronically degraded environments, and under constant surveillance. Training is tough, realistic, iterative, and task focused. We eliminated or reduced over 85 individual training requirements to unburden commanders and allow them to focus on training their units. In the Army National Guard and the Army Reserve, we increased the training days for select units to increase the pool of reserve component units available to support operational requirements. Additionally, we maximized capacity at our combat training centers to meet Army force readiness requirements. The Army will execute 26 Decisive Action Training Environment rotations for Brigade Combat Teams and six other mission specific rotations for a total of 32 combat training center rotations in FY19. Moreover, we continue to develop a Synthetic Training Environment which will integrate live, virtual, constructive, and game-based training environments into a single platform to increase home station training repetitions and enhance training realism in a variety of scenarios and locations.

We also approved the new Army Combat Fitness Test (ACFT) to fundamentally improve our fitness culture, reduce injuries, increase deployability, and increase the probability that a Soldier survives on the battlefield of the future. We have focused our fitness standards on the skills needed to fight in sustained close combat where physical toughness and endurance will be pushed to the extremes of human capacity. We began field-testing the ACFT in 2018 with 63 units across the Total Army and will begin full implementation this year. By the end of FY20, the ACFT will be the fitness test of record for all Soldiers.

Increasing readiness is also about improving our equipment. To this end, Army Materiel Command increased the spare parts inventory and ammunition stockpiles. The Army also redistributed equipment to Focused Readiness Units, which remain at higher readiness levels to support global response. Furthermore, we are making progress towards achieving ground and aviation equipment readiness goals Army-wide.

To further improve equipment readiness and enhance our power projection capabilities, the Army uses prepositioned stocks to quickly execute operational plans and conduct contingency operations. We budgeted \$1.7B in FY19 and FY20 to improve the readiness of Army Prepositioned Stocks. Additionally, we initiated a Configured-for-Combat effort to equip Army Prepositioned Stocks with combat enablers such as communications, modernized weapons, and counter-measure systems in order to speed our ability to build combat power. This reduces the time it takes to build combat power by weeks and significantly reduces the amount of strategic airlift previously required to deploy early entry Army forces. Follow-on forces will continue to rely on modern and ready strategic lift assets, especially sealift, to deliver ready and lethal ground forces in support of the Joint Force. We must continue to invest in robust power projection platforms and strategic lift capabilities to ensure we can rapidly deploy and operate anywhere in the world.

Through these readiness initiatives, the Army is getting stronger by the month in manning, training, and equipping the force. With Congressional support, our FY20 budget will allow us to continue to increase readiness and build lethality.

## Modernization

While we continue to build readiness, the Army must also prepare for the future. This includes modernizing our doctrine, equipment, processes, and organizational structures to extend our overmatch against any competitor on any battlefield. Guiding our modernization effort is our Multi-Domain Operations concept, which identifies the threats and challenges we will face in the future. Great power competitors like China are developing capabilities to create standoff intended to frustrate our ability to build combat power and maneuver at will. To counter this, the Army will need to integrate our capabilities with the Air Force, Navy, and Marines even more in the future. The Army's new Multi-Domain Operations concept describes how we will synchronize our capabilities across all domains in support of the Joint Force.

The Army is using the Multi-Domain Operations concept to inform future force development through numerous iterations of experimentation and analysis, including field experimentation with Multi-Domain Task Force pilots in the Indo-Pacific region and Europe. Our future success depends on modernized equipment, evolving doctrine, and the organizations essential to ensure overmatch against our competitors. These elements will work in concert to increase our combat capabilities across all domains.

As a major step towards developing the capabilities needed for Multi-Domain Operations, we reorganized our entire modernization enterprise for greater speed and efficiency. Last year, the Army made its most significant organizational change in over 40 years by establishing the Army Futures Command (AFC). We stood up AFC in the innovation hub of Austin, Texas with a focus on providing unity of command and unity of effort for the modernization enterprise. For the first time, one commander is driving concept development, requirements determination, organizational design, science and technology research, and solution development. We located AFC outside of a traditional Army installation to increase their accessibility and ability to collaborate with industry and academia. Through these partnerships, AFC will identify and deliver new capabilities with greater speed and more efficient use of our resources.

To guide AFC, the Army established a clear set of modernization priorities that emphasize rapid maneuver, overwhelming fires, tactical innovation, and mission command. Our six modernization priorities will not change, and they underscore the Army's commitment to innovate for the future. We have one simple focus – to make Soldiers and units more capable and lethal. Over the last year, we identified \$16.1B in legacy equipment programs that we could reinvest towards 31 signature systems that are critical to realizing Multi-Domain Operations and are aligned with these priorities. The six Army modernization priorities are:

- Long Range Precision Fires – We will improve the range and lethality of cannon artillery and increase missile capabilities to ensure overmatch at each echelon. Army artillery weapons, including Extended Range Cannon Artillery and the Precision Strike Missile, will neutralize and dis-integrate adversary A2/AD networks, from extended ranges, to create windows of opportunity for the Joint Force to exploit. The Extended Range Cannon Artillery is on schedule for delivery in FY23. It will protect and support maneuver forces in the close and deep operational maneuver areas with an extended range out to 70km and increased 6-10 rounds/minute volume of fire. The Army has requested \$1.31B for Long Range Precision Fires in the FY20 President's Budget to accelerate prototyping and initial fielding.

- Next Generation of Combat Vehicles – The Army will modernize the next generation of combat vehicles through technology development, experimentation, and prototyping to ensure overmatch against near-peer competitors. These vehicles will employ greater firepower, mobility, and protection to successfully maneuver on more lethal battlefields. They will have manned and unmanned variants for combined arms maneuver, and be built with future growth in mind. The first prototype will arrive in FY21 to accelerate experimentation and initial fielding. We requested \$2.0B in the FY20 President’s Budget to deliver an initial capability.
- Future Vertical Lift – We will increase our competitive aviation advantage with next generation aircraft to penetrate contested airspace and support independent maneuver from greater distances through extended range, endurance, and lifting capacity. The most important FVL investments at the moment are the Army’s development of the Future Armed Reconnaissance Aircraft, designed to address the gap left by retirement of the Kiowa, and the Future Long Range Assault Aircraft. An additional investment includes integrating unmanned aerial systems, which we will prototype in FY24, for manned/unmanned teaming and improved lethality, situational awareness, and survivability. Over \$797.2M is included in the FY20 President’s Budget to develop initial designs and unmanned demonstration systems.
- Army Network – The Army Network supports mission command and the continuous integration of combined arms and Joint capabilities. We will deliver a resilient and secure tactical communications network effective in the most challenging contested and congested electromagnetic spectrum and cyber environments. This network includes advanced information technology, hardware and software, and a reduced electromagnetic signature. We have allocated \$2.28B in the FY20 budget to build our integrated tactical network as part of our network restructuring.
- Air and Missile Defense – Advanced air and missile defense will protect our forces from adversary aircraft, missiles, and drones to enable joint operations. This includes both theater systems and short-range air defense, like the Mobile Short-Range Air Defense with directed energy technologies. The FY20 budget includes \$1.4B to rapidly deliver an initial capability by FY22.
- Soldier Lethality – We will equip and train Soldiers to extend overmatch through increased lethality, mobility, and survivability against emerging threats. This includes improved weapons, sensors, body armor, and training. The FY20 budget includes \$1.18B for prototyping, development, and procurement of the Next Generation Squad Automatic Weapon and Squad Rifle, Enhanced Night Vision Goggles, Integrated Visual Augmentation System (HUD 3.0), and Synthetic Training Environment.

Eight Cross Functional Teams (CFTs), aligned under AFC, lead the development of these modernization priorities. The CFTs streamline Army acquisition processes to

reduce the requirements process, shorten acquisition time, and, by engaging Soldiers early in development, ensure fielded systems are affordable and meet warfighter needs. This approach demonstrates our commitment to good stewardship of taxpayer dollars. In addition to this organizational realignment, we updated acquisition policies. Our new intellectual property policy will encourage private industry to work with our CFTs to develop innovative solutions to maintain technological overmatch.

The Army is taking a holistic approach to modernization so we can achieve multi-domain dominance by 2028. Next generation equipment, combined with modern doctrine and formations, will allow the Army to maintain overmatch on future battlefields.

## Reform

Over the past year, the Army aggressively pursued reforms to free up time, money, and manpower for our highest priorities and to empower subordinate commanders to make more effective and timely decisions. In addition to our detailed program review process, we are executing the Army Reform Initiative, instituting fiscal discipline, scrutinizing contract management and contract services, and working towards financial auditability. Through these reform efforts, we realigned over \$30B across the Future Years Defense Program (FYDP) for higher priority programs to build readiness and increase lethality.

In our most significant reform effort, Army Senior Leaders conducted a detailed review of Army equipping programs for the FY19 and FY20 budgets. Through this in-depth, time intensive process, we eliminated, reduced, or consolidated nearly 200 legacy programs to reallocate funding towards our modernization priorities. While each of these programs had value, we must continue to make hard choices to ensure we spend each dollar wisely and remain aligned with Army priorities.

Through the Army Reform Initiative, we garnered over 700 ideas to eliminate, delegate, consolidate, or streamline Army policies, programs and practices. Inputs included work efficiencies, business process improvements, and structural realignments. For example, through our installation management reform effort, we are realigning Installation Management Command under Army Materiel Command and consolidating staff functions to garner personnel savings and improve efficiency. This integration of sustainment and installation functions provides the ability to prioritize resources on key requirements for both combat readiness and Soldier and family support. Additionally we have an ongoing headquarters reduction effort across multiple levels of command. The goal of the Army Reform Initiative is to eliminate redundancy

and delegate authorities and resources to the lowest appropriate level of command. This allows for rapid actions and decisions while simultaneously saving resources for higher priorities.

To improve fiscal discipline, we implemented the Command Accountability & Execution Review (CAER) to optimize the purchasing power of the Army's operating budget. This Army-wide program educates Army leaders on fiscal stewardship, updates policies to increase purchasing power, and creates a scorecard of key performance indicators to measure progress. While still early, CAER has generated a marked improvement in the efficient execution of the Army's budget for FY18 and we anticipate greater success in FY19.

In 2018, contract management and contract services reform saved the Army \$1.6B across the FYDP by eliminating contract redundancies, improving contract competition processes, and using data analytics for contracting decisions. We continue to implement category management and increased emphasis on the use of strategic sourcing contracts to improve management of services acquisitions. This year, we found service acquisition efficiencies in Army rotary-wing aircraft and ground system maintenance programs, food services, and the use of advanced data analytics. We saved over \$400 million and are on pace to reach over \$1B in budget savings from improved contract management in FY19. These savings and their reinvestment into modernization are crucial to the Army and our progress towards the force of the future.

The Army completed its first full financial statements audit in FY18, and the audit findings are an important part of our larger reform effort. We fully support these audits, which help the Army identify ways to improve resource management and business practices. We are aggressively implementing corrective action plans and are on track to achieve auditable financial statements across all accounts by FY22.

Another major area of reform is the directed reorganization of our medical capabilities across the Army. Readiness is the primary focus throughout this effort because the Army will continue to be responsible for a ready medical force trained in clinical skills that are critical to wartime missions. As we transition medical treatment facilities to the Defense Health Agency, we are working to ensure we retain the necessary combat medical support at each echelon to maintain readiness and deliver premier military health care on the battlefield and in garrison. This reorganization provides us an opportunity to optimize the Army medical structure and plan for future medical capabilities.

The Army will continue to pursue savings in time, money, and manpower that we can reinvest into our top priorities. These aggressive reform efforts, will sustain our momentum as we build readiness and increase lethality to prepare for high-intensity conflict against great power competitors.

## Allies & Partners

America's network of allies and partners is an unrivaled strategic advantage the Army is actively working to enhance. Every day, the Army works to strengthen alliances and build new partnerships through security cooperation and security assistance. A continued commitment to our allies and partners helps us compete against great power competitors and bolster deterrence. In support of our allies and partners we established Security Force Assistance Command (SFAC), which will consist of six subordinate Security Force Assistance Brigades (SFABs) - five Regular Army and one Army National Guard. The SFABs are specialized units whose core mission is to train, advise, assist, enable and accompany allied and partner nations. SFABs reduce the demand on conventional Brigade Combat Teams enabling them to focus on high-intensity conflict against near-peer threats. The Army deployed its first SFAB to Afghanistan in support of the Afghan National Army to validate the proof of concept, and we will apply what we learned to the second SFAB deployment this year.

The Army works with Combatant Commanders to ensure our security cooperation efforts support their priorities as we work to increase interoperability and build partner capability. Interoperability ensures we can train and fight alongside our allies and partners more effectively and efficiently so we are ready to face any threat together. In FY18, the Army executed \$115M on 58 multinational exercises with 95 allies and partners. In FY19, we programmed \$165M for multinational training exercises to increase interoperability.

In Europe, we are leading a multinational battlegroup in Poland as part of NATO's Enhanced Forward Presence mission to deter Russian aggression. Last summer, our Soldiers participated in Exercise Trident Juncture alongside forces from every other NATO ally and two of our closest partners, Sweden and Finland. This was the largest NATO exercise conducted in recent years, and it demonstrated both the Alliance's commitment and collective defense capability. We will continue these efforts as we prepare for the division-level Defender exercise in 2020, which will exercise the Army's force projection capabilities. We also maintain close training and exercise relationships with Ukraine and Georgia, key partners in the region for promoting peace and security.

Likewise, in the Indo-Pacific region we are deepening cooperation with our allies to protect our national and shared interests. The U.S. Army presence in the Republic of Korea and Japan deters North Korean aggression and protects U.S. interests. Assigned and rotational forces participate in combined training exercises, such as Yama Sakura in Japan and Yudh Abhyas with the Indian Army. These exercises strengthen our relationships and build interoperability. Furthermore, we are testing the Multi-Domain Task Force in exercises through our Pacific Pathways program to determine the right capability mix to counter Chinese A2AD capabilities. We will continue to use regional training and exercises to work with new partners and leverage multi-component and inter-service integration. This helps us to expand the competitive space and counter Chinese influence throughout the region.

We are assisting our partners around the world in building military capabilities to enhance security. The Army, through its security assistance enterprise, supports Combatant Command theater security cooperation plans. We will continue to prioritize security assistance programs to counter key threats and achieve shared defense objectives with our allies and partners.

## People & Values

The Army's greatest strength is our people – the intelligent, adaptable, and professional Soldiers, Civilians, and Families who sacrifice for our Nation. We take care of our people by ensuring our Soldiers are ready for combat with modern doctrine, equipment, and realistic training while simultaneously providing their families with the resources they need to thrive at home. Furthermore, our continued commitment to the Army Values ensures we foster strong and resilient units built on a foundation of trust.

Comprehensive reform of the Army's personnel management system is a top initiative for 2019. To remain the most lethal ground combat force in the world, we must continue to attract, develop, and retain the best people our Nation has to offer. A competitive labor market for America's most highly skilled talent complicates this effort. We thank Congress for the Defense Officer Personnel Management Act (DOPMA) reforms and additional authorities in the FY19 NDAA, and we will incorporate these into our new Talent Management Strategy. We are moving the Army towards a market-based assignment process with more flexible career models along with updates to our promotion system and retention incentives.

The Army faced significant challenges in meeting our FY18 recruiting goals, however, we remain committed to quality over quantity. Despite these challenges, we



recruited over 70,000 new Soldiers into our ranks, the most in any single year since 2010. To meet our FY19 recruiting goals, we changed our approach to increase the pool of qualified applicants so we can attract the best talent and improve diversity in our ranks. We restructured our accessions enterprise to ensure unity of effort across the Army, manned our recruiter positions at 100%, realigned resources to increase our recruiting capacity, and improved our use of technology. Additionally, we centered this recruiting initiative in 22 major metropolitan areas across the Nation to expand our reach using micro-targeted web advertising and local marketing. This revised strategy expands recruiting across the Total Army to increase awareness of the opportunities for service and to better connect the Army to the American people.

Taking care of Army families remains a top priority, and we are taking steps to improve quality of life programs across our installations. This year we increased staffing rates at Army child care centers, and we are implementing new policies to improve spouse employment opportunities. Given recent reports of deficient conditions in some of our family housing, the Army has taken immediate action to ensure we are providing safe, high quality family housing. We are visiting all Army housing and inspecting all barracks to identify health, life, and safety issues that exist. We will work with the Residential Communities Initiatives (RCI) companies to remediate these issues immediately, and over the long term, to improve work order resolution, customer satisfaction, and communication with residents. We are also reviewing and standardizing partnership agreements and incentive structures to ensure we hold the RCI companies accountable for providing quality housing. The Army is fully committed to providing a safe and secure environment on all of our installations where our Soldiers and Families can thrive.

The Army Values form the bedrock of our profession and guide us in all that we do. The Army's Senior Leaders have asked everyone to recommit themselves to these Values, and we demand that every member of our Army team treat each other with dignity and respect. Across the Total Army, we continue to focus on eradicating sexual harassment and sexual assault from our ranks. Over the past several years, we have placed a high priority on our prevention efforts, and the Army will continue to improve the effectiveness of our prevention efforts moving forward. This starts by ensuring that the perpetrators of sexual assaults are held accountable and that the victims are protected without fear of retribution. Additionally, we are reinforcing leader responsibility for building a climate of trust and professionalism that emphasizes the Army Values. We are taking a similar approach with other essential programs including Equal Opportunity, Suicide Prevention, Alcohol and Drug Abuse Prevention, and Resilience.

## Conclusion

The Army mission remains constant: to deploy, fight, and win our Nation's wars by providing ready, prompt, and sustained land dominance by Army forces across the full spectrum of conflict as part of the Joint Force. Our Army is ready today to win in the unforgiving crucible of combat. We are supporting the National Defense Strategy and expanding the competitive space by increasing our lethality through our modernization effort, strengthening American alliances through combined operations and training, and reforming our business practices to be the best stewards of the resources Congress has provided. The Army thanks Congress and the American people for their continued strong support, which enables our ability to accomplish our mission. By providing predictable, adequate, sustained, and timely funding, Congress will ensure America's Army remains the most capable and lethal ground combat force in the world.

Mr. VISCLOSKY. General, thank you very much.  
Mr. Calvert.

ARMY FUTURES COMMAND

Mr. CALVERT. Thank you, Mr. Chairman. Appreciate that.

Let's talk about the Army modernization efforts. Secretary Esper, General Milley, you both have worked hard to put forward an ambitious Army modernization effort that will enable us to fulfill the capabilities required by the National Defense Strategy. I commend you for this effort. We want to succeed, and we want you to succeed.

However, many of us have been here a long time, and we have witnessed high-profile failures of Army modernization efforts, including Future Combat Systems, which we expended \$18.1 billion; the Comanche helicopter, we expended \$7.9 billion; the Crusader self-propelled howitzer, \$2.2 billion; the Ground Combat Vehicle, \$1 billion. It is about \$30 billion. I am sure we wish we could get all that money back.

The Army is at a crossroads between legacy and next-generation equipment. Your modernization efforts are too important to fail.

One of the reasons cited for the failure of the FCS program was a complicated program management approach. Program management of major defense systems typically involves a number of organizations and multiple authorities and processes.

So I have a number of questions here.

How are you ensuring accountability over these programs?

How will the programs interact with traditional Army Acquisition Office structures?

Who has the ultimate authority over the requirements?

How are you driving out the risk factors, such as assumptions on technological maturity?

Are you working with CAPE, the Office of Cost Assessment and Program Evaluation, which tends to be more accurate on realistic cost estimates?

And, finally, how are you balancing these requirements and what the warfighter needs with the speed at which you are both hoping to field these new systems?

Secretary ESPER. Well, thank you, Mr. Calvert. I can't agree more with your points in terms of money wasted in the past, and that is one thing that we aim to overcome here.

I will just try and take a number of your points here.

Yes, we are working with CAPE.

With regard to accountability, a fundamental reason why we stood up Army Futures Command was to establish two things: unity of effort and unity of command. And that places accountability squarely on General Mike Murray, the commander of Army Futures Command.

So, before, where you had multiple players, a dozen-plus players involved in the modernization effort, from S&T to acquisition to budget to contracting, all of that, he now is driving the entire requirements process. So he is the accountable officer for that whole chain of modernization events. So that is where our accountability is built in.

The interaction occurs in the fact that he works side-by-side with Dr. Jette, our head of Army acquisition. And it is seen most evidently at the cross-functional team level. So at the cross-functional team is where this partnership begins, with the cross-functional team leader, which is typically an O7, and a warfighter sitting side-by-side with the PM or PEO of a program. And they are the ones working with this broader team of budgeters, testers, contractors, and all that to bring forward realistic requirements.

So we now have a process that aims to reduce the requirements process from what used to be 5 to 8 years down to 12 to 18 months, based with a lot more interaction with the private sector and in a way that aims to do a lot of prototyping up front. So rather than buying clean-sheet designs, we intend to prototype. And you can see that now with prototyping we are doing with the ERCA long-range gun, prototyping on the next-generation combat vehicle that will happen in the next couple years.

So there are a number of organizational changes we have made. There are process changes we have made and other adjustments we have made—for example, lining up, in terms of career timelines, the CFT leads and the program managers so that they stay in position much longer and they don't hand programs off until there is a major milestone change.

So there is a lot more I can give you on this, but we looked at all parts of this problem to make sure that we did exactly what you called for and made sure we don't fall into the same problems of the past.

Mr. CALVERT. General.

General MILLEY. I would concur with the Secretary.

This goes back a ways, as you well know and pointed out, Congressman. Senator McCain, when I first became Chief, he and I sat down at length, and he talked about a broken acquisition system. And one of the things in the last NDAA that was driven by Senator McCain was to bring the Chiefs, the service Chiefs, back into the entire acquisition and procurement business at a much heavier level.

So accountability is right here with the Secretary and I. The Secretary is in charge of the entire acquisition process, and the Chiefs of each of the services—I, being the Chief of Staff of the Army, am in charge of the requirements.

One of the things we needed to do, going back 3-1/2 years ago, was we needed to reestablish unity of command, unity of effort, because the Army procurement and acquisition system was spread out all over the place in multiple commands. And as the Secretary looked down into the Army, he had a command, Forces Command, which was responsible for current readiness; he had a command, Army Materiel Command, which was responsible for the logistical readiness of the force; and he had Training and Doctrine Command, which was spread out all the way from prior to a soldier coming in the Army to begin with, all the way through your education system and everything between, to include setting requirements. It was a command spread too thin.

So we decided—and I think it is exactly the right thing; it is the largest reorganization of the Army in 40 years—to establish a command that had sole responsibility for the modernization of the

Army and to develop the modernization in answer to—I mean, we have sole responsibility, but a command that would do that in the name of the Secretary and the Chief. And that is what General Murray is all about.

Forces Command still does all the readiness in the near term, the legacy force, if you will, call it out through 2, 3, 4 years. But Army Futures Command, that command itself, is responsible to take the deep look into the future, gather it all together, analyze the concepts, come up with a doctrine, the organizations, and the material solutions to deal with this near-peer threat.

And the last thing I would say is that, in terms of processes, we have been working on a variety of processes for the last 2 or 3 years to improve the system, the efficiency, the timeliness, in order to get both the best use of the taxpayers' dollar and to get the piece of equipment to the soldier in the shortest amount of time. There has been a huge amount of work done, and I am very, very proud of the Army having done what it did in the last 3 years on this.

#### PROGRAM MANAGERS

Mr. CALVERT. Thank you.

Just a final point—you brought it up, Secretary Esper—is program managers. You see it in these major weapon programs, like, for instance, the F-35. I don't know how many program managers, Mr. Chairman, we have had over the years, but it has been a number.

And it is not like the days when you had an Admiral Rickover and you gave him a job and said, "Look, this is it. Submarines. You are going to be with it until the day you die." And that literally—he was there until the day, almost, that he died.

And so there is no responsibility on these major weapon programs that anybody can put a finger on.

General MILLEY. And I am glad you brought up Rickover. That was one of—and you may have known this. That was one of the models we looked at. And, in fact, for Futures Command, the Futures Command commander next—not Murray, because Murray is a relatively pretty senior guy. He graduated around the same time I did, so he is getting long in the tooth, and he is going to time out after a few more years. But the commander after next, it is the Rickover model we are looking at for Futures Command, that when we appoint that person, whoever that next person is, we are looking at probably a 7- or 8-year term, just like Rickover was. He was, you know, Rickover for life.

And that is kind of what we want in the Futures Command, is that continuity of effort over multiple Secretaries, multiple Chiefs.

Mr. CALVERT. Thank you.

Thank you, Mr. Chairman.

#### MODERNIZATION PRIORITIES

Mr. VISCLOSKY. I would like to take my time, first round, now, simply because I would like to follow up on Mr. Calvert's line of questioning but in a different vein.

One, it is the committee's job to pay for modernization. And I do appreciate that the Department has come in with 186 recommendations as far as reductions. My concern—and we have had conversa-

tions about this in the past—is that there is, if you would, a gap, that some of the modernization will start, there are some of the cuts that will start in 2020, but some will significantly increase in 2021 and the outyears.

And my concern, because Congress is a partner and has been at fault here, when the Army is right on an acquisition, is we can't say "no" to a cut—or, we can't say "yes" to a cut.

And so my first question is—I assume you have talked to vendors about the adjustments that will be made as far as determination, reduction in programs, the new ones, and trying to even out, if you would, the industrial base and the production schedule. What about the Members and Senators in those districts and States? Are you having those conversations, too, to plow the field for us when we get on the House floor?

I think of a Chinook helicopter. I have heard from a number of people from a particular State that they are not happy with that particular change. And I am not saying it is good or bad. Vendors, because they may have a job in that State or another State, may have a different opinion.

Is the Army seeking out some of these Members and doing an educational program? Really, we are not going to repeat the past, and we really aren't going to need this program in the future, and there is going to be that uncertainty in the middle years. Are you doing that?

Because when we get to the House floor—and I have reiterated, we have had some very unpleasant experiences, because we give you new money, the theory is we pay for it with cuts, and by the time we get done with the bill on the House floor, there are no cuts, and I have to find—we have to find more money.

And I am not suggesting anybody is doing anything untoward, but I don't want to get in a trap.

Secretary ESPER. So, Mr. Chairman, you know, on your last point first, that is why I said up front, we could have come to you and said, "I need \$5 billion more to modernize the Army," but I think that with a \$182 billion budget we can find savings. And that is what we did.

It is not that the programs we cut, eliminated, or delayed didn't have any value. The fact is in many of them we were either producing too many, the upgrades weren't worth the cost, it was a duplicate effort in some ways, if you will.

But to your first question, you know, obviously, the budget is not available for any public release or discussion until it is released, and that was 6 weeks ago at this point, I guess. But in the days immediately following this, several Army senior leaders reached out to some of the companies, the CEOs directly, those who took some big hits in the budget, and had discussion with them about where we are going and why.

I would say, prior to that, the Chief and I have probably met multiple dozen times with CEOs, either privately or in large groups, to explain where the Army is going. We try to be very clear about our 6 modernization priorities and the 31 programs associated with them and that those were not changing. So we wanted to give them predictability, because that is where we are going.

What we try to do—and certainly in the case of 47s, I know that company was aware, because they came and spoke to me months in advance. We said, this is where we are going, this is why, this is our game plan, and tried to lay out what future is, to try to get them to move to future.

I mean, could you imagine what the Army would look like in the 1980s or 1990s if Army leaders hadn't made the steps they made in the 1970s to really move to the Bradley and the Abrams and the Black Hawk and the Patriot? So that is the move we are trying to make now. These systems have been with us for four decades.

You talked about the risk of doing this. There is a great risk and a very clear risk in not doing it, because these systems will not hold up. Many have run their useful life. The Bradley is a case in point. And if we don't modernize now, I don't know when we will, and we will be at a significant disadvantage on a future battlefield.

Mr. VISCLOSKY. Could I ask—because you have mentioned the conversations you have had with the vendors and contractors. They are not going to vote on this bill or on those amendments not to make that cut. Are people from the Department going to be—again, an educational program, here is why we are doing it, here is what the future looks like, so that, again, the ground can be laid here?

Secretary ESPER. Yes, sir. We have done that in multiple speeches, in multiple presentations. Again, I have done it privately; I have done it in small groups with CEOs and companies. I have done some outreach with Members but not as much. But certainly with the industry, absolutely.

Mr. VISCLOSKY. I would encourage the Department to think about individual Members—

Secretary ESPER. Sure.

#### COST REDUCTIONS FOR PROGRAMS

Mr. VISCLOSKY [continuing]. Delegations and locations. If you want to be successful, we have to win those votes on the House floor.

The second question I would have—and then I will defer—is, a significant number of the reductions—and, again, I am not arguing with them—are, given the Department's budget, relatively small. In one program for fiscal year 2020, \$6 million; for another one, \$5,093,000; another one, \$4,487,000.

I appreciate the granularity, but I am also worried, is there a thought that has been put into some of these people who might be very small businesses, smaller contractors, and when, 2 years from now, there is zero in that account, what happens to that part of the industrial base?

Because many of these—that is why you have 186—are relatively small in comparison to the budget. Is there a thought and concern placed on who those vendors are and what happens to them?

Secretary ESPER. Yes, sir, we did try and pay attention to the industrial base. We obviously need a robust industrial base. And we need competition within that base, so we can't drive down a product so you have one vendor. So we tried to do due diligence there.

I think throughout the process we have said, at least I have said, we may have made mistakes or whatever, and that probably is the case, but what we want to do is find out what those impacts are.

And you are right, there is—in my view, when you do reform, no dollar amount is too small, in many ways. We have gone after a million dollars, because those millions and 5 millions start adding up to 100 millions, and 100 millions start adding up to billions. That is how we got to 30-plus billion dollars.

Because, again, I think if you look at the budget, you know, we found ourselves producing thousands of items that seemed far in excess of need of what a soldier or unit need. We saw ourselves building capabilities that were unnecessary or at least weren't as relevant as the capabilities we had or that we need in the future fight.

Long-range precision fire is a case in point. We are outranged and outgunned. I have to build those systems now if we are going to face down the Russians and the Chinese on the future battlefield.

So every time a case came before us, the Chief and I would ask, is it worth more money to keep funding this program? What do I get from that? What is the return on investment from that in terms of lethality versus putting that money into a long-range cannon?

And those were the fundamental choices we made, case by case by case, with some consideration, of course, to the industrial base.

Mr. VISCLOSKY. Judge Carter.

General MILLEY. Could I just add one quick comment—

Mr. VISCLOSKY. Sure.

General MILLEY [continuing]. Chairman.

We are trying to shift from an industrial base model that has served our country well for, say, 100 years or so into the current century. So, for example, not everyone needs everything at the same time.

It is contrary to the Army instinct. Army instinct is everyone has the same uniform, same haircut, everything is the same, same—left, right, left, right, left. But that is not necessarily going to be valuable in the future. In some instances it will, but in other instances it won't.

So a case in point is the new squad rifle or the new individual rifle that we are developing down at Fort Benning. We decided that about 100,000 of the million, about 10 percent of the force, actually needs that rifle. So we are only going to buy 100,000 of those, for those forces that are engaged in close-quarters combat. The rest of us will do with the rifles that exist today.

And that is just one example of many, many, many that, as we went through these night courts and these cuts, ended up in a \$30 billion recoupment, because some of this equipment doesn't have to go to everybody.

And the second point is, technology is moving at a rate of speed very, very quickly today. So if we decide on a particular item today, by the time you field an entire Army, that might be 10, 20 years, 30 years, and that technology is no longer valid for the original need, and yet we keep buying it.

So we are shifting to a different procurement model, an acquisition and procurement model.

Secretary ESPER. And, by the way, if I might add, when the Chief mentions the next-generation squad weapon, just so there is no misunderstanding, issued to the infantry or the scouts, that is all



components. That is not just the regular Army; that would be issued to the Guard as well.

But we look at who actually needs a weapon of that capability. And as the Chief said, you may not need it in a logistics unit, but you certainly need it in your regular Army and National Guard infantry units, and you need it in, you know, your cavalry units and stuff like that.

We are trying to get more sophisticated, more precise in terms of how we—because these are going to be expensive weapons, given their capabilities—how we do smarter budgeting, so we free up money for other things.

Mr. VISCLOSKY. Judge Carter.

#### MOTOR POOLS AT FORT HOOD

Mr. CARTER. Thank you, Mr. Chairman.

And thank each of you for being a part of our Army. We are very proud of you.

And, General Milley, we are looking forward to your confirmation. I think it is a great choice.

I am going to go local, because I have a question about Fort Hood. And you both know I represent Fort Hood. It is a great place.

Over the past several years, as I bring people through—I have had Ms. Granger come through. I have had other Members of Congress come through. General Milley and I have toured and looked at the needs of Fort Hood together with the garrison commander on multiple occasions. And it has all come down to: We have to refocus and fix up our barracks, we have to get new motor pools that our equipment will fit into, and we have to get hangars.

Okay. We have done a lot. We have found money. We have scrounged money. We have come up with solutions kind of outside of what we do here. And we have gotten an awful lot done on our barracks at Fort Hood. And I think we all need to proud of that. And there is barracks money in this particular bill.

But as I look at this, not only is there nothing about motor pools, but there is nothing—as I look into the future on the FYDP, there is nothing in the future about motor pools. And yet we have motor pools that an Abrams tank won't fit in. And if you are going to build a new tank, it probably won't fit in it either.

And so, at that point, I want to know, was there a decision made not to think about motor pools at Fort Hood? Which has been a current event at least since General Milley was in command there; I know that for a fact. And so I wanted to find out—I needed to ask that question about motor pools. Because I came to this table looking to build a couple motor pools, and there is nothing in there about it.

General MILLEY. Thanks, Congressman. And, of course, as you recall, Fort Hood is not the great place; it is the greatest place.

Mr. CARTER. Yes.

General MILLEY. And we know that there is, like, 6½, 7 miles of motor pool at Fort Hood. I think what we are talking about is not the space but the facilities themselves.

Mr. CARTER. Buildings.

General MILLEY. And those facilities at Fort Hood, as a former commander of Fort Hood, they do need to be upgraded. We are aware of that. It is on the laundry list.

But in the broader scheme of things, in terms of prioritization for this particular budget, the motor pool at Fort Hood, for the 2020 budget, did not rise above the line. It is not too far below the line, by the way. So if money does become available, then it is certainly under consideration.

We recognize the importance of motor pools. There is not a deliberate decision not to fund motor pools. But in the scheme of things and priorities, the Secretary and I and the senior Army leadership determined that there were other priorities of greater need than the Fort Hood motor pool. I hate to say that, but it is just below the line.

Mr. CARTER. I recognize that we care about our soldiers and their living environment, and we are certainly working on barracks and doing a good job on that. But we have to worry about their working environment too. And working in the Texas 110-degree August sun, where you get burned when you touch the tank, is not a good place to be.

And my responsibility requires me to continue to push getting those workplaces in order. Because we have some really fine people out there that keep us ready to go to war, and their work environment is not the best right now.

Thank you for your—I understand and respect your decisions. And I realize, from the conversation we are having here, about what we are doing as we go to near-peer competition. But let's not forget our current equipment needs to be ready to go to fight tonight.

Thank you.

General MILLEY. And it is a balance between current readiness and future modernization, which is a different name for future readiness. And we are keenly aware of that. And we think—the Secretary and I and the rest of the Army leadership thinks we did a job of due diligence, if you will, to strike that balance. Is it perfect? No. And we do recognize the importance of motor pools, especially those at Fort Hood.

Secretary ESPER. The only thing—

Ms. MCCOLLUM [presiding]. Mrs. Bustos.

Secretary ESPER. The only thing—I am sorry.

Mr. CARTER. Okay. Thank you. I yield back.

Ms. MCCOLLUM. Mrs. Bustos.

#### ROCK ISLAND ARSENAL

Mrs. BUSTOS. Thank you. Thank you, Mr. Chair—and Madam Chair who is sitting in.

It is good to see you both again. And I do want to thank you for your regular engagement with us even before I was on this committee, and look forward to working with you more closely now that I am an appropriator.

And I think you both know this, because I have brought it to your attention, and, Mr. Secretary, you understand that the Rock Island Arsenal is in the congressional district that I serve.

And for my colleagues here in this room that have not had the pleasure of visiting what I think is a pretty awesome place—

Mr. CARTER. We would love to have you.

#### ADVANCED MANUFACTURING CENTER

Mrs. BUSTOS [continuing]. In addition to Fort Hood—but I would love for folks to visit our installation. But it is literally on an island in the middle of the Mississippi River, so it is a pretty awesome environment.

But when our brave men and women put on the uniform and put their lives on the line, the men and women who serve and work at the Arsenal are proud to help provide the best equipment to help get the job done. And the hardworking men and women of the Rock Island Arsenal are leading the way in developing 21st-century manufacturing techniques that make our Army the strongest in the world, and we are certainly proud of that.

I am pleased to see the Advanced Manufacturing Center of Excellence nearing its initial operating capability at the Rock Island Arsenal. And given the history and current efforts that the Arsenal provides the Army, this is the right location for this endeavor, in our opinion.

To that extent, how do you envision additive and advanced manufacturing techniques helping to support the fielding of the Army's modernization effort? And the second part of that, particularly as we look to the efforts like the next-generation combat vehicle?

Secretary ESPER. So, thank you, ma'am, for that opening. As we discussed, I had the chance to go up there and visit Rock Island last year—it is a neat place to visit—and walk through the site of what would be our 3D Manufacturing Center of Excellence.

I think, in many ways, it can be a game-changer for Army sustainability both at the strategic level, in term of its ability to allow us to inexpensively and quickly print parts, if you will, particularly for low-density items, and if you can think about that, once we master that technology, to put it on the battlefield, behind the forward line of troops, so that you don't have to carry around warehouses of supplies and equipment.

The ability to quickly manufacture key parts, again, could really improve our sustainability, our readiness on the battlefield. So I think it is an exciting venture I think we need to continue to develop, because I think additive manufacturing is going to be a real big, important part of the future Army.

General MILLEY. If we look at future combat operations, it is highly likely that ground forces will be cut off and they will be operating in a small, isolated organizations. Long logistics convoys may or may not have the survivability and the capability to get through on that type of extraordinarily violent, very intense battlefield. So 3D manufacturing, additive manufacturing, is going to be critical to the survivability of an organization so they can produce their own spare parts right on site. And that will play a very critical role in future battle.

#### ARMY MATERIEL COMMAND

Mrs. BUSTOS. Okay. Great.  
If I may ask one more question?

All right. So, in addition to making some of the best Army equipment, the Arsenal is also home to Army Sustainment Command, as you are aware. It is the logistics arm of the Army Materiel Command, and that provides our warfighters with everything they need to do their job. America's soldiers need ammunition, equipment, food, uniforms, much more, to fight and win on the battlefield or to respond to natural disasters, and the Army Sustainment Command makes sure that they get them.

Can you discuss the role of prepositioning of assets and how that plays into managing the budget, both in support of current operations and future needs?

Secretary ESPER. Well, I will speak to one part of that. You may be talking about prepositioned stocks, for example. We have sets around the world—Korea, Europe, and elsewhere. It obviously allows us to fall in on these—a piece of equipment, whether it is fighting vehicles or tanks, much more quickly than if we had to ship them from the United States. And so it is a very important part.

I would like to commend Army Materiel Command, under General Perna, for what they have done to bring that to a much, much higher state of readiness. I had a chance to walk through these prepositioned stocks warehouses in both Korea and in the Middle East. And I know we are look at some adjustments, based on what the National Defense Strategy tells us to do, to make sure that we are in locations that allow us the highest degree of readiness should a conflict happen.

General MILLEY. So, as the Secretary said, the PREPO stocks play a critical role in, essentially, what I would argue is part of the American way of war, which is for the United States to project power forward and to do that in a strategic way, from continental United States, overseas.

And we can rapidly deploy ground forces by air or sea and have them fall in on various prepositioned stocks and then move from the PREPO stock areas into the combat zone.

So the PREPO stocks are critical to the broader strategy of the United States and our ability to conduct combat operations overseas.

Mrs. BUSTOS. All right.

Mr. Chairman, I yield back the remainder of my time.

Mr. VISCLOSKEY [presiding]. Mr. Diaz-Balart.

Mr. DIAZ-BALART. Thank you, Mr. Chairman.

Gentlemen, good to see you all.

Let me talk a little bit about SOUTHCOM.

Mr. Secretary, the folks assigned to SOUTHCOM, the headquarters, they clearly struggle to find affordable housing in the area, for obvious reasons. And this puts an incredible financial burden on them.

And, General, in October, the Army received approval to proceed with the required planning and studies to acquire land for SOUTHCOM military housing. Any idea on when the Army is planning that process or what is going on with that process?

Secretary ESPER. My understanding, Congressman, is that the Army is looking at options, a variety of alternatives, which could include the one you are talking about. But I think what we need

to do is make sure we understand the most economical and effective approach going forward that meets a variety of needs.

You know, we have soldiers in high-cost urban areas all around the country, and there are different approaches to each. So I just think we want to take a thoughtful approach to make sure we understand what the near-term and long-term values and costs are for a variety of options.

Mr. DIAZ-BALART. Oh, absolutely. But any idea where that is in the process? Because, obviously, you know, folks are struggling down there.

Secretary ESPER. I don't, but we can get back with you.

Mr. DIAZ-BALART. That would be great.

General MILLEY. It is in an analysis-of-alternatives process.

I have talked to Craig Faller. Each of the services has proponents, an executive agent, if you will, for various COCOMs. And the Air Force has, you know, Tampa or MacDill and so on. So we have SOUTHCOM. So we are responsible for the housing and the maintenance and all that kind of stuff, the administrative/logistical support for SOUTHCOM.

And it is in a process—he has made his desire, his aspiration, his ask, his requests, he has made that known to us. It is in a process right now where we are looking at an analysis of alternatives to meet his housing needs.

#### NATIONAL DEFENSE STRATEGY

Mr. DIAZ-BALART. Appreciate that.

Another quick question, if I may, Mr. Chairman. I know that votes are pretty much at the end of the time.

But I think everybody kind of knows that SOUTHCOM is one of the most under-resourced of the commands. I don't have to tell you all gentlemen what is happening in this hemisphere right now with Venezuela, Cuba, Nicaragua, Russians, Iranian, Chinese. It is a big deal. And yet my understanding is that, in the proposal, there is actually a bit of a decrease for SOUTHCOM funding.

And so just wondering, what is the rationale for decreasing SOUTHCOM support right now, particularly right now during this pretty unprecedented time in this hemisphere?

General MILLEY. Congressman, the National Defense Strategy is what guides us. It is an authoritative document. It is signed by the former Secretary of Defense, General Mattis—Secretary Mattis. We take that as an order, and we develop our plans and policies and our train/man/equip programs in accordance with the National Security Strategy coming out of the White House and the National Defense Strategy.

The National Defense Strategy clearly states, unambiguously, that the priority is China and Russia, and then everything else falls after that, and that SOUTHCOM is an economy-of-force theater, that the main effort is Pacific—I am putting this in military language, so to speak—but the main effort is Pacific, followed by Europe. And then third would be the counter-violent-extremist and counter-terrorist operations that are going on in the Middle East. And then after that comes SOUTHCOM and AFRICOM.

But those are orders to us. So we prioritize in accordance with those orders. And that is why you see what you see in the budget.

Mr. DIAZ-BALART. If I may, General, though, because, right now, with what you see in this hemisphere—

General MILLEY. Yes.

Mr. DIAZ-BALART [continuing]. Which is, you know—I know that concerning, the fact that you have now, it looks like, an increased, at least more public presence of Russia in this hemisphere. You have China—

General MILLEY. Yes.

Mr. DIAZ-BALART [continuing]. Now. You know that.

And so I would just caution everyone to not underestimate the threat. I think that the threat that we are facing right now in this hemisphere—and I may be wrong, but I don't think so—is, frankly, equivalent to—in dealing with, again, not only Russia and China but others, including Middle Eastern presence—is as big of a threat as anything that we are seeing anywhere around the world right now. And so I just hope that we are aware of that.

General MILLEY. I think we are—with SOUTHCOM and Admiral Faller down there and the forces and the intelligence services that we have, I can assure you that we are keenly aware of the threats in the SOUTHCOM area of our responsibility.

Mr. DIAZ-BALART. Thank you.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Ruppertsberger.

#### HYPERSONICS

Mr. RUPPERSBERGER. First thing, I want to acknowledge both of your leadership, as far as—I know your theme, I think, General, of readiness and modernization, and, Secretary Esper, working together as a team, I think you are one of the better teams we have in our area of national security.

I want to get into the issue of hypersonics. In my opinion, other than maybe nuclear weapons, hypersonics is one of the most serious threats to our national security.

At a budget hearing yesterday, Secretary Wilson indicated the various branches of our Armed Forces are working together to develop an offensive hypersonic capacity. And I believe those are slated to enter initial operating capability in fiscal year 2021 and 2022. And Secretary Griffin, I think, also stated those are the dates that they are focused on.

Secretary Wilson indicated that the Army's role in this effort is the hypersonic shell, so to speak. Now, we know that there is also an offensive and defensive component here. If you can discuss that. And, also, can you provide additional details on the Army's role in collaborative process?

And do you feel that industry is making the right steps to have the capacity to affordably build hypersonic weapons in order to meet the fiscal year 2021–2022 initial capabilities?

Secretary ESPER. Yes, sir. Thank you.

If I had to list a handful of technologies, hypersonics would be up there, along with directed energy, for example, and artificial intelligence.

It is indeed true that the Air Force, Navy, and the Army are working together on this. Secretary Wilson, Spencer, and I worked a disagreement out some many, many months ago where we had

separate research going on with regard to hypersonic weapons, and we decided, by pooling our resources and our efforts, we found that each had a different piece of the puzzle we could utilize.

We are investing a lot of money into hypersonics in order to fulfill the demands of our number-one priority, which is long-range precision fires. We are looking at a long-range hypersonic weapon being tested in the 2023 timeframe either as atop a missile or—and the Chief may want to talk about the strategic long-range cannon we are looking at for National Defense Strategy purposes.

But we think it is moving along. All that I have been told is we are getting a lot of good effort by industry to do this. And I think it is a game-changer.

With regard to ability to defend against it, it is a very difficult system to defend against due to its maneuverability and due to its speed and its profile.

I think, of our six priorities, number five is integrated air missile defense. That is something that we really need to build out. That is part of our modernization plan. Because over the past 18 years, we faced an enemy that did not present us, really, with any type of airborne/aerial threats.

So you could see how all these modernization priorities fit together, Mr. Ruppertsberger, to kind of help us modernize the Army and get to where we need to be.

Mr. RUPPERSBERGER. Okay. Thanks.

General MILLEY. Congressman, the American way of war, if you will, you know, project power forward at the strategic level, but at the tactical and operational level, we are a fires-based Army and a fires-based military, and we are fundamentally a maneuver force, a maneuver military.

And in order to gain maneuver, to get maneuver, freedom of maneuver, you have to have fires and movement. Hence, the very first priority of the United States Army is to reestablish our overmatch with fires. And that is why we said long-range precision fires.

Between the ERCA program, the Extended Range Cannon Artillery, and the PrSM, the long-range cannon, to include hypersonics is another piece of that, and upgrades to our attack MLRS and GMLRS programs—all of those programs in combination, both the acquisition piece of it and the fires piece of it, will reestablish U.S. dominance in fires.

That is a really important priority for the United States Army and ground forces in general in a near-peer competition or a near-peer combat operation against either Russia or China, is to have overwhelming fires. And everything else will flow from that.

Mr. RUPPERSBERGER. Okay. Good.

And congratulations on being the next Chief. That is going to be good for our military.

General MILLEY. Thank you, sir.

Mr. VISCLOSKY. Mr. Calvert.

#### FUTURE VERTICAL LIFT

Mr. CALVERT. Thank you, Mr. Chairman.

I would like to talk about the Future Vertical Lift. And, as you know, there is a plan to develop a family of helicopters for the Army which will share common hardware such as sensors, avionics,

engines, and countermeasures. It kind of sounds vaguely similar to the F-35, you know, when we went down the path of having these variants of aircraft. It didn't work out the way we planned, but, nevertheless, here we are.

This FVL is meant to develop replacements for the UH-60 Black Hawk, the AH-64 Apache, the CH-47 Chinook, the OH-58 Kiowa helicopters. The program is in the RDT&E phase. Fielding will not begin for several years. But the Army, as you know, is putting \$800 million towards the fiscal year 2020 and \$5.7 billion across the FYDP. There is a sense that the Army may be moving extremely aggressively in order to field this capability at the expense of existing programs. There are some people who believe that.

General, in regard to the Future Vertical Lift and your ambitious efforts, how important will these aircraft be in a fight against a near-peer competitor?

General MILLEY. So thank you, Congressman, for the question.

Going back to Dutch—or going back to Congressman Ruppenger, on the American way of war, the operational tactical piece, fires—long-range precision fires, number one. So the next thing is move. So shoot and move. And that then gives you maneuver.

Armies move two ways—or, actually, three: one by foot, one by vehicle, one by helicopter. So the Future Vertical Lift is absolutely fundamental to the Army's ability to execute maneuver warfare.

The program Future Vertical Lift really has two components to it, an attack piece and a lift piece. And you mentioned what they are going to replace. They will essentially double the range of existing systems, double the speed, the agility, the survivability, and the lethality of existing systems, unlike any existing helicopter of any nation on Earth today.

If we are able to achieve it—and I believe the technology is there, and I believe we are doing the demonstration, the prototypes now. The reason we are putting so much money into this is to ensure that we can field the force by the mid- to late 2020s, with the first units equipped of these aircraft, to restore Army dominance for ground maneuver in the conduct of ground warfare. It is critical.

So the combination of those priorities—long-range precision fires, Future Vertical Lift, and Next-Generation Combat Vehicle—will restore Army dominance against a near-peer.

Secretary ESPER. And if I may, sir. I don't want to use up all your time, but this is a great opportunity to connect some dots.

You talked about how we are doing modernization differently. So here is a program whereby, over the last several years, industry has contributed, invested \$4 for every \$1 the Army has invested, and we now have two prototypes flying with regard to Future Vertical Lift. And it shows just a great partnership that we have developed by giving predictability, by emphasizing Future Vertical Lift.

The second point you made is there is concern out there, maybe an atmosphere about, are we moving too quickly and maybe neglecting the current fleet? The current fleet we have will be with us for decades—decades. So the CH-47s are the youngest aircraft, on average, 8 years or less. They will be with us through the 2030s, probably the 2040s. The Apaches, we are remanufacturing, rebuild-



ing 48 a year. They will be with us well into the 2030s. Same with the Black Hawks; we are upgrading all of those.

So we feel very comfortable with where we stand with the current fleet. It is a very capable fleet. It still allows us overmatch with regard to our adversaries. But we need to get to a system that can do what the Chief said—penetrating range, higher payloads, speed, lethality. And that is why we want to move to the Future Vertical Lift now. I think industry is with us on this, and we feel very good about the path forward.

Mr. CALVERT. Thank you. And I have to go up and vote. Thank you very much.

#### ENVIRONMENTAL RESTORATION FUNDING

Ms. MCCOLLUM. Mr. Secretary, I want to talk about the level of funding in the environmental programs in this year's budget request. In the case of the Army, it seems as though funding for environmental programs in the fiscal year 2020 request has been reduced significantly below the fiscal year 2019 enacted level.

Given the range of environmental cleanup issues facing all the services, emerging contaminants like PFOS or lingering soil remediation or unexploded ordnance issues, I find the proposed reduction concerning.

I understand that the Army has prioritized new weapon systems in your budget request, but it cannot come at the expense of deferring the Army's responsibility regarding environmental restoration programs. It just creates a bigger and bigger backlog, and it makes it more and more expensive to clean up as well, and possibly, especially with PFOS, putting more people's life at risk for cancer-causing agents.

So can you speak to the decision why these numbers are considerably below fiscal year 2019 enacted levels, as well as assure the subcommittee of the Army's commitment to meeting its obligation as it relates to environmental restoration will be lived up to?

Secretary ESPER. Yes, Congresswoman. We do take very seriously our responsibility to be good stewards of the environment and the programs set out by DOD or the directives provided by Congress.

I would have to get back to you on the details. In some cases, what looks like a reduction, because maybe Congress added money from the enacted, which is what you referred to, versus what we proposed in this year's budget, may look like a decrement, but it may be that it is actually an increase from what we proposed a year prior.

So I would have to go back with you, do the forensics and come back and tell you what happened, if anything, in that regard.

Ms. MCCOLLUM. Well, I would like very much to see a breakdown—

Secretary ESPER. Sure.

[The information follows:]

The Army's FY19 Environmental Restoration account is broken down as follows:

- The Army received a total of \$235.8M from Congress.
- The Army's budget request was \$203.4M.
- Congress provided an additional \$32.4M (\$25M for PFOS/PFOA-related cleanup activities; \$7M for other cleanup activities).

While the Army appreciated the additional funding this FY, it exceeded what we believed was appropriate in the context of the broader FY19 budget. The Army has requested sufficient resources in FY20 (\$208M, \$4.1M above the level requested in FY19) to continue addressing our environmental restoration sites, including those with PFOS/PFOA-related actions. When the Army's FY20 budget is compared with what we requested (not what was enacted) in FY19, it shows that environmental funding was not reduced from last year. The Army is currently evaluating the appropriate request for FY21 and beyond. As the Army reaches completion of its environmental restoration program, funding requests have been decreasing commensurate with requirements; however, future funding will likely need to be programmed as we continue to assess and address PFOS/PFOA.

Ms. McCOLLUM [continuing]. On your list of priorities, where you are and how you are moving forward.

Because even in some of the areas—and I can speak to my district, but other districts, I have been around the country, but I will speak to mine specifically—when we have gone in to do cleanup, we often then start getting resistance as to how clean is clean and when they will get to it and this is fine.

And it is just not acceptable for the communities around in the area, the water tables, and especially with the new emerging contaminants. If we don't get rid of the legacy contaminants, we will never, never get the cleanup done the way it needs to be.

Secretary ESPER. Well, ma'am, you have my commitment. If you ever get any pushback, feel free to reach out to me directly and we will jump right on it to make sure that you are getting the full responsiveness of the United States Army.

Ms. McCOLLUM. Thank you.

Thank you, Mr. Chair.

CH-47F

Mr. VISCLOSKY. Mr. Calvert has been anticipating my every move today. He asked about Vertical Lift. And I understand during the interim when I was gone that, General, you mentioned the Chinook helicopter and its value and that the Army was going to need it for some period of time.

It is my understanding, however, that you have a decision to delay procurement of the Block II upgrade to the helicopter for 5 years, but a year ago you submitted a notice for a formal program of record.

What changed in that year, and what happens during the intervening future 5 years or more?

Secretary ESPER. Congressman, Mr. Chairman, on two points.

First of all, we are going to continue to buy CH-47s. That will be provided to the Special Ops community. So there is a steady stream of helicopters being built over this year and succeeding years. We can get you those numbers.

The decision I think with regard to the 47s for the conventional Army, what probably changed at that point was the fact that the National Defense Strategy was issued. It told us to move away from counterinsurgency to high-intensity conflict.

And as we looked at the fleet of aircraft we had, we knew that we needed to upgrade what we call the Black Hawk, the future long-range assault aircraft, and, of course, more importantly, the future attack reconnaissance aircraft. We needed a capability that could fly at great distances at great speeds and penetrate, let's say,

Russian air defense systems. And so it shifted what our needs were for the outyears.

Plus, when you look at the portfolio of aircraft we have, we know that the 47 is the youngest aircraft in the entire fleet right now. It will be with us for decades at this point. And so we figured that we can manage a portfolio better by looking at the future needs, based on what the National Defense Strategy told us. That is what changed.

That is, frankly, what changed a great deal of our portfolio, was the shift in accordance with the National Defense Strategy, that directive to prepare for near-peer or peer-level competition.

[The information follows:]

The 2018 National Defense Strategy directed the military departments to prepare for high-intensity conflict against peer/near-peer competitors who possess advanced warfighting capabilities. It prompted an immediate review of how the Army mans, trains, equips, and organizes the force. As a result, Army Senior Leaders led an extensive review of our entire equipping portfolio to realign resources into our six modernization priorities rather than ask Congress for an unrealistic increase in our budget. This review led to the cancellation and reduction in funding for many programs. During this process, the Army determined that we had insufficient investment in improving our lethality, and, specific to aviation, our future vertical lift (FVL) capabilities.

Given the threats by strategic competitors outlined in the National Defense Strategy, it was determined that a Future Attack Reconnaissance Aircraft (FARA) capable of penetrating and surviving against robust air defenses, followed by a Future Long Range Assault Aircraft (FLRAA) to replace the UH-60, were our top priorities, in that order. These are critical requirements needed to meet our ability to fight and win the next war. Rather than ask Congress for more money, the Army reduced funding in many aviation programs to resource these requirements.

The Army recognized the CH-47F fleet is the youngest in our inventory, with an average age of six years in our conventional formations. The Army has met its acquisition objective for the current fleet of CH-47s, satisfying the conventional Army's heavy-lift requirements. Finally, it is unclear if the Block II meets the speed, range, payload, and survivability requirements essential to a future fight against Russia or China.

Delaying this decision, while working with the company to fill the manufacturing through Foreign Military Sales (and some other options), allowed the Army to realign resources towards the more pressing aviation modernization needs in FARA and FLRAA.

For the foreseeable future, the Army will continue purchasing the Special Operations Command variant (MH-47Gs), assembled on the same production lines as the CH-47F Block IIs.

#### EUROPEAN DETERRENCE INITIATIVE

Mr. VISCLOSKEY. On the European Deterrence Initiative, the fiscal year 2020 request is \$600 million lower than last year. Could you explain the rationale for that reduction, General?

General MILLEY. DOD-wide, I am not 100 percent sure on the numbers, but I know the Army has got \$3.9 billion, I think, of that EDI. And that is primarily going to exercises. It is going to some infrastructure pieces over there. It is going to the repositioned stocks. And a few other piece parts are embedded within that. We think that is a healthy amount of money for the purpose of deterring any further aggression in Europe.

As far as the cuts go, it is my understanding the reduction in the money came from the completion of projects. It wasn't so much a cut as it was a completion of projects. I can get you the exact detail on what was completed, but I believe it is housing, both in Germany, I think, from memory here, and Italy.

But let me come back to you with the exact accounting of the \$400 or \$500 or \$600 million that was, quote/unquote, “cut.” I don’t think it was cut, per se. I think it was completion of project.

But let me, if I could, I would like to come back to you for that for the record.

Mr. VISCLOSKEY. In the situation in Europe, would you for us compare where we are today from a year ago, 2 years ago, from your perspective, on the participation of the allies, coordination, their abilities? Is there an improvement? Are we stable? Is there a decline?

[The information follows:]

*Question:* On the European Deterrence Initiative, the fiscal year 2020 request is \$600 million lower than last year. Could you explain the rationale for that reduction, General?

*Answer:* The \$600 million reduction to the European Deterrence initiative request is a result of the reduced requirement to establish Army Prepositioned Stocks (APS). The APS efforts hit a high mark in 2019, and will continue to trend lower as we complete the build of planned unit sets. The reduction in the APS request was partially offset by an increase to exercise funding. In 2020, the U.S. Army will execute its most significant European exercise in years—Defender 2020. The transition from APS to exercise costs reflects increased readiness, as we rehearse U.S. based forces rapidly deploying to Europe and drawing APS.

*Question:* In the situation in Europe, would you for us compare where we are today from a year ago, 2 years ago, from your perspective, on the participation of the allies, coordination, their abilities? Is there an improvement? Are we stable? Is there a decline?

*Answer:* The capabilities and contributions of our European Allies continue to improve across time. This is reflected in their defense spending commitments and through their additional contributions to ongoing operations and activities. The most significant example of this trend was demonstrated during NATO’s Trident Juncture 2018 exercise. This event comprised over 30 nations, dispersed across three countries and served to demonstrate an ability to provide collective defense in a large-scale, multi-domain environment, under inclement weather conditions.

General MILLEY. I would offer a few things for consideration.

One is I think NATO is an important alliance and it has been, and I think this was reinforced most recently by the President by meeting with the Secretary General of NATO and then, of course, the Secretary General of NATO’s address to a joint session of Congress just the other day.

NATO has been around, as you know, for 70 years now. They just celebrated their 70th birthday. And it is one of—it is not the only reason, but it is one of the critical or one of the significant causal factors that has allowed—or prevented—great power conflict on the continent of Europe. That is important and people should remember that.

And with all of the difficulties and challenges that NATO presents, and there are many—and I have been a NATO commander in Afghanistan with all the NATO member states contributing to forces in Afghanistan—there are all kinds of issues in an alliance like that, because every state, every member nation has its own interests. But there is only one thing worse than fighting with allies, and that is fighting without them. So having allies in a team matters and is very, very important.

Relative to the principal threat of NATO, which is further Russian territorial aggression and undermining of NATO, NATO has significant capabilities.

Do all members meet the 2 percent GDP defense spending? No, they don’t. But, as Secretary General Stoltenberg said the other

day, the efforts of this government over the last 24 months has resulted in a significant increase in the amount of money that the NATO member states are contributing. So that is important as well.

So of the 28, 29 member states of NATO, only a few meet the 2 percent or greater in their GDP, but there is a significant movement in that direction in the outyears.

But NATO is an important alliance. We are a critical member. We are the linchpin of NATO, if you will. And I believe that the EDI is a critical component of the U.S. contribution to NATO.

Mr. VISCLOSKY. Thank you very much.

Ms. MCCOLLUM [presiding]. Mr. Carter, when you are ready, if you have a second question.

#### FUTURES COMMAND

Mr. CARTER. Okay. Well, I will just throw an easy one out there since this is my neighborhood. What is going on as far as putting everything together for the Futures Command? Where are we? How are we doing? I know you have a lot of slots to fill, still have a lot of slots to fill.

General MILLEY. We are very much on track. So we said that we would be at IOC and then FOC by this summer. We are on track to do that, by FOC this summer.

General Murray is in place. We still have a fair amount of civilian hires to do. The command is a relatively small command, located, as you know, in Austin, with about 500, about 100 military and about 400 civilians. They are not at full strength yet; they are in the 80 percentile strength. They have got the budget, and he is building it out.

So we expect him to be at full operational capability here, roughly speaking, within, I would say, another 90 to 120 days or so.

Mr. CARTER. July is kind of the target we were looking at earlier. Is July still a good—

General MILLEY. Yes, no later than. That is the charge to General Murray, and he is on track to do that. So we are in good shape.

Mr. CARTER. Okay. Well, I am a big supporter of the Futures Command. The concept is really modern and smart. And I hope that we will take the subcommittee down there and let them take a look at it when it is up and fully operational. I think they will be impressed.

General MILLEY. Yes, sir. I think so, yes.

Mr. CARTER. I am hoping that we can do that.

Secretary ESPER. I think it would be worthwhile for everyone's understanding to get a brief by General Murray.

We tend to think of Futures Command in the context of equipment, if you will, requirements, and it is much, much broader than that. It begins with his first responsibility is looking into the future and thinking about how the Russians and Chinese will fight and then thinking about how we will fight.

So there is this whole front end of this of his job that is very important before you ever get to what our acquisition community does, and it would be I think very insightful and very helpful as you think through what Army Futures Command's role is.

Mr. CARTER. And I have talked to the chairman. We have got interest. So, hopefully, maybe late summer we can go up there as a group and take a look. And I will be glad to host that. Thank you.  
General MILLEY. Yes, sir.

INFECTIOUS DISEASE RESEARCH AND MALARIA VACCINE

Ms. MCCOLLUM. Late summer in Minnesota is even better.

I want to ask you about the Army's infectious disease research and malaria vaccine, something I know a little bit about, having traveled and having a father serve in World War II who had malaria. Once you have it, you have it for your life.

U.S. military personnel is increasingly being deployed, again, in areas of the world that are prime locations for malaria transmission, Asia, Africa. And given that malaria remains the number one infectious disease threat for troops deployed in these regions and we know that we have issues with compliance, whether it is State Department, military, even Peace Corps volunteers because of some of the side effects from these diseases, it remains critically important that the Army's research on malaria vaccines continues.

I am concerned in the fiscal year 2020 budget that the justification appears as though the funding for the project that conducts the malaria vaccine research program is being realigned into other projects. Given nearly all the most effective, widely used antimalarials were developed, in part, by the U.S. military research team, I find the possibility of losing momentum in research extremely alarming when it comes to malaria.

Can you tell me in the fiscal year 2020 budget what it contains specifically for malaria vaccine research and assure me that the fiscal year 2020 funding and beyond will continue a robust malaria vaccine program to continue within the Army's research area? Because you have done it so excellently in the past, the Army and the world are counting on you to continue to do it.

Secretary ESPER. Congresswoman, the Army does do a lot of research in infectious diseases. I can't give you the specific numbers for this program. I will have to get back to you.

I will tell you, with all of our research, what we are trying to make sure that we do, that it is all focused on lethality, survivability of the force, all those things we need for readiness.

I don't know if your facts are correct, whether there was another program or something. We will just have to get back to you and give you a full explanation.

Ms. MCCOLLUM. Well, you can get back to us as soon as possible—

Secretary ESPER. Sure.

Ms. MCCOLLUM [continuing]. Or else we are going to start moving forward on this.

And with climate change, malaria is only going to continue to spread and become more of an alarming disease, which can really cripple people.

But at the same time, not to do anything if progress is being pushed forward, to stop research or to slow it down would be foolish, in my opinion. So I look forward to fully understanding your rationale and what you are doing.

Secretary ESPER. Sure.

Ms. MCCOLLUM. Thank you, Mr. Chairman.

General MILLEY. Congresswoman, I don't believe—we will get the numbers. I don't think we are stopping research on malaria. I think there is a couple million dollars pumped into the malaria research in 2020.

Ms. MCCOLLUM. Well, I said slowing down or stopping.

General MILLEY. Okay, yes, because we are not stopping.

Ms. MCCOLLUM. Slowing down sometimes stops things, right?

General MILLEY. Roger. But we understand, the Army understand that infectious diseases cause more casualties than bullets in historical war. The 1918 flu took a lot more people, killed a lot more American soldiers than the Germans did in World War I. World War II, infectious diseases, that your father fought in, they were very debilitating. Vietnam, the same.

And we continually do research on infectious diseases. We are keenly aware of the debilitating effects of infectious diseases on deployed combat troops.

Ms. MCCOLLUM. Well, your justification, if you read through it—and I am sorry, Mr. Chair, to reiterate this again—it really appears to me, looking through the funding, that the project in malaria research is being realigned into other projects. And maybe it is just malaria research moving into another line and it is still all covered, but my view of it, I don't see it.

And as I said earlier, you don't have to explain that to me how it impacts a soldier a long time after they are home, having lived with someone who did have reoccurrence of malaria when I was a child.

General MILLEY. We will get you the answers.

[The information follows:]

In support of the Army's modernization initiative, Army leaders reviewed existing Army programs, including the Army Medical RDT&E portfolio, in an effort to identify opportunities to realign investments towards the highest priority modernization efforts. As a result, Army leadership directed funding realignments across multiple programs through the Program.

Objective Memorandum process. Based on the relative priorities of infectious disease programs, including malaria vaccines and therapeutics, a \$2.2M FY20 cut was applied to the malaria research program. The cuts and realignment will terminate the Army malaria vaccine core program research efforts. Malaria vaccine funding was realigned to higher priority malaria prevention and treatment. The realignment of S&T funding priorities is to push products currently in the S&T phases forward so they can move into the development phase.

Ms. MCCOLLUM. Thank you.

Mr. VISCLOSKEY [presiding]. Mr. Rogers.

#### MEDICAL RECORDS

Mr. ROGERS. Thank you, Mr. Chairman.

Mr. Secretary and General, thank you for your service.

Let me ask a question of General Milley, more in his upcoming role than his present role.

We have got a problem, a big problem, between DOD and VA. Many of the soldiers coming back through the hospital, for example, in Germany, when they get back home as a veteran they can't get access to their medical reports from the hospital in Germany.

A young man came to me some time ago after an IED in Afghanistan with his eyes deeply injured. He went to the VA hospital in

Kentucky, and they could not operate or attempt to fix him because they could not get the military records from the hospital in Germany.

We have spent \$4.5 half billion so far over the last 15 years trying to merge those two systems. Still not workable. And it is inhumane the way we are treating some of these soldiers.

Mr. Chairman, could you in your new role follow this through?

General MILLEY. I will do that, Congressman. I absolutely will.

Mr. ROGERS. There is an effort underway, obviously, but it is taking so much time and overcomplicating what I think is a fairly simple remedy, and that is a common language between these two computer systems and the bureaucracies on both sides of the question.

General MILLEY. I am not going to disagree with that at all. I have seen that in spades, with dealing with WIN-T, the network, all kinds of computer systems, and all the variety of IT systems that we deal with. This is one of many. And you are absolutely correct, complicated, bureaucratic, needs to be fixed, can be streamlined. And let me take a specific look at this one, if you would.

#### ADVANCED CAMOUFLAGE TECHNOLOGY

Mr. ROGERS. The VA hospital could not operate because they didn't know what had been done in Germany to his head, and he went blind because of that.

Switching gears quickly, let me talk briefly about great power competition and the procurement of technology that is critical to our success in a potential conflict with a near-peer adversary, and that is advanced camouflage technology. Not as glamorous as the Next Generation Combat Vehicle or Abrams tank upgrades and so forth.

But can you talk about the importance of advanced camouflage and concealment technologies, especially in a combat environment where we don't necessarily have dominance in the air and space domains and we are not able to operate out of fixed operating bases? Could you share your thoughts on that?

General MILLEY. As we look to the future—and even in the present—the ability to survive is obviously paramount on any battlefield. And we think the ability to survive in a future battlefield will be at a premium, because we think it is going to be highly lethal and, as I mentioned earlier, units will be cut off and separated and so on and so forth.

So advanced camouflage systems are critical. We are putting a fair amount of money into advanced camouflage systems, both individual unit, vehicle, et cetera.

The key to camouflage is the electronic signature. We think it is the electronic signature and the heat signatures of human beings, the vehicles, et cetera, but also the electronic signature.

We know that adversary acquisition systems are very, very capable. And if you can see a target with precision munitions in today's rocket and tube artillery, along with joint systems from the air or sea, you can hit a target.

So camouflage systems that break up electronic signatures or break up heat signatures are critical, and that is the systems you are talking about. And I think we are putting money in this budget



and we will continue to research in that. And you are right, it is not as glamorous as the others, but survivability is key.

As you look at our six priorities that the Secretary has laid out for us—Long-Range Precision Fires, the ability to shoot, then you have got the move piece for vehicles and helicopters, then you have got the communication piece, so shoot, move, communicate, that is the network—the next piece down is protect. And that is the integrated air missile defense system, but it also includes things like smaller programs, like advanced camouflage systems.

So it is embedded within the various programs that are underneath those priority bins.

Mr. ROGERS. We are proud of you for your service so far, and we wish you very much success in the new role you are entering. Thank you.

General MILLEY. Thank you, sir.

Mr. VISCLOSKY. Mr. Ruppertsberger.

#### MATERIALS IN EXTREME DYNAMIC ENVIRONMENTS PROGRAM

Mr. RUPPERSBERGER. Yes. First, I want to talk about the issue of Materials in Extreme Dynamic Environments Program. You are familiar with that, General, my question is to you.

Regarding the Materials in Extreme Dynamic Environments, that is MEDE Program, run by Johns Hopkins University and the Army Research Lab, in 2017, you were quoted as saying: The real sort of holy grail of technologies that I am trying to find is material, is the armor itself. If we can discover a material that is significantly lighter in weight that gives you the same armor protection, that would be a real significant breakthrough.

The Materials in Extreme Dynamic Environments Program has developed advanced materials, such as boron carbide, glassy epoxy, magnesium alloy. These materials all reduce the size and weight of vehicle armor while enhancing protection. However, the Materials in Extreme Dynamic Environments Program is slated to end after fiscal year 2021.

My question: What are the plans for investing in followup basic research efforts to advance the development of new armor materials for our soldiers? In my opinion, we need to keep the research and development moving ahead in this area. Comments?

General MILLEY. The quote that you read back to me from a year ago is still valid. The materiel for armor for vehicles—or for personnel, for that matter, but really we are talking vehicles—that is the holy grail of the whole thing.

So anything that we can make a 70-ton tank, for example, much, much lighter, say 30 tons or 35 tons or 25 tons, based on a material that gives you the same protective qualities as rolled homogeneous steel does today, but at a much thinner and lighter weight, that would be an incredible breakthrough.

To my knowledge, no country yet has broken through that barrier. But we are researching and we intend to continue to research, because we are aware of a variety of avenues, many of which are classified, that do hold promise, but they are not real yet. But we do intend to continue to research that.

Mr. RUPPERSBERGER. Okay. Thank you.

Mr. VISCLOSKY. Mr. Womack.

## OFFICER CORPS

Mr. WOMACK. Thank you, Mr. Chairman.

Thanks both to you, Mr. Secretary and General Milley, for your outstanding service to our country.

The first question for the Secretary, and I don't even know if you are at liberty to discuss any findings if you have findings, but you had commissioned kind of a look at the officer accessions process. General Abizaid, I guess, was your point on that.

So has that yielded a product or do you have some findings from what he looked at that would be beneficial to us in terms of—because I understand it covered all the commissioning sources, basically, and looked at the BOLC piece. So fill me in on where we are in that study.

Secretary ESPER. Yes, sir. So we are very focused with making sure we understand, because we are a closed personnel system: Who do we bring into the Officer Corps? Who do we bring into either ROTC, OCS, and West Point? How do we then train and educate them? And then they how do we graduate and commission them? And those are all different parts of this. And so we wanted to have a good understanding of the product we are getting, based on what the field is telling us.

And so we did take a deep dive at that. And there are some obvious things that come out. We underresource ROTC, for example, in terms of what we have. We have different standards between all three of those sources. Within ROTC itself, there is a wide range of schools, in terms of the focus they put on the military, the number of graduates, the type of graduates.

So, for example, I was at Virginia Tech last week, has a very good program at Virginia Tech, and this upcoming week, I am going to VMI. I am trying to make my way around to the senior service colleges to really get a good feel of this. Because I think if we can produce an exceptional Officer Corps, it will serve us well into the future.

It is of note that the cadets we graduate this summer from any source will one day be in 35 years a future Chief of Staff of the Army, a future COCOM Commander, a future Chairman of the Joint Chiefs of Staff. That is why I think we need to get it right on the front end.

So we are looking at a number of things by which we improve the quality across all those bands to make sure that we are, again, getting the right talent in, training and educating them properly, and then getting them into the right assignments.

And this is all part of the bigger effort that we are pursuing; that is talent management. How do we replace the current personnel system with a system that is based on—it is a market-based system utilizing talent management techniques?

Mr. WOMACK. So was he able to conduct it in such a way that there wasn't a lot of territorial protection? Because I know that is where kind of the rub might come.

Secretary ESPER. There is. And there is a lot of this is the way we always did it so we always will.

But we have a number of initiatives underway where we are looking at some of the recommendations to make sure we do what

is best for the Officer Corps and for the service. And that will require some change, and change will be difficult, but we think it is the right thing moving forward.

#### COMBAT TRAINING CENTER ROTATIONS

Mr. WOMACK. Thank you.

General Milley, back a few years ago, during some of the more austere times in funding our Department of Defense, particularly the Army, I was outspoken about the lack of Combat Training Center rotations that we were able to afford to do. And I guess we took a dip there for a while, in part because of budgets, but also in part because of the type of warfare we were engaged in.

Now, with this great power competition going on, I see a really strong need to get back into the rotation business in a pretty big way. And we have got some money budgeted for that. I think 25 rotations, as I read the budget.

So can you speak to the need for us to utilize Combat Training Center rotations and the importance they are going to bring to the readiness picture?

General MILLEY. Absolutely.

The number of rotations, the maximum throughput—there are three training centers, dirt training centers, National Training Center at Fort Irwin, Joint Readiness Training Center, and then over in Germany, CMTC. And the fourth training center is a virtual training center for computer simulation at the higher levels. But the three dirt centers I think is what we are talking about here.

So with three of those, and given the length of a given rotation, the maximum throughput would be 30. But you need to reset. You need to give the Observer Controller/Trainer some time to take a leave or to do so and so. And given the current pace, so what we try to set it for is between 10 or 11 at a given rotation or at a given training center, and then 5 over in Europe, because the other 5 over in Europe will go to allies and partners, not necessarily U.S. forces alone.

So 25. We are essentially at max throughput other than mobilizing for general war sort of thing. So we are at max throughput. So that is one thing. And they are funded, and four of those rotations will go to National Guard units.

The other piece—one is just the throughput, the capacity. The second piece is the quality of the rotation.

Some of those rotations, but very few now, are geared and targeted specifically towards a rehearsal exercise for a targeted theater. So if you are going to go to Afghanistan, you are still going to go to a rotation at one of the training centers.

But most of those rotations are decisive action, specifically at the higher end, and we have modeled them after the best practices of a combined threat, if you will, from the best practices that we were able to discern from China, Russia, and some other countries. And we have kluged them into an enemy that is replicated at the training centers.

And we have included all the domains. So space is included in the training centers. Cyber, for example, the National Training

Center at Fort Irwin is the only enclosed live cyber fire exercise training area in the world that I am aware of.

And then, of course, you have got air and the ground piece as well.

So all the domains are replicated in all of these training centers. The OP-4 is very, very capable, and the blue units or the friendly force units that have gone through there are really being put through the wringer.

Very, very difficult, very challenging. And I would encourage any Member to go visit any of the training centers, and I think you will see an Army that is undergoing significant change in terms of its training.

And the last piece I would say, it is really critical, these training centers, it is really critical, because what you are talking about is not just the training of the unit, but you are talking about the training of a future Army.

The leaders—the buck sergeants, the lieutenants, the captains—are learning their trade, their craft at those training centers in a very, very realistic environment, and they carry that with them for many, many years as they get promoted through the ranks.

So those training centers are critical, they are fully funded, and we are at max throughput.

#### EMPLOYER SUPPORT

Mr. WOMACK. Where it concerns the National Guard, are there any difficulties you are seeing in employer support? These are longer rotations. This is not your 2-week annual training exercise. This is a much longer piece and a much more demanding piece. Are you getting any feedback there?

Secretary ESPER. Yes and no. One of the things I am concerned about is employer fatigue. I think you and I have talked about this before. I see some units are going on multiple rotations, not just NTC. They are going to Korea. They are going to Europe. They are going to Afghanistan.

So I do get concerned about that. You know, on one hand you hear the commands, the senior officers and NCOs are very gung ho to go, and I believe that. But if you talk to individual soldiers, sometimes if you are on your third or fourth deployment, it gets old.

And particularly, as you know, I mean, I served in both the Guard and Reserve, it is one thing if you are a big company and you have a thousand employees, but if you start getting down to a 20-person, 15-person office, losing 1 or 2 persons, employees, gets tough on the business.

So I am very conscious of that. I ask it every time I meet with a Guard or Reserve unit. What is the state of your employers? How does it feel? And I think we need to watch that carefully.

Mr. WOMACK. So as a former Guard guy, I can tell you, Mr. Chairman, the Combat Training Center rotation is the pinnacle. Other than going on a deployment, it is the pinnacle of military training. And I am glad to see that we have got at least these guys funded to the level that they can maximize their throughput.

I yield back.

Mr. VISCLOSKY. And if you say it, Mr. Womack, it must be true.

Mr. Aguilar.

GOLDEN HOUR POLICY

Mr. AGUILAR. Thank you, Mr. Chairman.

General, I wanted to ask you about the Golden Hour Policy, the policy that we have that says the first hour after a life-threatening injury occurs that we help an individual on the battlefield with life-saving care.

What challenges does the Army expect to have with regard to meeting the Golden Hour Policy in future conflicts?

General MILLEY. Again, we are currently engaged in armed conflict in different parts of Afghanistan, for example. We have soldiers, we just lost three marines who got killed and three others wounded and another American civilian contractor killed.

So we are engaged in armed conflict now. But currently in the combats we are involved in now, we have dominance of the air and we pretty much can guarantee ourselves ground evacuation and/or air evacuation within the so-called Golden Hour, 60 minutes.

The real key, of course, is the immediate reaction of the people on the scene to stop the bleeding, clear the airway, and so on. And then we get them into an evac. So you want him under surgeon's knife within 60 minutes. That is what you want.

And we have an extraordinarily high success rate, well in excess of 90 percent. So that if you are wounded and we can get you to a doctor within 60 minutes, your probability of survival is well in excess of 90 percent. It will be a difficult survival. Perhaps you lose a leg, you lose other limbs, but you will be alive. And where there is life, there is hope.

So that is the Golden Hour. But it is dependent upon control of the land lines of communication and control of the air.

In future combat, that may or may not be true. It will depend on the situation. So hence, Future Vertical Lift is really critical, because that is going to increase the survivability of the helicopters much, much greater than what we have today, in order to penetrate to be inside the airspace, the air envelopes of enemy air defense systems. So that is key.

We are up-arming our ground ambulances. So that is what the EMT program or part of the EMT program is all about. So that is piece parts of it.

But also equally important is to protect as far forward on the battlefield as we can as a basic method and principle of military medicine. So we want to get the forward surgical teams, the doctors and the critical care nurses, get them as far forward on the battlefield.

So when I had a chance to visit U.S. advisers to the SDF on the outskirts of Raqqa, there was a fully funded or fully equipped, manned and equipped forward surgical team there with doctors, ortho doctors, critical care nurses, right there to take care of wounded right from here to a couple hundred meters from here. So protect as far forward as you can.

And then telemedicine is another area that we are putting money into so that those doctors and those medics and those nurses can pipe in the specialist virtually over various communication systems and they can work that.

And then the last piece I would say is the ability of self-care and body care. And we are putting a lot of money into advanced medical capabilities, things like bandages and QuikClot type systems, et cetera. There is a lot of individual stuff that can go a long way towards the immediate care once you get a wound.

And it is all of those and many, many more that we are working on. We are very, very interested in that, because it is the survivability of those folks.

Mr. AGUILAR. Recent Department of Defense statements have suggested that this may not be an expectation in the future. It sounds like you are—

General MILLEY. It is probably not. I mean, realistically, for us to think that we are going to have the success rates of evacuating soldiers in high-intensity combat against a potential adversary like the Russians or even, let's just say, North Korea, first of all, the scale and the scope of the casualties will be significant, really significant. And the ability to evacuate those casualties within 60 minutes, that expectation, we will try, but I am not guaranteeing that.

We control the air, we control the land lines today in the type of war we are in now. Against that type of threat in those environments, you can't guarantee that. That is why the protect far forward, to get the doctors and the nurses as far forward as we can.

So the level of intensity and the amounts of casualties in that scale and scope of war will be significant. And for me or anyone else to guarantee a Golden Hour under those conditions would be a false representation of what we think would be the truth.

Mr. AGUILAR. Thank you, General.

Mr. Secretary, what analysis has been done to identify gaps within the planning and capability side of the policy, of the existing policy?

Secretary ESPER. For which policy, Congressman?

Mr. AGUILAR. For the Golden Hour Policy.

Secretary ESPER. I would have to get back with you on policy changes. I guess I was on a different track. I mean, one of the things I wanted to add—and I can come back to your question—was the Chief talked about the importance of the soldiers, what happens to the soldiers. And the chairman asked earlier about save a million dollars here, a million dollars there.

[The information follows:]

The term golden hour was an idea coined to encourage the urgency of trauma care. There is no change to that policy, only how the Army reacts to and adapts it to the Large Scale Ground Combat Operation. Circumstantially, the Army may have to extend the golden hour by focusing less on rapid evacuation of injured soldiers and more on bringing life-saving definitive care capabilities far forward on the battlefield. This means focusing on prolonged tactical combat casualty care, advanced resuscitative care, and long-distance ground MEDEVAC until air MEDEVAC is available. Reshaping the golden hour will require that the Army adapt and rapidly modernize its medical technologies, training, and expectations.

The Army has analyzed our potential medical needs during future conflicts within the idea of a multi-domain battlefield environment. In this environment, the area-denial capabilities of our adversaries will create an increased need for prolonged field care capabilities down to the lowest level of medical care. To ensure there are no gaps, Army Medicine is deeply invested in Combat Casualty Care Trauma Research and Development. Our priorities include increasing capability to provide enroute critical care, leveraging current and future ground, air and other service's evacuation platforms as well as providing effective, logistically supportable, capabili-

ties and advanced treatment options to deliver critical care closer to the point of injury. The Army's efforts to address planning and capability have shown great success as the past 15 years of war have yielded the highest survivability rates in history. As an example, in Operation Enduring Freedom, the survivability rate was 91.4% and for Iraq/Syria it was 89.7%.

And out of the \$30 billion that we have moved to build the Army of the future, training is a very important part of that. We shifted a lot of money into initiatives like the CTCs. But one where we did was we extended Army basic training, OSUT, One Station Unit Training, actually by 2 months, 2 months. It is now, I like to say, the longest and toughest in the world.

But in addition to changing their program of instruction to focus more on high-intensity conflict, one of the things they do now is they go through an extensive medical training course. So they pretty much come out as EMT-qualified soldiers, which is a pretty remarkable achievement.

Now, you think of all these young soldiers coming out of infantry basic and advanced training with the skills, I think it is going to enable us to not only be more lethal on the battlefield, because these soldiers are now training on all infantry company weapons, they are also getting these enhanced medical skills that I think are going to serve them well and serve us well in the future.

With regard to the broader issues of the Golden Hour, I mean, that is all what we are looking at in terms of research.

Futures Command, one of the things we are doing in Futures Commands is making sure medical research is lined up as well, because, as I mentioned over here earlier, one of the things, the challenge of Futures Command is not just about requirements as it relates to equipment, but it is also about: How do we envision the future fight? How will we fight? How will we organize?

And they need to look at that. Part and parcel of that is to look at how do we make sure we have adequate medical capabilities on the field to make sure that we can keep soldiers alive, whether or not it is 60 minutes or 30 minutes or 90 minutes, is how do we build that into based on a future fight against the Russians and Chinese, as the Chief outlined as a future battle.

Mr. AGUILAR. Thank you. Appreciate it.

Thank you, Mr. Chairman.

Mr. VISCLOSKEY. Mr. Cole.

#### END STRENGTH GOAL

Mr. COLE. Thank you very much, Mr. Chairman.

And, gentlemen, I thank you for your service. And I apologize, frankly, for not being here earlier. Juggling too many balls today.

But let me ask you, Mr. Secretary, in fiscal year 2018, the Army fell about 11,500 short of its end strength goal. And it looks like, I am told, it will fall short about 7,500 this year.

What are we doing on the recruitment front to address that, try and hit the targets that we have set?

Secretary ESPER. Well, we fell short in the Regular Army 6,500 in fiscal year 2018. We had a very aggressive goal. We originally were shooting for 80,000 soldiers and we ended up with 70,000 once the final congressional limit was set at 76,500, and it was a miss.

But I will tell you, it was still the highest recruiting year we had in 10 years, and not just the highest recruiting year in 10 years, but also the highest retention year we had in quite some time, 86 percent overall for the Army and 90 percent-plus for the Regular Army.

At the same time, as you recall, last summer we turned up the standards, in terms of who we would waive in, the drug standards, a number of things. So our emphasis continues to be quality over quantity.

Now, that said, we recognized as well that we face a difficult recruiting environment. Only 29 percent of America's youth qualify for service for one reason or another, and of that same cohort, less than 4 percent have any proclivity to serve. And then you are doing it in a country that is facing one of the lowest unemployment rates in decades and an American population that is increasingly isolated from the Army that serves it.

So we went back to the drawing board and did a lot of work in terms of our recruiting enterprise. We appointed a four-star in charge of it. We have done tactical things, from overhauling our website to greater social media outreach, more recruiters on the streets.

We also launched what we call the 22-City Initiative. So we are going back to America's 22 largest cities, and we are going to go to where the kids are and talk to them about what opportunities present themselves in the Army, whether you are coming for 3 years or you are coming for 33 years.

But we are really doubling down on this task to make sure that we—and I am confident we will hit this year's goals, both in terms of numbers and quality, and I think, again, quality being more important.

#### READINESS GOAL

Mr. COLE. I think that is good news.

General Milley, how are we doing toward meeting our readiness goal of 66 percent? And do you think we can reach that goal by 2022?

General MILLEY. I do. Now, it depends on two things, the international environment essentially staying about what it is today; and we get this budget and next year's budget and so on, that we get continuous, predictable funding at the levels we are asking for.

If those two variables happen, then we should achieve our 66 percent goal of the Regular Army units being at the highest levels of readiness and 33 percent of the National Guard and the U.S. Army Reserve being at the highest levels of readiness, we should achieve those two metrics by 2022 if those two variables obtain.

#### EFFECTS OF A CONTINUING RESOLUTION (CR)

Mr. COLE. Let me, Mr. Secretary, give you a chance to respond to something nobody around this table wants to see happen, but I think it is good for us to know. What would happen if we ended up stumbling into a CR at the end of this year, which I think is very possible, frankly, what would that do to your ability to reach the targets that you have set?



Secretary ESPER. Well, I thought you were first going to say, Congressman, if we went to BCA limits, and that would be disastrous.

A CR also presents its own challenges, particularly for an Army in transition. Last year we got the budget on time, and I cannot tell you what good it did. It was fantastic in terms of us having the ability to fill training seats.

So if we have a CR, what it means, given all the limitations of the CR, is likely lower funding levels. We likely will not be able to fill all of our training seats. Commanders will likely have to tune down their training, which will affect readiness.

For an Army that is moving out on a number of modernization objectives, we would not be allowed to do new starts. That would have a major impact on us. For an Army that is trying to build its munition stockpiles to fight in either North Korea or Europe, that would mean we would not be able to change production levels.

So you can see, whether it is manning the force, training, equipping, you name it, it just has dramatic impacts. And if we look at the past, if the past tells us about the future, then we would start the year likely in January or February with a full budget, which means we now have to spend a lot of money quickly.

And you just end up with these bad cycles and bad habits that you get into, then trying to spend a whole lot of money near the end of the fiscal year, and that presents its own challenges as well in itself.

The key thing for Army, all the services and all of government, really, is predictable, adequate, sustained budgets that we can rely on and then plan on and then keep a steady force, steady growth.

And so I know the Chief has some views as well.

General MILLEY. No. I mean, he said it all: predictable, adequate, sustained. And a CR, I mean, it is not the end of the world, but it is a terrible way to spend the taxpayer's dollar. It is not effective. It is not efficient. It cuts off part of the year. Everything builds up at the end of the year. It sends terrible signals to industry. Industry jacks up the price of a widget, because they don't have predictable cash flow, and so on and so forth.

So it is not good. The best thing, on time and predictable from year to year. I mean, everyone knows that. A BCA would be catastrophic.

#### NATIONAL DEFENSE STRATEGY

Mr. COLE. Evidently, everybody doesn't know it, because we have done this before around here, and that doesn't reflect very well on Congress. It is certainly not your fault. But I hope you are carrying that same message to the administration.

One last question, if I may, General Milley. Based on the National Defense Strategy and the current plans, how do you envision the current mix of armored, infantry, Stryker Brigade command teams will change to meet the demands of the National Strategy going forward?

General MILLEY. We are looking at that. And, again, it is another part of the overall review that we have charged Army Futures Command to do. We started that review a couple, several, 3 or 4 years ago.

Right now we have 58 brigade combat teams. We have got a mix of, as you mentioned, armor, infantry, and Stryker. And we are looking at what needs to be that force structure. In fact, the Secretary is going to take a brief here in probably about the next 30 to 45 days at least on some preliminary findings, some studies that we have done.

What needs to be that force structure to fight a war against a near-peer competitor sometime in some distant future? Pick your time. We have some classified times that we are looking at.

But we do know this. We know that force structure won't be the same. We know the Army of 10, 15, 20 years from now is not going to look like the Army of today. It is not a linear progression to the future.

So we are looking at all that. I can't give you the exact answer right now. It is under review and we are a little bit preliminary in our studies. But we are taking a hard look at that, in terms of concept, doctrine, organization.

The multidomain operation concept that you hear about or maybe have read about, that is going to be the driving organizational concept, but it is not yet doctrine. We are probably 24 months or so from that becoming doctrine both for the Army and the joint world, and from that will flow the organizations, the precise types of equipment.

These things happen in parallel. So those six priorities that you see, the Long-Range Precision Fires, Future Vertical Lift, Next Generation Combat Vehicle, et cetera, we know that those technologies, we need to get moving on those technologies, because we know those are going to be important. We already know that.

We know things like we are going to fight mostly in urban, highly dense urban areas. We sort of know that. We think there are going to be 8 to 10 billion people in the world. War is about politics. Politics is about people. And we know that a decisive battle will happen probably in urban areas, which is a fundamental shift in war over the last two or three hundred years.

So we know the capabilities and the requirements that are going to be needed. The exact force structure and organization and exact mix of infantry, armor, Stryker, et cetera, in those outyears is not yet known, but we are going through those studies and the Secretary will be briefed on those shortly.

Mr. COLE. Thank you very much.

Thank you, Mr. Chairman.

Secretary ESPER. If I may, Mr. Cole, just to—

Mr. COLE. Oh, thank you, please.

Secretary ESPER. Just to make a bigger point, because the chairman talked about this earlier. He talked about the Army modernization budget changes being not just this year but several years.

If you look back at history, when the leaders of the Army in 1973 decided to make a fundamental change, we were going to move, shift from Vietnam, based on the lessons of the Middle East wars, and focus on the Soviet Union, and we were going to change doctrine and change equipment, we brought in the Big Five, all that, that process took 10-plus years.

So when the Chief and I talk about Army reform, that if we don't start now when will we start, and we are talking about an Army we want to field in 2028, 2029, 2030. Because we are doing all the work now on the new doctrine. That is going to take a couple years. New doctrinal changes will drive new organizational changes throughout the force. The equipment piece. I talked about how we are changing basic and advanced infantry training.

All those these things will come together, but it is going to take years of change and adjusting the ship as we go forward to get to where we need to be in late 2020s-early 2030s to be able to fight and beat a peer adversary. That is what this is all about.

So this is not a 1-year fiscal year 2020 and we are done. This is fiscal year 2020, 2021, 2022, and it is going to occur for many, many years to shift this big ship called the United States Army to where we need to be.

Mr. COLE. Thank you very much.

Thank you, Mr. Chairman.

Mr. VISCLOSKEY. I would have more confidence we will avoid a CR if the gentleman from Oklahoma was still on the Budget Committee.

Ms. Kaptur.

#### ARMY TANK CORPS

Ms. KAPTUR. Thank you, Mr. Chairman.

And thank you so very much, Mr. Secretary and General, for being here today and for your service.

I wanted to ask a question about tanks. And the Abrams tank, made in my neighborhood, can weigh over 45 tons—actually, 65 tons—fully loaded. My question is, your budget requests, the Army budget requests \$1.75 billion for the upgraded M1A2 and version 3, and my question is, how does that potential capability compare to what the Russians and Chinese have on the drawing boards?

Secretary ESPER. Ma'am, if you don't mind, I will take the first stab at this and then let the Chief talk about the other side.

I was in Lima actually a couple weeks ago and was able to tour the plant. It is an incredible facility. Great American workforce out there. I think the Abrams tank is the most capable in the world and we continue to upgrade it.

And that is why we are buying, I think, 168 tanks or upgrading 168 last year and 168 this year and we will continue to do the upgrade, so we can retain the overmatch over the respective Russian and Chinese counterpart. That is the key. And I think as compared to the Bradley, the Abrams has more life in it, more life left in it. That is why we continue to do these upgrades.

Ms. KAPTUR. But I understand there is a Russian version that can make it across Europe faster than anything that we have.

General MILLEY. I would say this, Congresswoman—

Ms. KAPTUR. And can traverse more difficult terrain.

General MILLEY. The Russians are investing in a variety of vehicles, some of which are tanks, some of which are infantry fighting vehicles, et cetera. There is nothing that I have seen yet that is some sort of super breakthrough in the world of Russian armored vehicles. They have certain capabilities that are very, very good,

but I will match our M1 tank and the various models and series of those tanks against anything the Russians have.

They do out-range us, because they put a missile on their tank, not just a main gun, but our main guns are very similar. But the real difference in tank, in the capabilities, is not so much the piece of equipment, it is the crew that mans it. It is the people.

And our crews, our armored force are far superior, in terms of training, the amount of rounds that are fired per year, miles driven per year, and the complex environments they face at the training centers. So currently, today, our force, our armored force is a very, very capable force, and I am very confident in its ability to successfully operate against the Russians or anybody else.

The key, the question really is the future and what are we going to do in the future, and therein lies this Next Generation Combat Vehicle. We talked about material with I think it was Congressman Ruppensberger.

We need a vehicle, the basic attributes, that has the same protective qualities, that has increased lethality and overmatch relative to anything the Russians or the Chinese or anybody else can field.

We want something that has greater speed and range and agility and is light enough to cross the rivers and the bridges and can be strategically mobile, can move from continental United States by air or sea with much less level of effort by TRANSCOM than currently to do with the M1s.

That is a high bar of requirements, and we are working very, very hard on that as part of this Next Generation Combat Vehicle program.

But our current vehicles—and I don't want anyone to walk away thinking that the Russians are 10 feet tall or anybody else is 10 feet tall in this world—the United States Army and the United States Army Tank Corps, the United States Army Armored Forces would do very well against anybody on the face of this Earth.

And if you combine that with the United States naval power and the United States air power, we will do okay if something were to happen. Pray that it doesn't happen. But if it happened tonight, we are going to be okay. The future is what is really the question, and that is where we are driving with this modernization program.

#### ROBOTICS

Ms. KAPTUR. All right. And are plans on the drawing boards yet for those new vehicles?

General MILLEY. Yes. They are being prototyped, tested right now.

The other part of that is robotics. So these are going to be optionally manned vehicles. We know that the Russians and the Chinese are moving out very, very quickly on the use of robotics.

Hypersonics was a technological area that the Secretary had mentioned would be an area that we want to invest in heavily. Also, robotics and artificial intelligence. And there are several others. There is a laundry list of these emerging technologies.

But robotics is important for both the air and the ground vehicles. So for ground vehicles, you want the commander to make the decision on some future battlefield as to whether it is going to be a robot, the vehicle is going to be autonomous or semi-autonomous,

depending on the situation, or manned, again, depending on the situation.

And there is a variety of—industry has a variety of options and models that we are experimenting with. We are already driving some of these vehicles. We know in the commercial world there are plenty of robotic vehicles out there on the highways and byways of America and in other countries right now delivering goods and services.

But running up and down I-95 is one thing. Running through some of the difficult terrain in the woods or deserts or dense urban areas is a different problem set for the engineers to solve.

But I am 100 percent confident that it is going to get solved, and I think that we are going to be fielding very, very high-tech, optionally manned, robotic-type vehicles, armored tanks, if you will, in the not too distant future for the fielded force.

TANK AND AUTOMOTIVE RESEARCH, DEVELOPMENTAL AND  
ENGINEERING CENTER (TARDEC)

Ms. KAPTUR. Is the Warren Tank Command heavily involved in that futuring?

General MILLEY. I am sorry?

Ms. KAPTUR. Is the Warren Tank Command heavily involved in that futuring?

General MILLEY. TARDEC. Yes, TARDEC, yes, absolutely. Absolutely.

Secretary ESPER. And just to be clear, ma'am, the number one priority right now is replacing the Bradley, the fighting vehicle, because it is out of electrical power, it is out of automotive power capabilities. So we have got to focus on that first.

As the Chief said, we will have prototypes here in the next 18 months or so that we will be able to test. And the game plan is to start fielding, I think, in 2026.

And then we have got to focus on the tank. And we will learn a lot from the Bradley replacement in that process. But just to be clear.

INTREPID CENTER

Ms. KAPTUR. Thank you very much.

General, I just wanted to ask, as I look at the suicide rates in the Army for 2018, the third quarter had a higher amount, sadly, in the Reserve and National Guard. And do you have any initiatives under development to help ensure better access to mental healthcare, particularly for those in the Reserve and Guard components?

I was extremely impressed when I went up to the Intrepid Center up here at Walter Reed, but I can't guarantee you not one of those existing centers exists for Guard and Reserve personnel.

Can you provide more information now or to the record about how one goes about getting something like the Intrepid Center in places where we have large numbers of Guard and Reserve returning home without access to that type of care?

General MILLEY. I will. I would like to take the second part of that for the record to get back to you on how to do that, because I, frankly, don't—the Guard, as you know, is in all 54 States and

territories and in various densities. I don't know that—I would have to go back and do the analysis to determine if there are centralized locations where something like the Intrepid Center would make sense for the Guard and Reserve.

It is a particular challenge, no doubt, for the Guard and Reserve. We know that. We are very sensitive to it. Suicide is a national issue, and it is an issue for the U.S. military, and it is further an issue for the U.S. Army in all three of our components, the Regular, Guard, and Reserve. We take it serious. We have behavioral health counselors and specialists in all of our Active units and also embedded within our Guard and Reserve units, but not to the extent that is necessary.

Suicide is extraordinarily complex. It is extremely tragic. And really, from my own experience as a commander and from what I have seen to date, the crisis point is almost—not always, but almost always there is some sort of spiraling or crisis that occurs about 72 hours prior to the consummation of a suicide. It is in that 72 hours if someone could intervene in some capacity, whether it is a family member, a buddy team, a soldier, a leader or something.

So that is what we emphasize. We emphasize it for sexual assault and we emphasize it for suicide. It is the intervention that is critical. It is the I am my brother or sister's keeper, I do have personal responsibility for you as my fellow soldier. And regardless of rank, whether it is a private saving a sergeant or a lieutenant saving a colonel, it doesn't matter. Intervene.

And oftentimes what we have seen is the diving catch, that intervention within those 72 hours makes all the difference in the world as some individual experienced crisis and they don't know how to get out of it and they do essentially what amounts to a short-term solution—or a long-term solution to what could be a short-term problem. And they do something that is irrevocable, suicide, when if someone could intervene right there.

So we emphasize buddy teams, intervention, small unit leadership, the squad leader, the platoon sergeant, the platoon leader knowing their people, perceiving all the signs, symptoms, and crisis indicators and warnings, and then intervening. Don't hesitate. You will be saving somebody's life.

[The information follows:]

The Army National Guard (ARNG) and U.S. Army Reserve (USAR) have implemented psychological health programs, staffed by Directors of Psychological Health who provide referrals and linkage to appropriate treatment based upon eligibility and available resources. The ARNG and USAR expanded that program to include clinical case management of high risk and complex cases. Nurse case managers work with Soldiers, commands, providers, and Family members to coordinate treatment and ensure that Soldiers have access to, and engage in, the treatment required to stabilize their condition with the primary goal of restoring Soldiers to optimum mental health.

The ARNG also operates the Resilience, Risk Reduction, and Suicide Prevention (R3SP) program across the 54 States and Territories to implement the Fiscal Year 2018 National Defense Authorization Act requirement for suicide prevention training and education for ARNG and USAR Service Members and their dependents. The R3SP program is collaborating with the SHARP Ready and Resilient Directorate to deploy *Engage* training across the force, which refocuses leader and junior Soldier intervention at the first sign of problematic behavior. This year, we have partnered with the Veterans Health Administration to utilize Veterans Affairs Mobile Vet Center staff members to provide increased access to behavioral health services for ARNG and USAR Soldiers in remote areas through a Mobile Vet Center Outreach Initiative.

Additionally, the Secretary of the Army directed the development and evaluation of an Army suicide prevention leadership tool for first-line leaders. The pilot study of this tool is the first to deploy a rigorous scientific design to evaluate leadership's practical and tool-based methods for suicide prevention. Results of the pilot study will inform whether the tool should be further tested or deployed Army-wide.

Regardless of component, screening and risk assessments are included in the Periodic Health Assessment, the Post-Deployment Health Assessment, and Reassessments, as well as separation health assessments, and occur routinely in Army Patient Centered Medical Homes during treatment encounters. Education and public awareness efforts leverage Army programs to reach out to leaders, peers, and Families. Surveillance occurs through the Army Public Health Center, the Armed Forces Health Surveillance Center, the Department of Defense (DoD) Suicide Prevention Office, and the DoD Suicide Event Report Program.

Ms. KAPTUR. I know my time is up, but I must say this. I was very disappointed when we had the heads of West Point, Annapolis, and the Air Force Academy before us and I said to them, we know we have a shortage in the military of physicians and behavioral nurses, people who specialize in these categories, would you consider admitting more individuals who would wish to study in those areas? And I got a very weak reply, actually a terrible reply from every single one of them. So they are unconscious.

And then for the uniformed military health services, I have asked myself could we do something in those accounts to attract more individuals who would come into the military with some responsibility. They would learn and study in these arenas that the military very much needs as well as civilian society. But I haven't really heard too much about that.

So I am just sharing that with you. You have extremely important positions in our country. And this is a problem we need to solve. My goodness, we just lost the Admiral on the Fifth Fleet, for heaven's sake.

General MILLEY. That is right.

Ms. KAPTUR. So I just—it is like—some people say it, but where we have the opportunity to make a difference, we are not. And we have got the largest budget in the Government of the United States.

So just know you have a Member here who is harping on this, and some of my colleagues care a great deal as well. Why can't we fix this?

And every aspect of the military has to pay attention. And we can do this. We can do this as a country. So hear my plea.

Thank you.

General MILLEY. You are correct, and we agree.

#### U.S. FORCES ON KOREAN PENINSULA

Mr. CALVERT. Thank you, Mr. Chairman.

I have been reading the news lately, I know you do also, and it seems like Kim Jong-un is going to Russia on his begging tour, to try to get aid from Russia. Of course, Russia is not in great financial shape themselves.

But it concerns me. It seems that Kim Jong-un is getting increasingly desperate to get foreign assistance from either China, Russia, or whoever he can get it from. And I know, General, you have been dealing with this character for some time.

But is there a level of frustration he may get to where he may try to do something to get attention in order to get assistance? It

has worked in the past. And it seems that he was trying to gear up for a new launch or do some other things that maybe somewhat expose kind of management of this situation. Do you see any risk out there right now?

General MILLEY. The short answer is yes, there is always risk. And I would be hesitant here or any time to predict the future behavior of any foreign leader and specifically the foreign leadership of North Korea.

It is a challenging situation. We in the military, our role in all of this is to be prepared, and I believe we are. I believe we have done all the right things. I believe General Abrams and the U.S. Forces on the Korean Peninsula, 28,500 of them, are prepared to execute whatever is necessary.

Right now, with the diplomatic efforts with North Korea and the denuclearization efforts, diplomacy is the main effort of the Nation, and we are clearly in support of that.

But I would hesitate to predict what would come next. I have access to a lot of the intelligence, and I would be happy to talk to you in a classified environment. But right now in a public environment I would not want to predict what North Korea would do.

#### READINESS ON KOREAN PENINSULA

Mr. CALVERT. Well, a key point is our readiness in the Korean Peninsula. And obviously we put off a lot of joint training missions with South Korea.

General MILLEY. Yes.

Mr. CALVERT. Is that damaging our readiness?

General MILLEY. I think for the readiness of the force, General Abrams has testified, and I would reemphasize that, that the exercises that were canceled, modest or negligible in terms of its negative effects, per se, on the readiness. But if it was sustained over multiples of years, it would have a cumulative effect.

But the readiness of the force at the division and below level on the Korean Peninsula—and I will be heading over there in a couple weeks, by the way—the readiness of the force at the division and below level, at the brigades and the battalions and the companies, they are training all the time. So that is not what got canceled. What got canceled is command post exercises.

And so I think those can be mitigated adequately with an acceptable level of risk.

Mr. CALVERT. Thank you.

#### END STRENGTH

Mr. VISCLOSKY. Gentlemen, I would like to return to the issue of end strength. Where does the number come from? It is an authorized end strength number, but how is it formulated? Is it informed by the National Defense Strategy? Where does that number every year come from?

Secretary ESPER. I can take the first stab at this.

We have a process called the TAA process, the Total Army Analysis, that looks at—based on war-gaming and a number of other factors and—my shorthand—comes up with a force structure that we would need to fight and win in future wars. And then that force structure inevitably, once you break it down by compo—regular



Army, Guard, Reserve—drives a certain number of people. Once you determine how many of this type of unit you need, there is a number associated with that. For example, an infantry company, 142 people or so.

In shorthand, that is how it is derived.

I don't know if you—

General MILLEY. So, on an annual basis, we go through a rigorous process, starting with the National Security Strategy and the National Defense Strategy. And from the National Defense Strategy, you pick out—again, it is an authoritative document. You pick out the specified and implied tasks that the Secretary of Defense has given each of the various services. We go through that. Then we look at the National Military Strategy that is developed by the Joint Chiefs of Staff, of which I am a member, and the Chairman. They have specified tasks in there.

And then, in addition to that, we kludge onto all of that the combatant command war plans. Those are key because those are very, very specific, and they lay out exactly the types of forces and capabilities that each of the combatant commanders want in order to execute their various plans.

The combination of all of those are the inputs. It goes through very, very, very rigorous analysis down at various centers within the Army. Then we war-game all of those. And from those, we derive—plus we apply military judgement to all of that. And from that, we derive estimates of the size force and the type of force, the force structure that was mentioned earlier. We do it for the present force, and we do it for the future force. But all of that together is a—it is a very, very rigorous detailed process.

Mr. VISCLOSKY. My next question, then, would be that it would appear, if it is approved by the Congress, so your fiscal year 2020 authorized end strength would be 480,000, as I understand it.

The authorized end strength two fiscal years ago, fiscal year 2018, assuming 2020, was 483,500. So given the fact that we are trying to anticipate peer competition, you would have an authorized level of 3,500 lower than 2 fiscal years earlier. Does that give you pause or concern?

Secretary ESPER. Yes, sir.

General MILLEY. Let me take that. I am the one who—this is on me—

Mr. VISCLOSKY. A rigorous examination—

General MILLEY. Well, this is on me. I am the Chief of Staff of the Army. We know the end state. We know where we need to get to in general terms on the size. Those end strengths that we asked in the NDAA's, that was a glide path to an end state.

And I, the chief, set a goal that exceeded our recruiting ability. And I was advised by then-Secretary of Defense Mattis, hey, your goal, your objective is too high; you probably are not going to make it in the current recruiting environment, et cetera. But we kept that goal. And as Secretary Esper mentioned, we had a banner recruiting year, 70,000. Even though we came in short 6,500, it was still a 10-year high, and it was a greater amount recruited into the United States Army than are in the Canadian and Australian Armies combined.

So we set our objective too high. We maintained quality over quantity, and we didn't make the recruiting goal.

So we came back to Congress this year, and we said: Okay. We are not going to have that rise over run, that glide path, as big as we desired. We want to trim it back to about 2,000 rise over run, and we want to execute modest growth.

And what that means now is that the end state size of the Army that we think is necessary to execute the National Defense Strategy is going to be stretched out, pushed out several years beyond that which we would have had we achieved the objective.

Mr. VISCLOSKY. If I could, because I have a number of questions on this.

General MILLEY. But that is on me.

Mr. VISCLOSKY. I appreciate—and you are absolutely correct—that your accessions for fiscal year 2019 were the highest ever, about 70,000. They come from the civilian force, I assume—civilian population. They come from reenlistments. They come from the Guard. They come from the Reserve.

Is there any proportionality to that, and is there any shift of your emphasis to try to meet your numbers as far as what the composition of those numbers look like?

Secretary ESPER. Well, they come from the civilian population in into the Regular Army, Guard and Reserve. Each component has its own respective targets to meet. Each of the components missed their targets last year. And so we adjusted our numbers appropriately to deal with that.

As the chief said, one of the things that we have to do is make sure or training base—we give them predictability, because it determines how many drill sergeants they hire and the equipment they need, et cetera. I mean, if the economy changes in a few short years, we may come back—and by the way, we are reorganizing our recruiting enterprise. We may come back and say we want to go to 4,000 more a year, because we know the end state needs is well over 500,000 in order to—regular Army—in order to fill units to strength; number two, to restore capabilities have been lost over the past 18 years, like electronic warfare; and to build new capabilities, like cyber units.

So we know what we need to do, but we have to modulate that based on bringing in a sufficient number of quality recruits into each of the components year over year over year in a predictable basis.

Mr. VISCLOSKY. Because your number is fairly static. The fact that you have 70,000 new people, give or take, 70,000 people disappear, too.

General MILLEY. Okay.

Mr. VISCLOSKY. Not disappear, but they are not in the military now.

Secretary ESPER. One of the challenges, too, is—you know, I said earlier we had one of the highest retention rates of many years as well. One of the key things we need in the Army right now, the most in-demand rank is the rank of staff sergeant, E6. They are the level—the rank level is that our squad leaders, our team leaders. They are the recruiters; they are the drill sergeants. And that

retention of—that high retention rate allows us to kind of grow that NCO corps.

Now, that is going to take a few years, but you also need to make sure that we have a sufficient retention rate year over year to make sure we get those quality NCOs moving up.

Mr. VISCLOSKY. And I appreciate the fact that you are looking at all of your options and advertising and websites and everything because I am looking at your end strength on the end of February this month, and you are 818 people down from the end of the last fiscal year. You have a significant problem in your end strength.

The next question I would have is for fiscal year 2018. The Congress appropriated monies for the personnel account, and there is great support for doing that because it is for the troops. But there was an excess of about a billion dollars that the Army asked to be reprogrammed for 2018, and it was used for modernization efforts. And Congress approved those reprogrammings.

When we were in conference for the fiscal year 2019 bill, there was about \$600 million in the military personnel account that was essentially eliminated during conference and used for other military purposes. And I find it interesting that, within the last month, there is still a billion excess that is now being dedicated by the administration to the wall.

I note, at the very same time, that the Army has presented to this committee fiscal year 2019 unfunded requirements totaling \$308 million. It is my understanding the Army has also submitted and unfunded requirements list of \$2.3 billion and, additionally, that there are reprogramming requests pending at OMB that would substantially invest in other existing Army programs for this fiscal year.

Would you have a response to the fact that you have a list of needs here?

Secretary ESPER. Yes, sir, so the—

Mr. VISCLOSKY. The answer was made that didn't—wasn't applied to any of those.

Secretary ESPER. The chronology is important. And I was going to actually, when I was thinking about your first question, it ties into your second question. So we are a little bit behind right now. But these are what we call the bathtub months—not these now, but January, February, March. Our highest recruiting period is really when you hit the summer months, May, June, July, August.

So, last year at this time—and that is why we express confidence now that we will hit our mark by the end of this year—we were still fairly confident that we would hit our marks for fiscal year 2018. I want to make sure I get my years right. Come the end of the year, though, we realized, by the time we had the numbers in, were 6,500 people short. That is around late September, early October.

We—I—went to Secretary of Defense Mattis and said: We have this asset. What we want to do is lower our end strength numbers because we don't believe, given the recruiting environment, given all of the challenges, given the fact that we need to overhaul our recruiting base, that we can make a number of 487,000.

So we said: We want to lower that number for 2019 down to 478.

This is now October timeframe, October/November timeframe. And, therefore, we said: That means we have an asset of over a billion dollars for MILPERS that we are presenting to OSD, if you will.

This is well before any discussion about transferring money to the 284 account, or whatever, began. But at the same time, we came forward, I think, in late November or so, early December, to inform the Congress that we wanted to lower our end state number and we had this asset. We wanted to be very transparent in the process. That is the ticktock in terms of you talk about the military personnel—

Mr. VISCLOSKY. But in past years, the reprogramming was for military programs. And my point of the question is I have a list of unfunded requirements for 2019 of \$308 million that are still sitting out there.

And my understanding is there is going to be additional requests after OMB clears them for reprogramming of needs.

Secretary ESPER. Yes, sir. So—

Mr. VISCLOSKY. You have got about a billion dollars sitting there for something else.

Secretary ESPER. So, when we surrendered, if you will, that billion-dollar asset to OSD, we said that, while the fiscal year 2019 budget met our readiness and modernization objectives—your requirements, your needs and wants always exceed your resources. We had a list of things we said we could have used that for. Some of those things are on the UFR. But it was OSD's call to use that money for other priorities.

Mr. VISCLOSKY. Okay. I will conclude this, and I will recognize Judge Carter.

And I understand what you say about the end of school system. But I would note, in 2019, the net increase in personnel was 62; the net increase in June was 12; and the net increase in July was 144. So it just tells me you do have a problem as far as that end strength and meeting it. And I wish you well on it.

Judge Carter.

#### JUNIOR ROTC PROGRAMS

Mr. CARTER. Thank you, Mr. Chairman.

And let me continue on this conversation a little bit.

I met with Sergeant Major Dailey a couple of weeks ago. We were talking about recruitment. He pointed out that the members of the Junior ROTC programs around the country, they tend to be good citizens, and they tend to have a high propensity to join the military.

I live in one of the fastest growing areas of the country right now. We are building high schools. They are coming up like mushrooms after a rain, all over everywhere. And a lot of these high schools have a real interest in getting a Junior ROTC program, and they seem to be running into issues that frustrate their ability to get these programs.

How do you feel about Junior ROTC programs?

I feel like they build citizenship. And we have got a lot of interest in a fast-growing community, and I would think that would be a

good one small plus for recruiting. And then I will tell you about something else we have after you answer that question.

Secretary ESPER. I also agree that JROTC is a great citizenship program, and it tends to push—encourage kids to join the military at higher rates than anywhere else. It requires some investment. We have had great success for many, many schools. But as Chairman Visclosky mentioned earlier, as hard as it is to cut a program, it can be equally hard to reduce a JROTC or an ROTC program once you stand it up, even though it may be nonperforming. And so there is, quite candidly, a reluctance to start a program, unless we can trim programs elsewhere because, otherwise, you are just—you know, the return on investment.

So, if I had the ability on all levels to, you know, with a free hand to really make those shifts, that would be something we would want to do.

Mr. CARTER. As you know, I live in a military community. It is Army-based, but quite honestly, we have a high propensity for all the services in our area.

And a group of citizens have started have talking about ways to figure out how, at graduation, you will have the announcement made, “Ms. Bustos is graduating from Round Rock High School, and she is going to the University of Texas; and Mr. Kilmer is graduating from Round Rock High School, and he is going to”—whatever—“Texas Tech.” We want them to announce “Mr. Carter is graduating from high school and is joining the United States Army; Mr. Jones is graduating and is joining the United States Navy.” We want them to be acknowledged for their patriotism and for the fact that they are going.

I intend to—as part of a program a bunch of us are working on, I did write letters to all the recruits that graduated from high school, a personal letter from me, thanking them for their patriotism and congratulating them for meeting the high qualities and standards that our military requires, all of our military requires, to be able to be there and remind them they are part of 1 percent of the people that are qualified and eligible to serve in our service.

And then I am hoping I can get people who are going to help me come up with the money to give people who graduate a red, white, and blue extra tassel on their graduation hat when they graduate from high school which says “I have joined the military.”

I think the people that are patriots that are willing to do that need some reward.

Secretary ESPER. Yes, sir.

Mr. CARTER. And maybe that will help.

Secretary ESPER. Well, thank you for doing that. It does make a difference. It not only celebrates the young man or woman who decides to go into the military, but it also showcases them for the juniors and sophomores and freshmen behind them. As I said, as part of this recruiting overhaul, I have been around, and I have talked to many of our recruiters in major cities across the United States.

Unfortunately, in many cases, there are too many school districts that simply will not give us genuine access to the schools, to the kids. For one reason or another, we can't get in. We get very limited access. And I think it hurts our recruiting efforts. Not just us, but the Army, Navy, Air Force, Marines.

And I think it is a disservice to young people who maybe aren't ready for college, can't afford college, aren't college material. We can bring them in. We can teach them a skill, a trade. We can teach them about loyalty and duty and service. And even if they come just for 3 years, they will be a far better citizen if they join the military for a few years.

But we need to get into the schools, and that is where we need help.

Mr. CARTER. Thank you.

#### MEDICAL HEALTH SERVICES TRANSFORMATION PROGRAM

Mr. VISCLOSKY. I would just associate myself with the comments the Judge made about the Junior ROTC program. I think is a great program and certainly would appreciate it being expanded.

I just have one other line of questioning, and that is on the Medical Health Services Transformation program.

At the outset, I would acknowledge, people do not like change. One thing I have learned, they don't like change.

But a number of us travel—we are at a medical institution, not an Army facility, and most fulsome discussion, longest discussion, and most emotional discussion was this issue in billets.

People can tell you how incredibly confused I was at the hearing relative to medical services last week. The staff is trying to educate me over an extended period of time.

But the question I would really have is it is—you have services, whether they are pediatrics, OB/GYNs, others that sometimes people think aren't associated with the military, although we obviously have women and we have families.

As far as potential reductions, what is the concern here, and what are the ramifications? And if those billets, if those positions go away, what are the alternatives to members of the service and their families?

And the reason I ask is the facility we were at, some people are driving an hour just to get to work at the base. And pediatricians, women's health, if I then have to travel an extended period of time, my child is sick, whatever, I am not making for a happy soldier, if you would. That is kind of my question.

Secretary ESPER. There are two parts to this, sir. And we can talk to the first part and maybe a little bit to the second because it is different areas of responsibility, if you will, in some ways.

So, first of all, our commitment is to make sure that our soldiers, as a medically ready force, are ready to go to fight and win. And then we have concern about the beneficiaries, their family members, if you will.

On the first part, the Army, several months ago, started looking at what do we need for the fielded force in terms of medics and doctors and nurses and surgeons and PAs, you name it, to make sure we had exactly what we needed for the force. And there was a lot of change happening there, with that regard. We just didn't think that we had the right numbers in the right specialties for our fielded force, the units that go to war. And that is our responsibility.

The second part is Defense Health Agency. And as directed by Congress, was to look at a number of reforms. Our understanding of that is their challenge is to look at how they can reduce over-

head and how they can look at services that, if it is available in a local area, it may be where they can—they can outsource, if it is nearby, a—you know, pediatric services or what. That is the part that is not us, but is a focus of DHA. Our focus, though, is making sure that in this transition period and after, that our beneficiaries are taken care of, that you are not having to do exactly what you said.

There is a lot of concern and change out there. And it is—you know, my wife gave birth in both an Army hospital and a civilian hospital and had good experiences in both. But some people haven't, and some people have one.

So it is the second part that I think is causing the most consternation, is what happens with regard to the medical treatment facilities. And that is where we have been pushing hard. Myself and Secretary Wilson and Secretary Spencer have had a number of engagements with the folks leading that effort. I don't think it is moving as quickly as we would like or as—you know, I just—they got a long road ahead of them.

General MILLEY. I think there are probably three key areas that any soldier and their family care most about, I suppose. One of them, as you saw recently, is housing. And that is a significant effort. Another is schooling for your family members. And the third, and perhaps the most significant, is medical. And these are readiness issues.

Sixty percent of our Army today is married and, on average, with two children. So, on average, you are looking at a four-person family, whereas like, in World War II, 10 percent of the Army was married.

So taking care of the family's peace—the medical care, the housing, and the schooling—is critical to the readiness because we want the soldier to focus on the military task at hand. And if you are constantly worrying about lousy medical care or lousy houses or mold in your house or the kid doesn't have a good school to go to, then that wears on you, and it detracts from readiness. So point one is it is really, really important.

Point two is the military medical system—Army, Navy, Air Force, Marines—is a huge system. It is massive. And with the Defense Health Agency initiative, we are taking a massive system and doing a massive change. And I am one of those who believe when you are doing something on that scale and magnitude, to do it step-by-step, to do pilots, to learn lessons as you go, and make adjustments to the program. And that is kind of what we are trying to do.

So we have taken for the MTF—the Medical Treatment Facilities, take large—this is across all the services, not just the Army—take a large hospital, take medium hospitals, and take small hospitals, and let's apply the new DHA standards to them, draw the lessons, and then grow from there. So that is the MTF piece.

And the other part that we are doing within the Army is we want to carve out those healthcare professionals—medics, doctors, nurses, et cetera—that are necessary for the combat force in order to provide that forward medical care that we talked about earlier in order for the golden hour.

And those are two different capabilities. One is stay at home, medical treatment facilities, big hospitals, take care of soldiers and families. The other is a combat medical capability that is distributed within tactical units, and they are going to be on the forward edge of battlefields. And those are two different requirements.

So the medical command, if you will, has got to be split now into two as part of this major ongoing initiative in order to provide those capabilities. And it is very complex. We need to take it step-by-step and learn the lessons as we go.

Mr. VISCLOSKY. Gentlemen, thank you very much, and good luck this year. Please stay in touch. We want to work with you.

Mr. Calvert, thank you.

We are adjourned.

[CLERK'S NOTE.—Questions submitted by Mr. Aderholt and the answers thereto follow:]

#### COMMON HYPERSONIC GLIDE BODY

*Question.* I am concerned about our delay in deploying a long-range, offensive, hypersonic weapon in the field. I have pushed this for years.

I understand that there is a booster, of large circumference, which we have in our inventory, and which we have used, and that there is at least one more about the same size in steady production.

I think we may use one of those boosters for upcoming flight tests.

Yet—instead of fielding a few of these weapons using that booster, a decision was made to wait for a NEW, smaller booster to be designed and tested. I think that adds substantial time to the process. If money is a factor, this is the right Committee to hear the details. I would appreciate you sending the Committee information on your most recent cost-study.

Meanwhile, as all this work continues, would you support the fielding of a limited number of weapons, using the larger booster, so that we can save a couple of years in getting a weapon in the field?

Answer. The Army recognizes the importance of deploying a long-range, offensive, hypersonic weapon. The current plan accelerates the initial fielding from FY2025 to FY2023. The Army's plan will allow the Army to have a road mobile weapon system that is more survivable and operationally effective than a fixed site missile system using the larger booster stack that is currently in the Army's inventory. Army leadership made the decision in October 2018 to use a common booster with the Navy. Additionally, the Army will use the Common Hypersonic Glide Body (C-HGB) that both the Navy and the USAF are using. The use of common elements with the Navy and USAF also creates economic advantages of scale through increased production numbers from use by all the services.

#### ARMY FUTURES COMMAND

*Question.* For years, research labs such as the AMRDEC, now with the new name of CCDC, have done cutting-edge work on materials and other matters which may not be applicable to an acquisition next month but may be exactly what we need for the next generation or the one after that. Since there is never enough money for acquisition, now that we are under this new process called the Army Futures Command, how do we preserve some of the budget and the initiative of the lab directors so that we maintain the ability to hit the next breakthrough before our enemies do?

Answer. Army research laboratory directors under CCDC have the flexibility to allocate a percentage of their budget and exercise initiative through U.S. Code Section 2363—Mechanisms to Provide Funds for Defense Laboratories for Research and Development of Technologies for Military Missions. Sec. 2363 authorizes laboratory directors to use 2–4% of their funding for innovative basic and applied research to maintain the Army's ability to hit the next breakthrough before our enemies.

Materials research is often the core of new technology and is certainly an area where we will continue to focus investments. The Army will also continue to encourage our laboratory directors to utilize their Sec 2363 funds for these types of initiatives as well as to propose cutting edge research areas during the Program Objective Memorandum (POM) process.



*Question.* For FY19, Congress appropriated \$20M for Army Futures Command (AFC). However, an additional \$80M was transferred to support AFC operations. Can you explain what made these transfers necessary, what the FY20 request for AFC is, and whether additional funding transfers be required in FY20 to lead the development of the Army's modernization priorities?

*Answer.* Initial resourcing for Headquarters, AFC, includes requirements for 400 civilian and 100 military members at the Headquarters and an additional \$100 million in operations and maintenance—Army (OMA) funding to support the headquarters and cross functional teams. The increase of \$80 million funded civilian pay, facility leasing, headquarters operations, sustainment, travel, training, and information technology requirements. Funding also supported the innovation center and cross functional teams. Facility leasing pertains to Headquarters, AFC and basing in support of the eight cross functional teams, the Army Artificial Intelligence Task Force, and the Army Applications Lab.

The FY20 request is \$100M. The funding level for Headquarters, AFC is commensurate with other Army commands and will support the headquarters and cross functional teams as well as civilian pay, facility leasing, headquarters operations, sustainment, travel, training, information technology requirements, and the innovation center. There are currently no plans to submit additional transfer requests for FY 20.

#### COMMUNICATIONS NETWORK ACQUISITION PROGRAMS

*Question.* The Army has repeatedly acknowledged major setbacks in communications network acquisition programs and emphasized the need to modernize lower and upper tier capabilities.

In an effort to shore up network pitfalls, the Army has proposed acquisition policies that open competition to commercial off-the-shelf (COTS), non-developmental communications technologies, which can be quickly adapted and integrated.

Given the existence of vastly superior COTS solutions, some of which are currently fielded by the Special Forces, why does the Army continue to roll out major radio and communications network procurements based on restrictive, dysfunctional technical requirements (ex. JTRS, WIN-T, and Rifleman Radio) that specifically preclude COTS solutions from consideration?

*Answer.* The Army is fielding new network capabilities that can be integrated into, and dramatically transform, the current tactical network. Some of these new capabilities are delivered by improving programs of record, integrating the latest commercial non-developmental item capability into existing efforts. Other capabilities are entirely new, such as leveraging commercial cellular networks, buying industry developed COTS data radios, and using advanced waveforms to give commanders alternative paths to communicate. These systems will expand the Army's network capacity and resiliency and they will maximize the availability of bandwidth to support voice, data, and video in a contested and congested spectrum environment on the battlefield.

The Army is executing a strategy to field new network capability in two-year increments beginning in FY21. The detailed network design of each successive set will be informed by experimentation and direct feedback from operational units and Soldiers. The Army is using the new Mid-Tier Acquisition (MTA) 804 authority to rapidly procure the latest cutting edge commercial technology for our integrated tactical network efforts to support capability set fielding, where appropriate. The Army is leveraging several efforts including the use of rapid innovation funds to assess commercial products including purpose built radios, commercial waveforms, cloud computing, and common standard software and applications to help inform network design revisions.

*Question.* In addition, how is the Army providing active oversight of these activities to ensure that the warfighter is equipped in harsh operating environments with network capabilities providing optimal scalability, full-motion video streaming, and high data transfer rates?

*Answer.* The network cross-functional team (N-CFT) and PEO C3T are working together to provide oversight of the network modernization strategy. Through the N-CFT, the Army has begun to simplify and expedite the requirements process, prioritize and align Army investment in science and technology with industry efforts, and focus on experimentation and rapid procurement of Joint and Special Operations Forces solutions, available commercial technology, and non-developmental items.

[CLERK'S NOTE.—End of questions submitted by Mr. Aderholt.]



TUESDAY, APRIL 30, 2019.

**FISCAL YEAR 2019 UNITED STATES NAVY AND MARINE  
CORPS BUDGET OVERVIEW**

**WITNESSES**

**RICHARD V. SPENCER, SECRETARY OF THE NAVY  
ADMIRAL JOHN M. RICHARDSON, CHIEF OF NAVAL OPERATIONS  
GENERAL ROBERT B. NELLER, COMMANDANT OF THE MARINE CORPS**

**OPENING STATEMENT OF CHAIRMAN VISCLOSKY**

Mr. VISCLOSKY. The Subcommittee on Defense will come to order. This morning the committee will receive testimony on the fiscal year 2020 for the United States Navy and Marine Corps.

Our three witnesses are the Honorable Richard Spencer, Secretary of the Navy, the Admiral John Richardson, Chief of Naval Operations, and General Robert Neller, Commandant of the United States Marine Corps.

Gentleman, we welcome you back before the subcommittee and do, as always, thank you for your service. Admiral Richardson and General Neller, I would like to take this opportunity also to recognize that this is likely the last time you will appear before the subcommittee, you are probably happy about that, and congratulate you both on your upcoming retirements. You have both been outstanding representatives for your services, and we appreciate the frank and informative dialogue we have always enjoyed with you.

The committee has made significant investments in Navy platforms and readiness over the past several years to ensure that sailors and Marines are prepared for whatever happens throughout the world. We want to understand how the fiscal year 2020 budget request is focusing on increasing readiness, utilizing the platforms currently in the Navy inventory to their full capacity, and taking care of sailors and Marines and their families.

The recently released 30-year shipbuilding plan continues to assert the need for a 355-ship Navy. Since 2001, the Navy force structure goal has fluctuated between a low of 306 ships in 2013 and a high of 375 ships between 2002 and 2004. However, the current number of ships totals 289, less than the requirements over the last several years.

At the same time, the budget requesting seemingly contradicts the shipbuilding plan by deferring procurement of a long-planned amphibious ship and canceling the refueling and overhaul of an aircraft carrier. Shipyard backlogs remain high, and the shipbuilding industrial base is also facing production delays and capacity challenges.

Today I would like to find out and hear whether or not a 355-ship requirement is a realistic goal and how some of these decisions have informed the fiscal year budget request. Additionally, I re-

main concerned with reports that the Navy is frequently accepting ships that have both minor and major defects which require additional costs and unscheduled maintenance. We have seen the multiple issues with the *Zumwalt* class of destroyers, the Littoral combat ships, and the lead *Ford* class aircraft carrier. I believe it is inexcusable that shipbuilders are delivering ships with defects, and we need to understand what steps are being taken to improve the situation.

I am also concerned, and the committee is, about the well being and quality of life for sailors, Marines, and their families. I have heard about the lack of available child care and would like to know what the services are doing to mitigate some of the challenges that members and their families face.

With that, again, I want to thank you for appearing before the committee today to discuss these issues, so we will ask that you present your summarized statement in a moment. But first, I would recognize Mr. Calvert for his opening statement.

#### OPENING STATEMENT OF MR. CALVERT

Mr. CALVERT. Thank you, Mr. Chairman. I would like to welcome each of our witnesses, Secretary of the Navy, Richard Spencer, Admiral John Richardson, Chief of Naval Operations, and of course, General Robert Neller, Commandant of the Marine Corps.

Admiral, General, I understand you are both going to be retiring before you have to return to this committee, so this is my chance to say congratulations on your retirement and thank you for your long and distinguished service to this country, and we certainly are appreciative of your dedicated service.

The Department of the Navy plays a critical role in addressing the growing challenge and increasing threats from China that suffer to extend influence over international waters and the sea lanes. As China becomes ever more bold, the National Defense Strategy rightly calls for renewed focus on adversaries such as Russia and China.

While we have been fighting violent extremists for nearly two decades, China has been watching us and steadily investing in its maritime capabilities. I want to hear how your budget request will enable the United States to achieve its strategic defense mission particularly with respect to China.

I also want to hear your rationale for the proposed early retirement of the USS *Truman*. This represents obviously a substantial change from the current course.

I would also like to hear from you, Mr. Secretary, about our carriers and survivability against attack. We have discussed the capability of the military health community to respond to such an attack at an earlier hearing with the defense health community.

I would also like to commend Secretary Spencer and Admiral Richardson on embracing the innovative technology such as the Aegis Virtual Twin which significantly shortens the time it takes to field new capabilities of the fleet. While change can be difficult, we need to disrupt the status quo if we are going to maintain our technological and military superiority.

Finally, I would like to hear from you both about training, both the Admiral and General Neller. Are we investing enough in our

sailors and Marine Corps to make sure that we are effective in the future?

And certainly we have a lot to discuss, so I will conclude my remarks. Thank you again for your service to our country, and I look forward to your testimony.

Mr. Chairman. I yield back.

Mr. VISCLOSKY. Thank you very much.

Gentlemen, your full written testimony will be placed in the record. Members have copies at their seats. Our intent is to try to complete two rounds of questions for each member present. In the interest of time, I would encourage you to keep your summarized statements to 5 minutes or less. Be complete but succinct in responding to questions. Thank you very much, and Secretary, the floor is yours.

#### SUMMARY STATEMENT OF SECRETARY SPENCER

Secretary SPENCER. Chairman Visclosky, Ranking Member Calvert, distinguished Members of this group, on behalf of our sailors, Marines, and civilian teammates, thank you from the bottom of our hearts. Thank you for this bipartisan effort that you have done historically here to provide us steady funding. It is the lifeblood of our ability to bring readiness to the forefront.

I too would be remiss, ladies and gentlemen, if I didn't take a minute, wearing my Title X, hat to say thank you to two amazing business partners I have on my right and left here. Admiral Richardson and General Neller. There has been no light between us on the efforts that we have put forward over the past 22 months. And we have pushed the envelope in many ways, but it has been done in lockstep with a complete understanding between us.

They have both done herculean work, and at the same time, I am also hoping that what is going on next door will come to an expeditious confirmation because we have the same relationship with Admiral Moran and General Berger, and I look forward to a seamless transition in that regard if, in fact, we get an expeditious confirmation.

Ladies and gentlemen, the concept of a strategy is the application of limited resources to attain a goal. Aligned to the National Defense Strategy, the Navy-Marine Corps strategy for restoring readiness, strengthening relationships, and reforming our processes has been set. And from that, we are building with a disciplined focus on people, capabilities, and process.

This budget prioritized a strategy-driven, balanced approach to investment. It builds on prior investments, sustains the industrial base, and maintains our competitive advantage as we transition to a more cost-imposing, survivable, and affordable future force.

The restoration of readiness is well underway, and we are seeing progress every single day. My analogy is that the weather vanes are all pointed in the correct direction. Although we might be frustrated with the rate of velocity of the wind, it is increasing every day.

We are building the strength of our team through hiring in areas of critical needs such as cybersecurity specialists, aviation technicians, scientists, engineers, human resource specialists, shipyard workers, and digital warfare officers. In that light, you have pro-

vided us the needed resources for hiring experts, but we now must also address the competitive salaries to fill these positions.

We are aligning and enhancing our educational institutions and distributed learning venues through the education for sea power review, and we are taking aggressive actions to return private military housing to a premium product, mindful that we recruit the individual, but we retain the family.

All of these actions have one common thread that runs through them, the goal of increased readiness. We are building our capabilities through investments in hypersonics, machine learning, additive manufacturing, quantum computing, and directed energy.

We are building the fleet in the pursuit of a 355-ship Navy, manned and unmanned, to include the *Columbia* class submarine, the next generation frigate, the remotely-piloted platform such as *Sea Hunter* and *Orca*. These efforts are increasing lethality through increased distributed maritime operations.

To reach the Secretary's goal of 80 percent mission capable tactical aircraft, we have realigned investments in spare parts, aviation engineering, and logistical support through our newly-created Navy sustainment system, incorporating best practices from outside the wire, or as we might say, from commercial best practices in industrial process.

As an example, our most recent F-18 readiness indicators show 68 percent mission capable Navy F-18s and 72 percent mission capable Marine Corps F-18s, a far cry better than 20 months ago. As a pilot program, these activities have moved us to review our processes in all maintenance areas within the Naval enterprise to improve ship maintenance, weapon, and vehicle maintenance and sustainment.

Driven by the Marine Corps Force 2025 capability investment strategy, we are investing in the amphibious combat vehicle, loitering munitions, and unmanned logistical systems in order to maintain and expand our competitive advantage on the margins.

Exercising the Marine Corps Operating Concept is moving us to rapidly progress as a continuous learning organization as we adapt and experiment in our new competitive environment. Yet while we affect the aforementioned, the Marine Corps is also contending with the unprecedented double impact of Hurricanes Florence and Matthew which together damaged or destroyed more than \$3.7 billion of infrastructure across our many East Coast installations. Camp Lejeune is a primary force generator for the Naval services, directly contributing to the capacity and readiness of our overall force. That area took the majority of blunt impact of those storms.

We need relief through a supplemental funding as soon as possible for two reasons. The fiscal year is closing upon us, and we are about to enter the hurricane season as of June 1. We truly appreciate the work the committee has done to reprogram \$400 million immediately which began addressing our most pressing infrastructure needs, and we look forward to working with you to address the remaining \$449 million shortfall in 2019 and the \$2.8 billion to fully recover.

Over the past year we have menially increased our interaction with our allies and friends, and this has been critical. Exercising and education has strengthened our ability to operate, therefore,

increasing the depth of our collective ability to deliver the resources required. Compared to a year ago, this increase in depth of our relationship with allies and friends has been a prime contributor to this good outcome.

Our Navy has adjudicated 91 of the 111 readiness reform and oversight council recommendations and fully implemented 83 to date, transforming a culture from accepting risk to one of understanding and managing risk. We have reviewed and are in the process of remediating our business processes following our first top to bottom audit. The audit is now proving to be a tool where we find we can leverage lethality.

We are using this information to streamline operations and re-imagine how support functions can be modernized to drive continued learning, therefore producing ever-increasing efficiencies for the American taxpayer. We owe it to them to ensure every dollar we invest, every dollar we invest is in the most effective manner possible. I am proud to work with this committee to keep that promise. Thank you.

[The written statement of Secretary Spencer follows:]

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COMMITTEE ON APPROPRIATIONS  
SUBCOMMITTEE ON DEFENSE

STATEMENT OF

THE HONORABLE RICHARD V. SPENCER  
SECRETARY OF THE NAVY

ON FISCAL YEAR 2020 DEPARTMENT OF THE NAVY BUDGET

BEFORE THE  
HOUSE COMMITTEE ON APPROPRIATIONS  
SUBCOMMITTEE ON DEFENSE

APRIL 30, 2019

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COMMITTEE ON APPROPRIATIONS  
SUBCOMMITTEE ON DEFENSE



Chairman Visclosky, Ranking Member Calvert, distinguished committee members. On behalf of our Sailors, Marines and civilian teammates, thank you for your bipartisan efforts to restore funding stability to the Department of the Navy.

The concept of a strategy is the application of limited resources to attain a goal. Aligned to the National Defense Strategy, the Navy strategy for restoring readiness, strengthening relationships and reforming our processes has been set, and we build on that with a disciplined focus on people, capabilities, and processes.

This budget prioritized a strategy driven, balanced approach to investment. It builds on prior investments, sustains the industrial base, and maintains our competitive advantage as we transition to a more cost imposing, survivable and affordable future force. The restoration of readiness is well underway and we are seeing progress each and every day. All the weathervanes are pointed in the correct direction, and although we might be frustrated with the velocity of the wind, we continue to increase it day by day.

### **Where We Were**

At my confirmation hearing in July 2017, I stated my intent to expeditiously assess the current situation, develop the tools needed to enhance its ability to fight, and to deliver on the Title 10 responsibilities of the Office of the Secretary the Navy. My priorities for accomplishing these goals centered on three key areas: people, capabilities, and processes.

I expressed my determination to recruit, train and retain the best of our nation for our military and civilian ranks, and to create a flat, lean and agile organization where those who manage critical situations have the ability to make decisions to solve the problems in front of them.

I committed to rebuild the readiness and lethality of our capabilities, citing cumulative effects of 16 years of wartime operational tempo, unpredictable funding, and challenges to our warfighting advantage as we return to a geostrategic environment dominated by great power competition.

And as a businessman, I expressed my determination to improve our processes across the portfolio, analyzing all systems and platforms to extract additional efficiencies, incorporating private sector best practices, and migrating to a true continual learning enterprise.

### **Where We Are**

Over the past year and a half, Admiral Richardson, General Neller and I have attacked these goals with a sense of urgency by investing in our people, capabilities and processes.

To build the strength of our people, we've invested in a ready, relevant and responsive force: A Marine Corps force with 186,200 active personnel and 38,500 reservists; the Targeted Reentry Program to enable key former personnel a streamlined return into active-duty; quality of life and retention efforts like the MyNavy Career Center, which provides Sailors with human resource services around the clock; and the military parental leave program. We've used the increased Defense Officer Personnel Management Act (DOPMA) flexibility from the FY19 NDAA to support dynamic changes and requirements in technical expertise, agility and innovation in our

officers. We've invested in our civilian workforce, including enhanced hiring and training at our public shipyards to reach our FY20 goal of 36,100 personnel one year earlier than originally planned.

We've enhanced our capabilities, through targeted investments in the lethality and readiness of our weapons platforms and munitions. We have accomplished this through strengthening our partnerships with the private sector. We've gleaned commercial best practices to increase efficiency and flow in our ship, ground and aviation maintenance facilities. The Navy has added 22 Battle Force Ships over FY17 and FY18, while decommissioning nine, for a net addition of 13 ships. The Marine Corps has reset 99% of ground equipment and returned 72% of our equipment to the operating forces. We have also enabled personnel to "fix it forward" through technologies such as additive manufacturing, including the procurement of 160 3D printers capable of producing over 125 ground and 83 NAVAIR-approved parts on demand.

We've also significantly improved our operational processes, through the Comprehensive Review (CR) and Strategic Readiness Review (SRR). Over the past year, the Readiness Reform and Oversight Council has examined 111 recommendations from the review process. 91 have been adjudicated and 83 have now been implemented. We're committing the resources to make these changes stick, spending \$173 million over this year and last, and requesting an additional \$345.7 million in next year's budget. Business processes were also reviewed and remediated after our first ever top-to-bottom audit of the Department of the Navy, and we're using this information to streamline our operations and reimagine how support functions can be modernized in real time to drive greater readiness, lethality and efficiency. Through the

development and implementation of the Navy Business Operations Plan and our Performance to Plan tool, we are beginning to accurately track the output impacts of our efforts.

It must also be noted that the Marine Corps is contending with the unprecedented double impact of Hurricanes Florence and Matthew, which together damaged or destroyed more than \$3.7B in infrastructure across many of our east coast installations. Camp Lejeune is a primary force generator for the Naval Services, directly contributing to the capacity and readiness of our force. The Marine Corps continues to feel the immediate impacts of these storms through lost and delayed training time; delayed deployments and redeployments; and daily quality of life challenges including the displacement of thousands of personnel and their families.

We appreciate the work this committee has done to make available \$400M of reprogrammed resources to the Marine Corps to immediately begin addressing our most pressing infrastructure needs, and we will continue to work tirelessly to address our remaining \$449M shortfall within FY19, and the \$2.8B required over FY20, FY21, and future plans to fully recover. Recovering from these disasters will continue to require sustained investment and the ongoing support of this committee.

### **Where We Are Going**

Now that the foundation for readiness and lethality has been set, we continue to move forward with a sense of urgency, continually thinking of how to deliver the people, capabilities and processes needed by the Navy - Marine Corps Team. The Naval Services have developed plans informed by the National Defense Strategy, which mandates increased lethality, strengthened

alliances and partnerships, and improved business processes. Now we are aligning those plans with the right leaders, tools, budget and technology advancements.

This budget request invests in our people with the education and resources necessary to develop and retain the human capital we need to confront a changing world. We'll expand hiring for areas of critical need, such as cyber security specialists, aviation technicians, scientists and engineers, human resource specialists, and digital warfare officers. We'll add end strength to the Marine Corps Special Operations Command. We'll complete the rollout of Sailor 2025, updating policies, procedures and systems to improve retention and readiness.

Education is a key component to developing the warfighter the Navy and Marine Corps Team needs. We will be effecting the blueprint developed by the recently released Education for Seapower Review, aligning and enhancing our educational institutions and distributed learning venues. And earlier this month, along with Secretary Esper and Secretary Wilson, I hosted University and College Presidents and other education leaders from across the country for a summit at the US Naval Academy dedicated to eliminating the scourge of campus sexual assault and sexual harassment.

We are constantly mindful that we recruit the individual, but we retain the family. And without the family, we are not operating at full capacity. As I stated before this committee last month, upon reviewing the issues surrounding Public-Private Venture (PPV) military housing, it is clear that in some cases we have fallen woefully short of our obligations, and there is culpability around the table. We have identified the problems, and are focusing resources on the solutions.

We will correct bad practices and return private military housing to a premium product. This budget supports these efforts, with a request of \$21.975 million for the oversight of the Department's PPV housing worldwide.

As we move from rebuilding readiness to owning the next fight, this budget prioritizes a balanced and strategy-driven approach, to provide for a bigger, better trained, and more ready force. It invests in our Force 2.0 capabilities in emerging areas such as hypersonics, applied artificial intelligence, machine learning, quantum computing, additive manufacturing, directed energy and more. We will continue to build the fleet in pursuit of the 355 ship Navy, manned and unmanned, to include the Columbia-class submarine, Next Generation Frigate, and remotely piloted platforms such as Sea Hunter and Orca, as well as one Ford class aircraft carrier, three Virginia Class submarines and three Arleigh Burke Class destroyers.

Driven by the Marine Corps Force 2025 capability investment strategy, we will continue to modernize the Marine Corps with a 21st Century Marine Air-Ground Task Force (MAGTF) by focusing on six key priorities:

- C2 in a degraded environment;
- Long range and precision fires;
- Operations in the Information Environment (OIE);
- Air defense;
- Protected mobility and enhanced maneuver; and
- Logistics.

This budget invests in Networking on the Move (NOTM) capabilities, close combat equipment, loitering munitions, unmanned logistic systems, ground-based anti-ship missiles, Ground/Air Task Oriented Radar (G/ATOR), the Joint Light Tactical Vehicle, and the Amphibious Combat Vehicle to ensure the Marine Corps continues to adapt to meet the demands of the future operating environment and maintain our competitive advantage.

We will operate with data-informed end to end processes and incorporate leading practices to inform how we fight. To achieve the Secretary's goal of 80% mission capable aircraft in our Fleet Strike Fighter squadrons, this budget funds the Fleet Readiness Centers (FRCs) to the maximum executable levels, realigns investments to spares, aviation engineering and logistics support, while pursuing reforms such as the Navy Sustainment System, which incorporates best practices from commercial airline maintenance leaders. We will also incorporate the lessons of private industry as we invest in shipyard infrastructure and training to improve performance and throughput.

These are just a few examples of how General Neller, Admiral Richardson, the entire Navy Marine Corps Team and I are building on the foundation of restored readiness and increasing lethality. We will continue to promote a culture of problem solving at every level, transform from a culture of risk removal to one of understanding and managing risk, and hold ourselves accountable for how and where we invest. Every day, we work with a sense of urgency driven by the knowledge that the American taxpayers provide us with their hard-earned treasure, and trust us to protect them from a dangerous world. We owe it to them to ensure that every dollar is

invested in the most effective manner possible to fulfill our sacred oath. I'm proud to work with this committee to ensure that we keep that promise. Thank you.



Mr. VISCLOSKY. Admiral Richardson.

SUMMARY STATEMENT OF ADMIRAL RICHARDSON

Admiral RICHARDSON. Good morning, Chairman Visclosky, Ranking Member Calvert, and distinguished members of the committee, and thank you for the honor of appearing here alongside Secretary Spencer and General Neller to discuss the Navy's fiscal year 2020 budget.

At the dawn of our republic, President Jefferson wrote that industry, commerce, and security are the surest roads to the happiness and prosperity of our people. The causal link between prosperity, order, and security is why he deployed the United States Navy to combat piracy off the Barbary Coast at the dawn of the 19th century, and it is why for over two centuries we have helped keep the seas open for all and oppose those who seek to control the seas at the expense of America and our allies.

Today as outlined in the 2018 National Defense Strategy, nations like China and Russia are attempting to do just that, to stem the tide that has steadily lifted all boats by unilaterally redefining international norms on terms more favorable only to themselves. The Nation and the Navy are responding with more than 60,000 sailors deployed aboard nearly 100 ships and submarines at this very moment by sustainably operating around the globe, advocating for our principles, and protecting our national interests.

To maintain this worldwide posture, the President's fiscal year 2020 budget offers a strategy-driven, future-leaning, balanced approach to deliver a Naval force up to the task in this era of great power competition. The single most effective way to maintain our strategic momentum is to provide adequate, stable, and predictable funding. This makes everything possible. It solidifies strategic planning, incentivizes our commercial partners, and mitigates operational risk by maximizing our planning and execution time.

The foundation of Naval power is our force of talented and well-trained sailors. Important to our success, we remain committed to recruiting and retaining diverse shipmates whose intelligence, curiosity, energy, different backgrounds, and varied viewpoints will catalyze the speed and quality of decisions we need to outperform our adversaries.

As well working with the Congress, we continue to transform our pay and personnel systems to 21st century standards. This budget builds a bigger fleet, 55 battle force ships over 5 years, preserving our industrial base, and strengthening our ability to prevail in any war fighting contingency.

This budget fully funds the *Columbia* class ballistic missile submarine program, fulfilling our existential imperative to deter nuclear attack on our homeland. This budget builds a better fleet, fielding state-of-the-art systems that are more agile, networked, resilient, and lethal. This budget recognizes that aircraft carriers will be central to winning the future fight which is why it invests in the *Gerald R. Ford* class delivering far more combat power for less cost over their lifetime than the *Nimitz* class predecessors.

This budget also builds a ready fleet, steaming days to exercise at sea, flying hours to train in the air, sufficient quantities of am-

munition and spares, and the resources to conduct maintenance today and in the future as the fleet size grows.

Meeting the Nation's and the Navy's responsibilities is not easy. It requires us all to work together, but this is what great nations and only great nations can and must do. At the dawn of the Cold War, as the Nation took on the challenge to go to the moon, President Kennedy, a Naval officer, said we do these things not because they are easy but because they are hard, because that challenge is one that we are willing to accept, one that we are unwilling to postpone, and one that we intend to win.

I am grateful to this committee and to your colleagues in the Congress for your continued vigorous support which validates the founding father, Thomas Payne's maxim that a Navy, when finished, is worth more than it cost. We look forward to sailing alongside you to deliver the safest Navy for our sailors, the strongest partner Navy for our friends and allies, and the Navy that is the worst nightmare for our enemies. I look forward to your questions.

[The written statement of Admiral Richardson follows:]

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UNTIL RELEASED BY  
THE HOUSE  
COMMITTEE ON APPROPRIATIONS  
SUBCOMMITTEE ON DEFENSE

STATEMENT  
OF  
ADMIRAL JOHN M. RICHARDSON  
CHIEF OF NAVAL OPERATIONS  
BEFORE THE  
HOUSE COMMITTEE ON APPROPRIATIONS  
SUBCOMMITTEE ON DEFENSE  
ON  
FISCAL YEAR 2020 NAVY BUDGET  
30 APRIL 2019

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THE HOUSE  
COMMITTEE ON APPROPRIATIONS  
SUBCOMMITTEE ON DEFENSE

Chairman Visclosky, Ranking Member Calvert, and distinguished members of the committee, thank you for the opportunity to testify today on the Navy's Fiscal Year 2020 budget.

To place this budget in its appropriate tactical, operational, and strategic context, we must understand what America stands for in the world so we don't forget it or, worse, take it for granted; the U.S. Navy's unique and historic connection to those core tenets; the challenges to those principles and our national interests by competitors like China and Russia—and our Navy's response; and the investments made in the President's FY-20 Budget to deliver, operate, sustain, and maintain a Navy that is bigger, better, and more ready to sail anywhere and do anything in defense of our country.

### **We Are a Maritime Nation—We Rely on Freedom of the Seas**

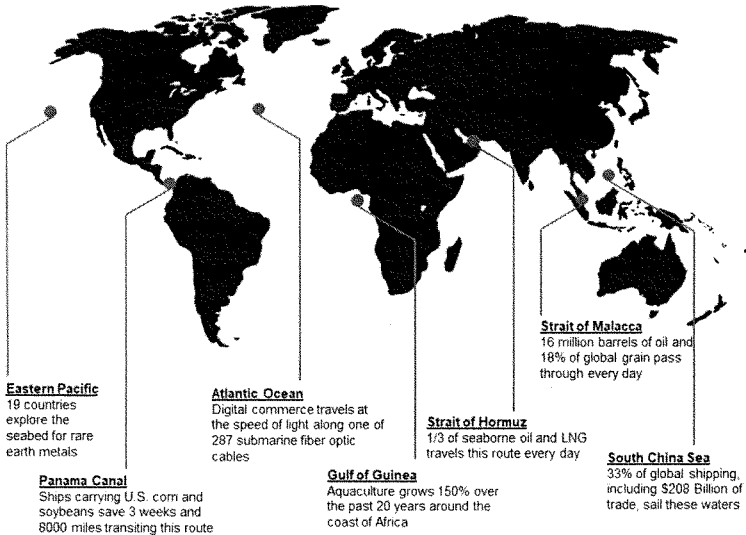
Our first President, George Washington, best captured the value a Navy provides to the American people when he said: "It follows then as certain as that night succeeds the day, that without a decisive naval force we can do nothing definitive, and with it, everything honorable and glorious."

Over 600,000 active and reserve Sailors and Navy civilians—alongside our partners in the Congress, academia, industry, and around the world—devote much of their lives to designing, producing, and operating a "decisive" naval force. Our decisive naval force operates around the world, defends our national interests, stands ready to fight if called upon, and de-escalates tensions on our terms. The President's FY-20 Budget delivers and sustains this decisive force and the investments contained therein will keep our Navy on a true course and making best speed to, as our oath declares, "support and defend the Constitution of the United States and the country whose course it directs."

Our founding values, as well as our livelihoods and collective national security, are tied to the world's oceans. The seas are a prime facilitator of our prosperity as a people. But prosperity does not and cannot exist in a vacuum. It is the result of secure and orderly conditions that enable the flow of goods and services, access to markets via open oceans and critical waterways, and the ability to move unimpeded across the seas.

**America Depends on the Seas**

\$1.5 trillion U.S. exports  
\$2.4 trillion U.S. imports



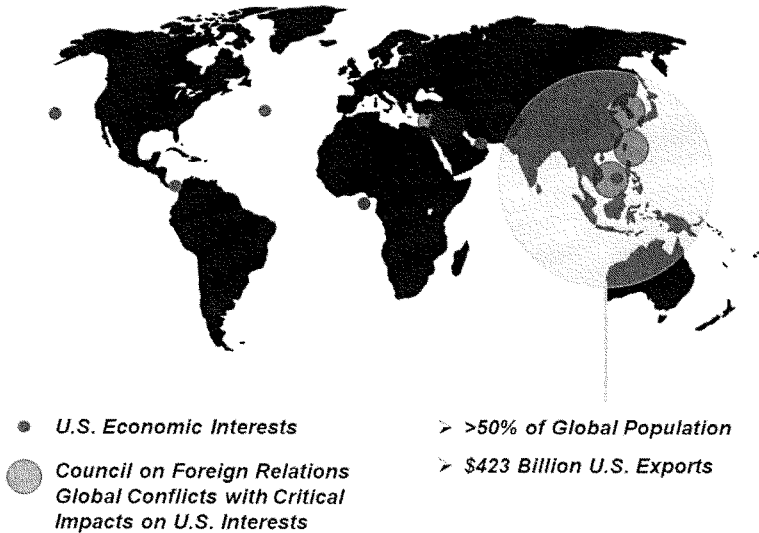
The seas present both challenges and opportunities—and the rapid changes in the maritime environment are stark and profound. More than 90 percent of all international trade travels by sea—60 percent of that by value sails in containerized vessels. In recent years, approximately 735 million containers were shipped worldwide annually. If placed end-to-end, those containers would encircle the globe at the Equator more than 11 times. Beyond the numbers on trade, the global economy's reliance on the seas for resources—rare earth minerals for advanced technology, energy, or aquaculture—increases their economic and strategic importance. The seabed also plays host to 287 undersea fiber-optic cables through which 99 percent of global internet traffic passes, fueling the modern economy.

Each of these developments serve to make the seas even more congested—and more vital.

### Challenges to the United States and the International Order

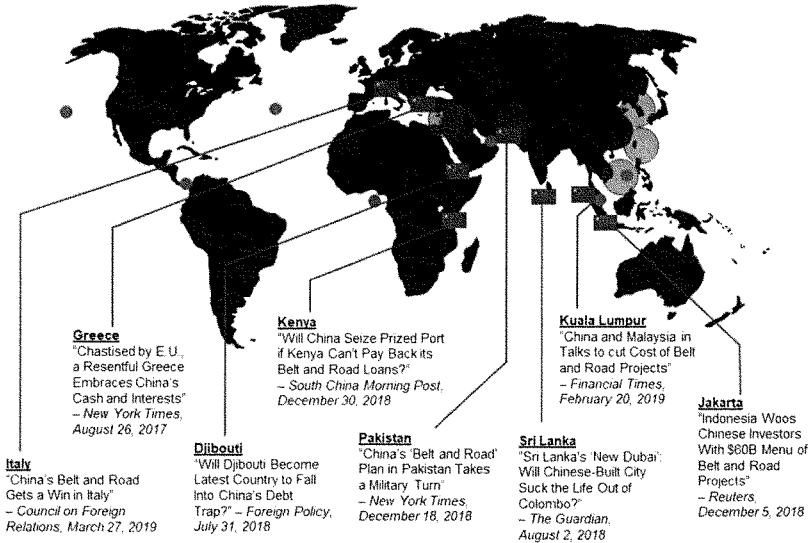
Despite the United States' persistent work over two centuries to keep the seas open to every nation and every mariner, there are those who seek to upend this free and open order and stem the tide that has steadily lifted all boats. As discussed in the 2018 National Defense Strategy (NDS), China and Russia are deploying all elements of their national power to achieve their global ambitions. China and Russia seek to accumulate power at America's expense and may imperil the diplomatic, economic, and military bonds that link the United States to its allies and partners. And these actions are not only directed at the United States China and Russia are working to redefine the norms of the entire international system on terms more favorable to themselves.

#### *Eurasian Hotspots Threaten Critical U.S. Interests*



China and Russia are determined to replace the current free and open world order with an insular system. They are attempting to impose unilateral rules, re-draw territorial boundaries and redefine exclusive economic zones so they can regulate who comes and who goes, who sails through and who sails around. These countries' actions are undermining international security. This behavior breeds distrust and harms our most vital national interests.

## China's Belt and Road Initiative: Maritime Expansion



China's Belt and Road Initiative in particular is blending diplomatic, economic, military, and social elements of its national power in an attempt to create its own globally decisive naval force. China's *modus operandi* preys off nations' financial vulnerabilities. They contract to build commercial ports, promise to upgrade domestic facilities, and invest in national infrastructure projects. Slowly, as the belt tightens, these commercial ports transition to dual uses, doubling as military bases that dot strategic waterways. Then, the belt is cinched as China leverages debt to gain control and access. In the final analysis, these unfavorable deals strangle a nation's sovereignty—like an anaconda enwrapping its next meal. Scenes like this are expanding westward from China through Sri Lanka, Pakistan, Djibouti and now to our NATO treaty allies, Greece and Italy.

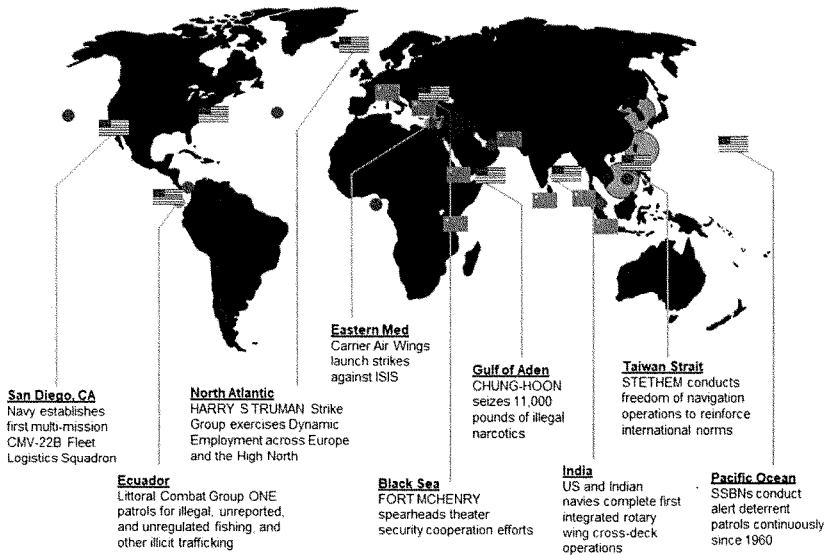
### The U.S. Navy Responding to Challenges Around the World

The U.S. Navy is responding to this changing security dynamic by playing to our strengths: deploying all around the globe, regularly enforcing common principles, strengthening the conditions that have enabled mutual prosperity, and protecting our national interests. As you read these words, more than 60,000 Sailors are deployed on board nearly 100 ships and

submarines to enforce a free and open order that enables this unprecedented flow of goods and services.

As the National Defense Strategy makes clear, the U.S. Navy will compete aggressively to shape our modern maritime environment, ensuring that order and security continue to underpin our prosperity. We do so by harnessing the myriad forces at play—the increasing use of the maritime domain; the rise of global information systems and the role of data-driven decision-making; and the increasing rate of technological creation and adoption. We remain committed to challenging excessive maritime claims, strengthening relationships with allies and partners, and upholding time-tested values.

### ***The U.S. Navy Deployed Around the World***



How can we maintain this worldwide posture and compete given these strategic realities? How must we invest in order to build, sustain, organize, and strengthen ourselves so that we can continue harnessing the global maneuver power inherent in naval forces? The answers lie in the President's FY-20 Budget (PB-20), a submission firmly rooted in addressing Great Power Competition and moving boldly and swiftly into the future.

Importantly, the single most effective way to maintain the strategic momentum started in FY-17 is to enact the President's FY-20 Budget prior to the *start* of the fiscal year. This funding



will help us fulfill our responsibilities in the National Defense Strategy by building the Navy the Nation Needs: a balanced force that will increase America’s naval power and safeguard our economic, diplomatic, and military interests around the world.

**A Bigger, Better, More Ready Navy**

PB-20 seeks \$160 billion for the U.S. Navy. For perspective, this request represents approximately three percent of the federal budget. According to the Congressional Budget Office, this investment represents approximately half of the amount currently expended on servicing the national debt and one-third of current expenditures on Medicaid.

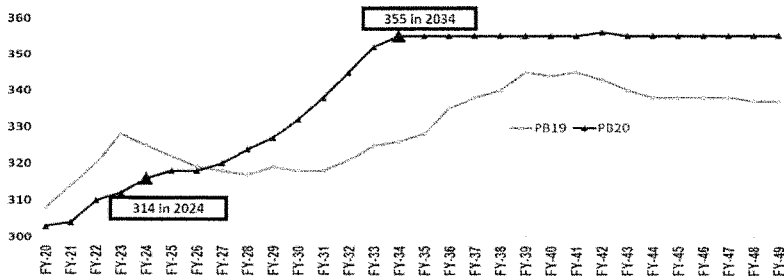
This budget request preserves our industrial base and establishes an aggressive, forward-looking, competitive posture. Our industrial partners are counting on us for consistent and continuous commitments. Absent this behavior, we may perpetuate, rather than end, the “boom-and-bust” cycles we have experienced in the past. Coincident with this aim to steadily grow the force and preserve our industrial base is the responsibility to “own” the additional inventory when it arrives. PB-20 embraces future capabilities while judiciously stewarding our current force.

The guiding principle of our budget request is to balance naval power across its many dimensions. Naval power is not a choice between increased capacity or better capability—it is a combination of both. Naval power is not a choice between readiness and modernization—it requires a balance of both. Naval power is not a choice between more complex stand-alone technologies or networked systems—it is achieved through both. The talent to operate and sustain a larger and more lethal force is not a choice between more people or better training—it must draw from both.

Bigger

An ongoing force structure assessment will conclude by the end of 2019. While data-driven analysis may ultimately change the details of our long-term fleet architecture, all force structure analyses agree in one respect: *we must build a bigger Navy.*

**A Bigger Navy: PB-20 vs PB-19 Shipbuilding Comparison**



To increase America's naval power, we will build more platforms like ships, submarines, and aircraft, and expand our special operations forces. In 2018, Congress made a 355-ship Navy the law of the land, and this increased capacity will strengthen our ability to prevail in any warfighting contingencies, meet demand signals from Combatant Commanders, expand global influence, and support American prosperity by safeguarding access to critical markets, waterways, and chokepoints.

The FY-20 budget requests nearly \$24 billion in ship construction accounts to fund one nuclear-powered aircraft carrier, three fast attack submarines, three large surface combatants, one small surface combatant, two combat logistics force ships, and two auxiliary support ships. Expanded across the Future Years Defense Program (FYDP), PB-20 funds construction of 55 battle force ships to achieve a 301-ship Navy in FY-20 and a 314-ship Navy in FY-24. Along with class-wide service life extensions, this puts us on pace to reach a 355-ship Navy in FY-34 (approximately 20 years sooner than PB-19). The *Annual Long Range Plan for Construction of Naval Vessels* (also referred to as the "Thirty Year Shipbuilding Plan") accompanies this budget request.

There is no more existential imperative than deterring a nuclear attack on the homeland. PB-20 fully funds the *COLUMBIA*-class ballistic missile submarine program to do just that. Fully funding this request now will ensure that the lead ship's construction commences on time in FY-21, delivers in 2028, and conducts its first alert patrol in CY 2030. The *COLUMBIA*-class will guarantee continuity of the most survivable leg of the strategic deterrent triad into the 2080s. This budget also procures 373 fixed and rotary wing aircraft (including 84 Block 3 F/A-18E/F Super Hornets), 226 unmanned systems, and over 17,000 weapons and munitions across the FYDP.

The recently approved block buy of two *GERALD R. FORD*-class aircraft carriers (CVNs 80 and 81) saves American taxpayers approximately \$4 billion. It also maintains our trajectory towards the requirement of 12 more survivable and powerful aircraft carriers, and it gives our industrial partners much-needed predictability. It also represents an investment in future technologies that solidifies the nuclear-powered aircraft carrier as a centerpiece of national defense through the rest of the century.

Finally, PB-20 funds an additional 5,100 Sailors in FY-20 (and 18,600 over the FYDP) on top of FY-19 end strength levels to recruit, man, maintain, operate, and fight these added ships, submarines, and aircraft. Filling gapped billets at sea remains our top manning priority, and we are committed to operating safely, effectively, and sustainably over time as the battle force grows.

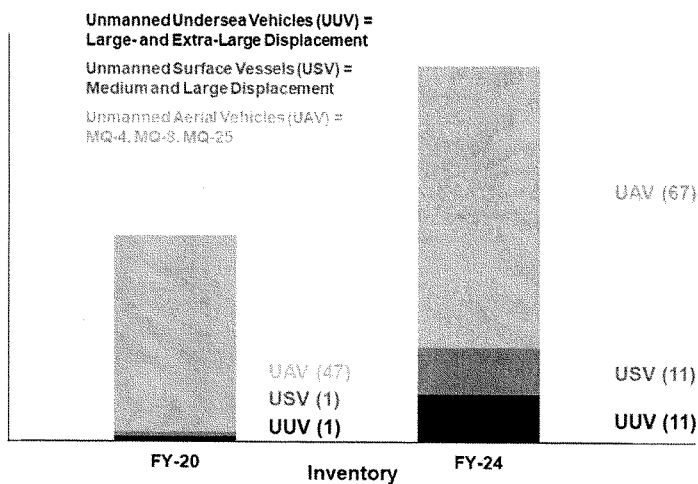
### Better

To increase America's naval power, we will build a **better fleet**—one that is more capable, agile, networked, and resilient across all of our naval platforms. This means fielding state-of-the-art systems and continually modernizing legacy equipment. In addition to other modernization efforts, the FY-20 budget includes \$18 billion for research and development—an increase of \$1.4 billion over FY-19 enacted levels.

For example, PB-20 includes \$4 billion across the FYDP to modernize 19 guided missile destroyers. This includes critical upgrades to AEGIS Baseline 9, enabling them to simultaneously perform Integrated Air and Missile Defense (IAMD) and Ballistic Missile Defense (BMD) operations. As well, improvements to Naval Integrated Fire Control Counter Air (NIFC-CA) will allow networked ships to share identification, targeting, and fire control data. PB-20 funds 160 F/A-18E/F Super Hornet Service Life Modifications (SLM) across the FYDP, equipping these aircraft with more lethality at greater ranges, improved signatures, and advanced networks.

The budget also increases investments in long-range offensive ship-, sub-, and air-launched weapon systems, including: Tomahawk Land Attack and Maritime Strike missile, Long-Range Anti-Ship Missile (LRASM), Standard Missile (SM) 6, Joint Standoff Weapon Extended Range (JSOW-ER), Harpoon Block II+, as well as investments in Conventional Prompt Strike hypersonics. The budget augments investments for acoustic superiority modernization by requesting \$93 million in FY-20 (\$633 million across the FYDP) to improve submarine quieting and sensor performance. To deliver capability faster, we are also leveraging accelerated acquisition and rapid prototyping by investing \$1.3 billion in FY-20 (\$4 billion across the FYDP) for the Navy Laser family of systems, SM-2/6 weapons, MQ-25 Stingray carrier-based unmanned aerial system, and Unmanned Underwater Vehicles.

**A Better Navy: Delivering Unmanned Capability**



*Note: This chart represents platform deliveries and therefore may include platforms procured in earlier budgets.*

The FY-20 budget builds on the progress made in FY-19 by pursuing near-term Naval Tactical Grid development and investing \$50 million in FY-20 (\$236 million across the FYDP) for the newly-established Digital Warfare Office to design and implement a comprehensive operational architecture to support emerging Distributed Maritime Operations concepts. The Navy will also invest \$440 million in FY-20 (and more than \$2 billion across the FYDP) to fund Fleet and industrial base cyber security, and hardening of ship hull, mechanical, and electrical systems among others.

As these investments indicate, the Navy is focused on controlling the high-end fight. Nuclear-powered aircraft carriers are, and will continue to be, central to this effort. *FORD* was designed to deliver more capability for today's airwing and to provide growth opportunity for tomorrow's airwing—more lethal systems, and increased power generation. *FORD* is also proving more cost effective with a 30 percent higher sortie rate with a 20 percent smaller crew than her *NIMITZ*-class predecessors. This translates into \$4B savings over the life of the *FORD* class when compared to *NIMITZ* class: in other words, more naval power for less cost.

*FORD* is innovation on a grand scale, offering a host of new technologies that will greatly improve the combat power of strike groups. As with naval innovations of the past, we didn't get everything right on the first try. We have learned with each test and most of the new systems are now operating. And we will continue to learn, iterate, and improve: the second *FORD*-class ship is being built with 18 percent fewer man hours. Despite this aggressive approach to adopt new technologies, *FORD* was delivered with less lead-ship cost growth than several other ship classes. *FORD* and her successors will set a new standard for afloat performance and combat power projection well into the second half of the century.

We are also making tough calls about the capabilities we need to tackle future challenges. PB-20 removes funding for USS *HARRY S TRUMAN*'s (CVN 75) Refueling and Complex Overhaul (RCOH)—\$3.4 billion over the FYDP. We are applying the funds from the RCOH decision to field cost-imposing advanced technologies faster. In parallel, we continue to validate this decision through a rigorous program of studies, wargames and experimentation to analytically validate the best way forward. We remain postured to respond to what our studies show us and to adjust pace in-stride, including reversing the CVN 75 decision, if needed.

### Ready

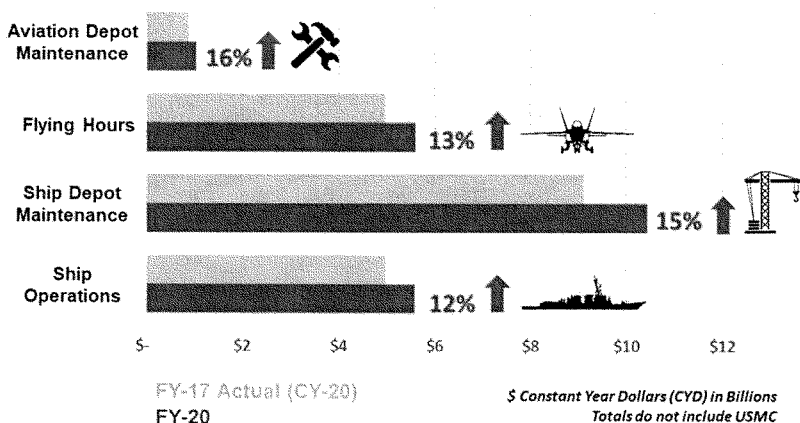
To increase America's naval power, we will build a **ready fleet**. This means steaming days to exercise at sea, flying hours to train in the air, sufficient quantities of ammunition and spares, and the resources to conduct emergent and planned maintenance—not only for today but also for the future as the Fleet grows in size. And it's not just about *buying* more parts: PB-20 includes \$23 million in FY-20 (\$66 million across the FYDP) to research and develop additive manufacturing (AM) capabilities. Among other AM goals—such as expanding this capability at sea to additional ships and beginning to network AM across the enterprise—we intend to produce 1,000 unique end-use components for Fleet installation and

operation by the end of 2019. Readiness—both materiel and training proficiency—transforms our Navy’s *potential* power into *actual* power. The knowledge and efficiency gained from the Department of Defense-wide audit will ensure that we do so as effectively as possible.

The FY-20 budget continues the readiness and wholeness commitments we made in FY-17, FY-18, and FY-19 by funding ship and aviation readiness and enabler accounts. The FY-20 budget increases maritime and aviation spares funding compared to FY-19. Additionally, the FY-20 budget stabilizes and incentivizes the industrial base by funding 62 ship availabilities in public and private shipyards, shifting two attack submarine availabilities to private yards, and infusing \$546 million in FY-20 for naval shipyard infrastructure optimization. Finally, the budget includes capital investments of 12 percent in public shipyard depot facilities and 10 percent in Fleet Readiness Centers, exceeding the six percent legislative requirement and underscoring our commitment to increase our capacity to maintain and modernize our fleet.

**A Ready Navy: Fixing, Flying and Steaming More**

**Maintenance and Operating Account Funding**



These investments will help on-time maintenance execution—aircraft and ship availabilities—which in turn gives our Sailors the time they need at sea to build proficiency and confidence; not simply to operate safely but to prevail at the high-end of maritime conflict.

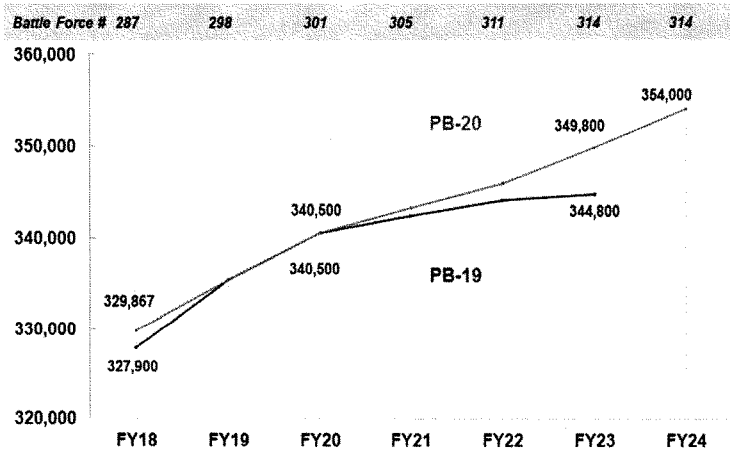
Recognizing the inherent link between readiness and lethality, we continue to modernize our logistics capabilities to better refuel, rearm, resupply, revive, and repair operational forces. At sea, we are prioritizing the recapitalization of auxiliaries and sealift capabilities to sustain the Fleet’s enduring global posture and support mobility of the Joint Force. PB-20 includes an

initial \$8 million research and development investment in the Common Hull Auxiliary Multi-mission Platform (CHAMP) for concept design. Ashore, we recognize that readiness is an enabler for force projection; in addition to investing in our shipyards, PB-20 increases investment in facilities sustainment, restoration, and modernization (FSRM) to \$3.1 billion (from 80 to 87 percent of the sustainment requirement).

Of course, ships, aircraft, and weapons are not, by themselves, sufficient to respond to today's complex challenges. The readiness of these platforms and systems depends on talented and well-trained Sailors, led by commanders of competence and character. Our Sailors are the glue that binds our Navy team together. This is our Polaris. It is also why we established the College of Leadership and Ethics at the U.S. Naval War College in April 2018. Just as we have done throughout our history, we will continue to develop and empower leaders who are driven to build winning teams.

***Manning a Bigger, Better, More Ready Navy***

**Navy Active Duty End Strength**  
 \$32B in FY-20 MPN reduces gaps at sea as the Fleet Grows

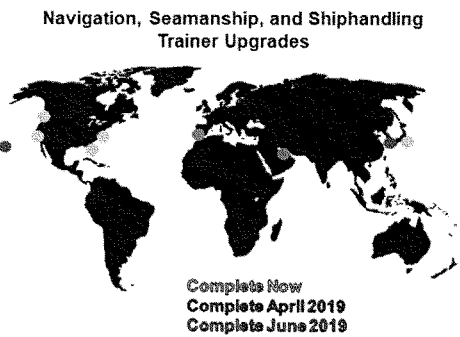
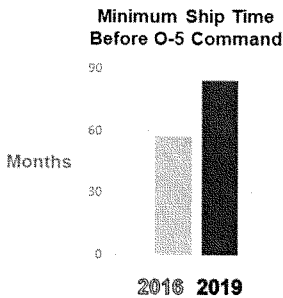
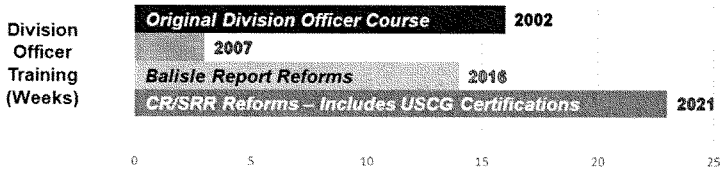


The FY-20 budget continues our generational transformation of the Navy's manpower and personnel systems. We are investing \$235 million in a modern cloud-based personnel and pay system, while creating an expanded assignment marketplace and increasing career flexibility. For example, we are exercising the authorities granted to us in the reform of the Defense Officer Personnel Management Act (DOPMA) to make better use of investments in training and increase career opportunities and flexibility for our officer corps. These initiatives leverage state-of-the-art practices to put more control into the hands of our Sailors. This

includes more transparency regarding their career options. The Sailor 2025 suite of programs will make today's burdensome and time-consuming process for executing orders—from updating pay and benefits to finding new housing and moving household goods—as easy as scanning a Quick Response (QR) code on a smartphone. Not only will this make the frequent relocations associated with military service easier for Sailors and their families, it will minimize distractions so they can focus on warfighting.

And we continue to tackle the recommendations listed in the Comprehensive Review (CR) and Strategic Readiness Review (SRR). PB-20 assigns the highest funding priority to CR/SRR-related investments—\$346 million in FY-20 and \$1.1 billion over the FYDP—including construction of new Mariner Skills Training Program centers and simulators and programmatic commitments for the Next Generation Surface Search Radar. Additionally, we remain committed to assessing our ships and crews, understanding the impact of fatigue and other human factors, filling personnel gaps for ships on deployment or in sustainment, and dedicating time to maintain our forward-deployed Fleet. As of February 2019, 20 of the 111 recommendations remain to be adjudicated. While we are on track to begin implementation of these remaining items by the end of the fiscal year, we will continue to analyze the effectiveness of our new programs and iteratively improve them over the FYDP.

**A Ready Navy: Surface Warfare Training**



Finally, we remain committed to recruiting and retaining diverse shipmates. In a time when evolving artificial intelligence and machine learning are factoring into future military capabilities, our Sailors must bring creativity, innovation, and context to tactical and strategic decisions. This potent combination will make us more competitive and operationally effective. And it is the diversity of their backgrounds and viewpoints that will catalyze the speed and quality of decisions we need to outperform our adversaries.

### **Continuing Our Budgetary Momentum**

These realities highlight the importance of partnerships and a recognition that together we can do so much more. This past year's on-time budget put our Navy on a steady course making best speed. Prior to last year, when the FY-19 National Defense Authorization Act (NDAA) was enacted on August 13, a defense authorization bill had not been enacted prior to the start of the fiscal year since FY-97; the last time a defense appropriation was enacted by October 1 was FY-09. This meant nine years of continuing resolutions that averaged one-third of the fiscal year. This uncertain financial footing resulted in fluctuating toplines and interruptions to government operations and services.

The Navy looks forward to working with the 116th Congress to continue the momentum developed in FY-19. Stable and predictable funding solidifies strategic planning, incentivizes our commercial partners, strengthens our industrial base, safeguards our Sailors, and bolsters the interests of your constituents. And most importantly, stable and predictable funding mitigates operational risk by maximizing our planning and execution time.

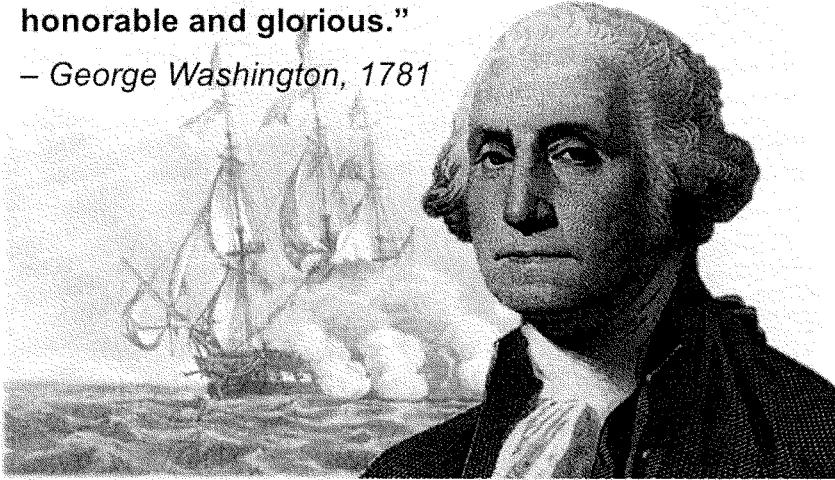
With timely, stable, and predictable investments, the U.S. Navy will be bigger, better, and more ready to work every day—in every ocean—to set the conditions that allow Americans and all the citizens of the world to flourish and prosper.



## The Navy's Connection to American Principles and Power

**“It follows then as certain as that night succeeds the day, that without a decisive naval force we can do nothing definitive, and with it, everything honorable and glorious.”**

*– George Washington, 1781*



The Navy has always maintained a strong connection to the flourishing and prosperity of the American people. President Washington’s phrase—“everything honorable and glorious”—hearkens to American values that are derived from the inalienable rights outlined in the Declaration of Independence: “That among these are Life, Liberty, and the Pursuit of Happiness.”

This last value has commonly been understood as the right to materially improve our circumstances. The Navy also maintains a deep and historic connection to America’s economic strength, the engine that makes our country a global power. The Navy was founded to protect vital sea lanes like Gibraltar and combat piracy off the North African coast—a mission to safeguard free movement of trade and free access to markets that continues in earnest today.

“Honorable and glorious” also characterizes the mission of the United States Navy and the selfless service of more than 600,000 Sailors and civilians, and their families. The U.S. Navy is a definitive military force in world events but the Navy also connects with every other element of our national power. The Navy is the face of the nation and often the first point of

contact between the United States and other peoples. U.S. Navy ships have shuttled American diplomats across all seven seas: think of the paddle-wheeled steam frigate USS *MISSISSIPPI* transporting Commodore Matthew Perry to Japan in the early 1850s; the Great White Fleet circumnavigating the globe at the turn of the Twentieth Century; and the USS *QUINCY* (CA 71) carrying President Franklin D. Roosevelt to Malta in 1945. And our ships have hosted international events of the highest consequence that have shaped the global security environment, such as the Japanese surrender aboard the USS *MISSOURI* (BB 63), anchored in Tokyo Bay, which formally ended the Second World War. The Navy brings sovereign United States territory to the shores of other nations, fostering connections to extend American assistance to those who would be our friends and demonstrating resolve to those who may oppose us.

And ingrained in every mariner is the notion that we will never sail past another mariner in distress. We will continue to provide humanitarian assistance and disaster relief to our fellow citizens and neighbors wherever and whenever they are in need.

### Conclusion

This hearing comes at a critical time to both our Navy and our nation. The challenges we face are varied and are growing more dynamic by the day. Let there be no doubt: America is a maritime nation and a maritime power. Our way of life and our economic prosperity have always been linked to the sea. For 243 years—through war and peace, uncertainty and stability, turmoil and prosperity—the United States Navy has validated founding father Thomas Paine’s maxim that “a Navy when finished is worth more than it cost.”

In the competitive environment we face now and in the future, we must increase naval power in a balanced approach to meet our national strategic goals. The President’s FY-20 Budget ensures that the Navy and the nation can continue to do everything honorable and glorious, as Washington intended.

I am grateful to this committee and to your colleagues in the Congress for starting this important work, and we look forward to sailing alongside you to build and deliver the Navy the Nation Needs.

Mr. VISCLOSKY. Thank you.  
General Neller.

#### SUMMARY STATEMENT OF GENERAL NELLER

General NELLER. Chairman Visclosky, Ranking Member Calvert, members of the committee, I am here today to testify about the posture and budget proposal for your Marine Corps for this fiscal year 2020. Thank you for that opportunity to be here today and answer your questions.

I know this committee. The Congress, the American people have high expectations for your Marines. As our Nation's expeditionary force and readiness, you expect your Marines to be ready to operate forward with their Navy shipmates in what the National Defense Strategy calls the contact or blunt zone layers of the global operating model to assure our partners, deter our rivals, and respond to crisis across the range of military operations. And if our deterrent should fail, and we are called to fight, you expect us to win.

As we hold this hearing, approximately 40,000 Marines are forward deployed or postured in more than 60 countries around the world, some of them in harm's way, all engaged, doing exactly what you would expect. Through our history, if called upon, your Marines respond immediately to crisis around the globe either coming from sea, from forward bases, or from home station to meet this intent, to be ready, to suppress or contain international disturbances short of large scale war. We strive to prevent war by assuring allies and deterring our rivals with ready, capable, and persistently present expeditionary forces along with our Navy shipmates.

Forward postured Naval forces remain critical to that end, providing the Nation a significant operational advantage through maneuver access and their daily presence. Supporting day-to-day operations through theater security cooperation, building partner capacity, doing humanitarian assistance and disaster relief, or supporting current global contingencies requires your expeditionary force to be both ready and to be present.

We recognize the strategic environment is constantly changing, requiring adaptations to our organization, our training, our equipment, and our concepts in order to provide our Nation the lethal Naval expeditionary force it demands.

So your Marine Corps remains committed to building that force. This requires hard choices as we balance commitments to current operations, work to continue to increase our readiness, and pursue modernization efforts designed to improve our competitive advantage over our rivals.

And thanks to your efforts in Congress, by providing timely substantial budgets, we have seen increased improvement on our readiness, and the rate of our ability to change the force has also improved.

The Secretary mentioned the effects of Hurricane Florence and Michael on the Camp Lejeune greater area and also Marine Corps Logistics Base Albany, so I won't go into that, but I do want to thank the Congress, the administration, and the Office of the Secretary of Defense for the reprogramming they gave us, \$400 million to get us working on making those reinvestments we need to get this base back on line. So we continue to work tirelessly to address

the remaining shortfalls for this year and for those in the future year budget.

Despite these challenges, we remain on the right path to implement the National Defense Strategy. We continue to develop what we believe are going to be and are effective war fighting concepts, invest in the right capabilities while experimenting ruthlessly to validate our choices.

Most important to the success of our core, we continue to be able to recruit and train the mostly qualified men and women our nation has to offer, men and women who raise their right hand and desire to earn the eagle, globe, and anchor, and ask to serve something greater than themselves and to represent the best our Nation every day around the world.

So your Navy and Marine Corps team remains the Nation's Naval expeditionary force and readiness, forward deployed and forward postured, present and competing across the globe. And with your continued support and commitment, we will ensure that we must never send our daughters and sons into harm's way where they don't have every advantage the Nation can provide.

I thank you for your support, and I look forward to your questions.

[The written statement of General Neller follows:]

NOT FOR PUBLICATION UNTIL RELEASED  
BY THE HOUSE APPROPRIATIONS COMMITTEE  
SUBCOMMITTEE ON DEFENSE

STATEMENT OF  
GENERAL ROBERT B. NELLER  
COMMANDANT OF THE MARINE CORPS  
BEFORE  
THE HOUSE APPROPRIATIONS COMMITTEE  
SUBCOMMITTEE ON DEFENSE  
CONCERNING  
THE POSTURE OF THE UNITED STATES MARINE CORPS  
ON  
APRIL 30, 2019

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SUBCOMMITTEE ON DEFENSE

**Marines – Ready, Expeditionary, and Lethal**

The purpose of your Marine Corps remains unchanged since mandated by the 82<sup>nd</sup> Congress – to be *ready*. Not just ready to go – but ready to go *now*, ready to *respond and compete* wherever sent, and if necessary – ready to *fight and win*. This idea of a “force-in-readiness,” reaffirmed by the 114<sup>th</sup> Congress, requires a Marine Corps that is “most ready, when the Nation is least ready.” As a naval service, Marines are *soldiers of the sea* ready to secure or protect national policy objectives by military force when peaceful means alone cannot. And if we must engage in the violence of battle to secure our interests, we stand *ready* for the violent struggle, and prepared to impose our will on our enemies. It is this idea of total readiness – a constant preparedness, expeditionary mindset, and aggressive warfighting philosophy – that remains the driving force behind your Marines today. Yet we recognize the strategic environment is changing, requiring adaptations to our organization, training, equipment, and warfighting concepts in order to rebuild our competitive advantage and provide our Nation the lethal, expeditionary naval force it demands.

The Marine Corps is committed to building the most ready, lethal force the Nation can afford. Unfortunately, the testimony that follows is presently a conditional statement as the Marine Corps confronts the impacts of recent Hurricanes Florence and Michael in the fall of last year. Hurricane Florence was the wettest tropical storm ever recorded in the Carolinas, dropping 39 inches of water in less than one week. Just a few short weeks later we felt the impacts of Hurricane Michael, the strongest storm in terms of maximum sustained wind speed to hit the United States since Hurricane Andrew in 1992. The impact of these two disasters in terms of cost to the Marine Corps is estimated to be \$3.7B, but their impacts go much deeper and the gravity of these unforeseen disasters may not be fully known to this committee:

- 3,000 military personnel displaced including 1,000 family members living on base
- North Carolina installations are home to II Marine Expeditionary Force which comprises 1/3 of the combat power of the Marine Corps
- North Carolina installations are also home to Marine Corps Forces Special Operations Command (MARSOC), Fleet Readiness Center–East, and the Center for Naval Aviation Technical Training
- 800 buildings across Marine Corps Base (MCB) Lejeune, Marine Corps Air Station (MCAS) New River, and MCAS Cherry Point were damaged or compromised

- 100 structures were damaged at Marine Corps Logistics Base Albany
- Almost 4,000 of the 6,200 homes across these installations sustained damage

Your Marine Corps is feeling the immediate impacts of these storms through lost and delayed training time; delayed deployments and redeployments; and daily quality of life challenges. Many of our ranges and training areas remain degraded. Damaged infrastructure to include roads, railroad trestles, and beaches have degraded our strategic capacity to deploy. All of these present an unacceptable challenge to the Nation's expeditionary force in readiness who must remain ready at a moment's notice. From a force posture "risk to force" and "risk to mission" perspective, we assess our current risk to both as "moderate." Effective 1 June of this year however, we assess our risk to both moving to "high" as we enter the next hurricane season.

Thanks to the hard work and support of the Office of the Secretary of Defense, Congress, and the Administration, the Marine Corps recently received \$400M of reprogrammed resources to immediately begin addressing our most pressing infrastructure needs. We continue to work tirelessly to address our remaining \$449M shortfall within Fiscal Year (FY) 19, and \$2.8B required over FY20, FY21, and future plans to fully recover. We continue to make the decisions necessary in the short term to return our personnel, repair our facilities, and restore our readiness. Funding the remainder of this requirement internally, however, may jeopardize the readiness gains made over that last few years through the efforts of Congress and your Marine Corps. We must continue the hard work described in the remainder of this testimony to rebuild our readiness and modernize our Corps to maintain our competitive advantage against rising competitors.

### **Expeditionary**

Throughout our history, Marines have been called upon to respond immediately to crises around the globe either from the sea, forward bases, or home station. To meet Congress' mandate to be "...ready to suppress or contain international disturbances short of large-scale war," we strive to prevent war by assuring our allies and deterring rivals with ready, capable, and persistently present expeditionary forces. Forward postured naval forces remain critical to that end, providing the Nation a significant operational advantage through maneuver and access. Supporting steady state operations through theater security cooperation (TSC); building partner capacity; supporting humanitarian assistance/disaster relief (HA/DR); and noncombatant evacuation operations (NEO); or supporting current global contingencies, requires your

expeditionary force-in-readiness to be present.

The 2018 National Defense Strategy (NDS) clearly requires forward-deployed naval *expeditionary* forces that can compete, deter, and provide “inside” forces capable of denying adversary freedom of maneuver as part of our integrated naval defense-in-depth. “Expeditionary,” however, is more than a simple definition contained within joint publications. Marines view the term expeditionary as a pervasive mindset that is fundamental to our character, and an idea that shapes all aspects of our organization, training, education, equipment, and employment. Marines must be able to deploy rapidly, leverage the sea as maneuver space, enter the objective area, accomplish a broad range of operations, sustain itself, withdraw quickly, and rapidly reconstitute while forward deployed to execute follow-on missions. The Marine Air Ground Task Force (MAGTF) – by design a tailorable, self-sustaining, and scalable expeditionary unit – provides our Nation a combined arms force capable of exploiting advantages over an adversary. Equally important, the MAGTF provides a forward deployed *dynamic force* available *now*. Marines approach this expeditionary mindset holistically – from our training, capability development, employment in austere conditions, and Service culture. Although our warfighting concepts must be continually revised and our capabilities modernized to sustain our ability to respond when called, it is our expeditionary nature, forward presence as a naval force, and preparedness for the violence of combat that define our unique role in the Nation’s defense.

### **Competition, Lethality, and Deterrence**

The strategic environment is complex, informationally and technologically charged, volatile, and dangerous. The proliferation of modern conventional weapons and social media capabilities to a broader range of state and non-state actors, along with the erosion of our competitive technological advantage in areas where we have long enjoyed relative superiority, is likely to continue as peer competitors attempt to contest our influence globally. Competition below the traditional level of armed conflict and global campaigns such as China’s One Belt One Road initiative, create a wide range of strategic and operational challenges that underscore the need for a globally responsive naval force capable of providing an asymmetric maritime advantage.

Threats posed by revisionist powers and rogue states require a change to how your Marine



Corps is organized, trained, equipped, employed, and integrated with the Navy. *We must become a more lethal, resilient, and capable competitor and deterrent.* The Navy-Marine Corps team no longer relies on concepts and capabilities premised on uncontested sea control. We must establish a forward deployed defense-in-depth, anchored on naval “inside” forces, capable of Expeditionary Advance Base Operations (EABO) in support of the naval campaign. Modern sensors and precision weapons with expanding ranges and lethality are redefining how we assess our posture and relative combat power. Advanced adversary defensive networks are forcing us to reconsider methods of assured access required to compete against rising peers within a contested maritime space. As naval “inside” forces, the Navy-Marine Corps team must develop complementary capabilities to compete, deter, and win in all domains and facilitate the maneuver and projection of Joint Force capabilities. Our warfighting contributions must help shape the strategic environment to prevent conflict – one of the original mandates of the 82<sup>nd</sup> Congress for a “force-in-readiness.”

The Marine Corps assures allies and partners and competes globally every day within the Contact and Blunt Layers articulated in the NDS, in support of respective Fleet Commanders and Geographic Combatant Commands (GCC). Your Marine Corps maintains approximately one third of its operating forces, or roughly 39,500 Active and Reserve Component Marines, forward deployed and forward stationed. Amphibious Readiness Groups / Marine Expeditionary Units (ARG/MEUs), Special Purpose Marine Air Ground Task Force (SPMAGTFs), MARSOC, Marine Expeditionary Force Information Groups (MIGs), Task Force South West, and allocated forces are forward-deployed and forward-stationed to contest the malign behavior of our foes, improve interoperability with our allies and partners, and prepare to delay, degrade, and deny adversary aggression should deterrence fail and competition turn to armed conflict. And if our adversaries mistakenly choose to test our will, we must be capable of providing a combat credible force ready to absorb the initial blow; hold the line; contest their advance; facilitate sea control/denial; win the information operations fight; attrit adversary naval, land, and air forces; and fight until our allies, partners, and the Joint Force reinforces.

At home, your Corps is preparing to contribute to the war-winning Joint Force should deterrence fail. We are preparing to respond to global contingencies against peer rivals in contested environments; to rapidly aggregate forces from across the globe to deliver capable

mass to the fight; and prepared and ready to wage violence in all domains – from degrading and penetrating anti-access area denial (A2/AD) networks – to assuring access and projecting power with command and control (C2), fires, maneuver, and logistics. Every Marine throughout the MAGTF is constantly preparing through training and exercises that approximate the conditions of war as much as possible, and conducting training that introduces friction in the form of uncertainty, stress, disorder, and opposing wills. At the institutional level, we are testing our concepts and developing new tactics, techniques, and procedures. At the unit level, we are focusing on our foundational core competencies, individual discipline, and continuing actions in order to develop the mindset and skills necessary to prevail in any future fight. Only through hard, demanding, and realistic preparation can we achieve total readiness.

We must increase the lethality of our integrated naval forces in order to deter our adversaries; and if deterrence fails, to win. Deterrence requires a combat credible force that possesses lethal capabilities, at sufficient capacities, paired with innovative operational concepts in order to alter the decision making choices of our adversaries. Lethality spans the Corps from the tactical to the operational levels of war, and from small unit formations to scalable MAGTFs. Ground formations must still locate, close with, and destroy the enemy by fire and maneuver, or to repel the enemy's assault by fire and close combat. The Marine Corps is committed to providing every lethal advantage available to our tactical warfighting formations to ensure overmatch against peer threats and improve the lethality of our close combat squads. No Marine should ever enter into a fair fight.

At the MAGTF level, lethality provides the means by which we alter the decision making choices of our adversaries. A *lethal*, integrated naval force that can deny adversary freedom of maneuver is paramount to this idea. That said, sea control is more challenging now than in past decades. Long-range detection and targeting methods possessed by adversaries, combined with extended ranges of their land-based anti-ship missiles, is increasing the interaction between land and naval forces in the littorals, requiring the Marine Corps to further develop and integrate force capabilities in support of the Navy – “*Green in support of Blue.*” While power projection and forward presence remain foundational to our naval force, we are developing new concepts and capabilities for assured access, sea control, and sea denial that include long-range precision strike, raids, Distributed Maritime Operations (DMO), Operations in the Information

Environment (OIE), and EABO. The product of those efforts, through speed, lethality, and an asymmetric competitive advantage, is *deterrence*. Ships and aircraft acting within a networked fleet must contribute to the lethality of the fleet with the ability to protect themselves from air, surface, and sub-surface attack, while possessing organic ship-to-ship and ship-to-shore strike weapons required by future naval campaigns. Current amphibious ships lack these capabilities, and therefore, must rely on support from other combatants to perform sea control and assured access missions.

To increase the lethality and deterrent effect of our existing amphibious fleet, the naval force must upgrade C2 suites; introduce organic ship-to-ship and ship-to-shore precision strike weapons; integrate organic air defense; decrease ship signatures; and launch/recover the MAGTF's growing fleet of unmanned aerial systems – together, a more cost-effective approach than seeking a replacement of existing platforms. An amphibious fleet so equipped is a force multiplier to the larger naval force. The Marine Corps, in support of the Navy, must shift from a focus on a near symmetric land-based enemy to an asymmetric view in which Marine forces, operating from expeditionary advanced bases, threaten enemy naval, land, air, and unmanned forces. Marines must be prepared to task organize in support of fleet operations in highly contested maritime environments; employing mobile, low-signature, operationally relevant, and survivable expeditionary forces to mitigate challenges created by adversary advantages in geographic location, weapons system range, and precision. These are the capabilities and concepts possessed by an integrated naval force that offer our adversaries a choice – a choice to de-escalate to a state of manageable competition, or a choice to escalate and face a lethal naval force at a time and place of our choosing.

### **Concepts and Experimentation**

Marines continue to innovate to build the 21<sup>st</sup> century MAGTF – a lethal, adaptive, and resilient Corps that executes combined arms as a means to conduct maneuver warfare across all domains. This transformation began in 2016 with the implementation of the Marine Corps Operating Concept (MOC). The MOC represents our institutional vision for how the Marine Corps will operate, fight, and win despite the challenges of the strategic environment, and like the larger institution, will continue to be revised as the character of naval warfare changes. The MOC provides the foundation and context for subordinate operating and functional concepts – like Littoral Operations in a Contested Environment (LOCE) and EABO – and it guides our

analysis, wargaming, and experimentation. These concepts, and our associated thinking on warfighting, are naval concepts which complement broader visions and conclusions articulated in the Navy's DMO concept.

Whereas the MOC, DMO, and EABO provide the concepts for how Marines will fight and prevail, it is through extensive experimentation and wargaming that we validate our force development choices, and inform our resourcing and programming strategies. Our experimentation and wargaming efforts focus on designing a lethal, agile, and resilient MAGTF optimized for the future that incorporates Marines capable of integrating cyber, OIE, artificial intelligence, and long range precision fires capabilities in support of the Navy. As a driver of innovation, our Marine Corps Warfighting Lab completed the first phase of our long-range experimentation plan called SEA DRAGON, and over the next five years will focus on MAGTF hybrid logistics, OIE, EABO, DMO, maritime fires, and maritime C2. Through these efforts, the Marine Corps continues to adapt and refine our capability development, force structure, and resourcing decisions that modernize the force.

#### **Our 2020 Budget**

"*Competing with a Peer Threat*" is the theme of our PB20 submission, and directly aligns with the Secretary of Defense's guidance to increase lethality, improve warfighting readiness, and achieve program balance. This year's budget of \$45.9 billion builds on the momentum gained over the previous year and seeks to further adapt and modernize our Corps by focusing on three key budget priorities – *modernization, readiness, and manpower*. Through programmatic reforms, divestiture of legacy systems, and key investments in manned / unmanned teaming and autonomous systems, we are transforming today's Marine Corps into the future force required by our Nation and building the most ready force our Nation can afford. To accomplish this goal, we require adequate, sustained, and predictable funding to properly plan for and resource a ready, capable, lethal force.

The Marine Corps remains committed to fiscal transparency and responsible stewardship of our taxpayers' dollars. The results of Full Financial Statement Audits for Fiscal Years (FY) 2017 and 2018 generated efficiencies through improvements to financial processes, systems, internal controls, and accountability of equipment. The Marine Corps continues to remediate audit findings

and remains focused on achieving a modified opinion by FY20. Continued emphasis on executing corrective action plans, improving information systems, and better managing funds provided to us by the taxpayer demonstrates our commitment to achieve and sustain favorable audit opinions.

Marine Corps business reforms identified more than \$389 million in savings and cost avoidance in FY20 to reinvest in modernization and warfighting readiness. When combined with reform efforts in FY19, the cumulative reforms and divestitures over the past two years total \$956 million. Examples of vetted and approved reform initiatives include:

- Multi-Year Procurement for Aircraft
- H-1 (Aviation) Program Procurement Savings
- Infrastructure Reset
- Enterprise Lifecycle Maintenance Program
- Legacy Counter-Radio Controlled Improvised Explosive Device (CREW) System Divestment
- DoN Under-Execution Review

Marine Corps business reforms enable us to make strategic choices in the divestiture of certain programs to reinvest our limited resources toward building a more modern, lethal, expeditionary force. We are focused on continuing business reforms in FY20 that foster effective resource management, support audit readiness, and streamline the requirements and acquisition process.

### **Modernization**

Modernization remains critical to meeting the demands of a strategic environment marked by revisionist and revanchist powers, long-term strategic competition, and rogue regimes that have immediate access to advanced, lethal, and disruptive technologies. As part of a naval expeditionary force, what we desire to achieve is a Corps capable of denying freedom of maneuver to deter our adversaries, or when necessary, capable of exploiting, penetrating, and degrading advanced adversary defenses in all domains in support of Naval and Joint Force operations. Deterrence is no longer measured solely by the threat of violence. We require a force capable of operating and winning in the information environment before the physical fight ever begins. Should deterrence fail, we require a future force that can deny adversary freedom of action, impose costs, control key maritime terrain, shape the operational environment in support of integrated sea control and maritime power projection operations, and impose our will in all domains while under attack.

In order to achieve the modern, lethal force required, we must experiment with new

technologies available on the market, determining what will work best in the future operating environment, and then deliver those capabilities to the force quickly to mitigate the rapid rate of technological change. The Marine Corps Rapid Capabilities Office (MCRCO) makes this possible, seeking emergent and disruptive technologies to increase our lethality and resiliency. The MCRCO leverages FY16 and FY17 NDAA provisions and partnerships to accelerate the requirements development and definition process – with the consistent and steadfast support of Congress – we will continue to fund this office. We also embrace the idea of alternative acquisition pathways. We are using and seeing value in other transactions authority and intend to apply middle tier rapid fielding authority at the first appropriate opportunity as a solution to expedite modernization, where production is achievable within five years or less. Accelerated modernization is an essential part of the remedy to our long-term readiness problems and we must not allow ourselves to bury modernization efforts under cumbersome acquisition processes.

Modernization investments represent roughly 30%, or \$13.9B of the total PB20 budget submission, and are synchronized with Marine Corps Force 2025 (MCF 2025), the capability investment strategy which modernizes the force toward implementing MCF 2025, MOC, EABO, and the NDS. The following capability areas support building a 21<sup>st</sup> century MAGTF across the Active and Reserve components of the force, and are prioritized in the following manner:

- *Command and Control (C2) in a Degraded Environment:* The Marine Corps requires a sustainable, defensible, and resilient C2 network, integrated with Navy and Joint Force networks, which allows for timely and persistent information exchange while enhancing battlefield awareness to dispersed tactical units across the MAGTF. Investments in Networking-on-the-Move (NOTM), Fused Integrated Naval Network (FINN), Terrestrial Wideband Transmission System (TWTS), MAGTF Integrated Command and Control (MIC2), and MAGTF Digital Interoperability upgrades provide significantly increased capabilities associated with maneuver and fires across the battlespace. Additionally, in a contested information environment, artificial boundaries between a “tactical” network and a “garrison” network erode; the Marines at the tactical edge will need seamless connections to the Marines supporting them further back from the front line. We have to modernize our enterprise network and move our data stores to the cloud so that Marines can access the information they need any time, in any place. The Next Generation Enterprise Network (NGEN) program and future programs like it are critical to supporting the warfighter.
- *Long Range and Precision Fires:* The modern day battlefield requires forces capable of conducting lethal strikes at range, in depth, and with precision from air, land, and sea. Marine Corps investments include 5<sup>th</sup> Generation F-35B/C aircraft, maritime Group 5 MAGTF Expeditionary UAS (MUX) with precision weapons, Guided Multiple

Launch Rocket System (GMLRS) Alternate Warhead (AW), Ground-Based Anti-Ship Missiles (GB-ASM) as well as ground vehicles and Long Range Unmanned Surface Vessels (LRUSV) armed with loitering munitions enabled by Low Cost UAV Swarming Technology (LOCUST).

- *Operations in the Information Environment (OIE)*: Adversary use of "information" to manipulate facts, mobilize mass perceptions, and contest our ability to C2 forces undermines our traditional military advantages. We cannot count on uncontested access to the electromagnetic spectrum any more than we can count on uncontested freedom of maneuver on the sea. Establishment of the Deputy Commandant for Information (DC I) provides headquarters advocacy while the development of the MEF Information Group (MIG) enables the planning and integrating of OIE with traditional military activities to enhance lethality and our competitive advantage.

- *Air Defense*: Forward deployed/stationed Marines are vulnerable to attacks in ways we have not considered for decades. Most lack protection and sufficient resilience from long-range kinetic attacks that jeopardize our ability to prepare, project, and sustain combat power. Expeditionary forces operating away from bases in a distributed/dispersed manner provide some degree of resilience through distributed mass and reduced signatures. Investments in Medium-Range Air Defense Systems, Counter-Cruise Missile, squad-level Counter-UAS, swarming technologies operating in a networked manner, and the Ground/Air Task Oriented Radar improve the resilience of our posture and our air defense capabilities.

- *Protected Mobility / Enhanced Maneuver*: To distribute and concentrate forces and effects, we must be able to maneuver to positions of advantage, and engage and defeat threat forces in all geographic, topographic, and climatic environments from littoral waterways to urban areas. The Corps prioritizes modernization and investments in three key vehicle replacement programs required to improve mobility and increase force protection: Amphibious Combat Vehicle (ACV), Joint Light Tactical Vehicle (JLTV), and the Armored Reconnaissance Vehicle (ARV). To improve dismounted mobility, we are investing in lighter, better fitting body armor. Aviation investment priorities include procurement and Block 4 capability upgrades for F-35B/C; and the CH-53K which will provide an exponential leap in vertical heavy lift capability.

- *Logistics*: In a distributed and contested environment, logistics takes on greater significance as a key enabling function requiring global logistics awareness, diversifying distribution, improving sustainment, and optimizing installations to support sustained operations. This requires innovative methods, the ability to leverage new technologies, and integration with Navy, Joint, and Coalition forces. Science and Technology (S&T) efforts in Additive Manufacturing (AM) drove the procurement of 160 3D printers, with more than 125 ground and 83 NAVAIR-approved aviation parts; immediately improving readiness and lethality. Additional investments in developing enhanced logistics C2 systems, bulk fuel transportation and storage, unmanned logistics systems – to include quadrotor cargo delivery systems and littoral connectors – are paving the way in Next Generation Logistics (NexLog) capabilities.

It is equally important that the Marine Corps provide every lethal, modern advantage available to our tactical warfighting formations to make sure our infantry is deadly and protected to the maximum extent possible. Aligned with the Secretary of Defense's Close Combat Lethality Task Force (CCLTF) initiative, the Marine Corps continues to invest heavily in its close combat formation capabilities, including – enhanced combat helmet; binocular night vision devices; M-27 Infantry Automatic Rifle; M320 grenade launcher; M38 Squad Designated Marksman Rifle; and Javelin anti-tank missile. Additional investments include Squad unmanned aerial systems; MAGTF electronic warfare; Joint Battle Command Platform; Handheld C2; target hand-off system; adaptive threat force augmentation; future integration training environment; pattern of life automated behavior development, and warfighter augmented reality. These capability investments, combined with demanding unit training and Service-level force-on-force exercises, provide the path forward to ensuring close combat superiority against peer competitors.

### **Readiness**

The Marine Corps is committed to building the most ready force the Nation can afford. Readiness, however, is the product of two metrics. The first is the ability of the force to execute its mission with ready people, ready equipment, and the right training. The second compares the force against potential adversaries, the importance of which grows dramatically in an environment of rising peers and global competition. If our near-term readiness levels are high and our units are ready, then by the first metric we are ready. If, however, that force is outranged or outpaced by potential adversary capabilities, then by the second metric we are not. This requires an additional long-term view of readiness through capability modernization, as discussed in the preceding section of this statement. As a Service, we will take a deliberate approach to continue the positive trends in our overall readiness while simultaneously balancing the need to modernize our current force, satisfying existing GCC demands, and building the force required by the strategic environment to remain relevant in the future. Thanks to your efforts in Congress to provide increased funding, you have made the choices the Marine Corps has to make less difficult. Our PB20 budget provides \$14.3 billion, or approximately 31% of our total submission towards near-term readiness.

### **Aviation**



While readiness concerns exist across the MAGTF, our most acute readiness issues are found in aviation units. Recent increases in funding enabled the Marine Corps to simultaneously invest in both readiness and modernization, adding capacity to the flight lines by fully funding readiness enabler accounts, depot and Defense Logistics Agency (DLA), spares, training, and people. The Marine Corps has been able to accelerate aviation readiness recovery efforts along four lines of effort:

1. Depot Readiness Initiative: resources to accomplish certain unit level maintenance while an aircraft is being re-worked at the depot, which means aircraft that return from the depot to a squadron are ready to fly almost immediately.
2. Non-Mission Capable Maintenance (NMCM): the qualified maintenance Marines and needed supporting resources (engineers, support equipment, etc.) are available to fix aircraft without delay.
3. Non-Mission Capable Supply (NMCS): all parts are available when needed to prevent extended aircraft down times awaiting parts.
4. In-Service Repair: higher-level maintenance needed at the squadron is properly resourced to perform these repairs without delay, avoiding excessive aircraft down time.

Although much work remains to achieve our aviation readiness recovery goals, we continue to see significant gains realized along these lines of effort: depot throughput met Service goals, NMCM rates have decreased, NMCS rates have dropped, and in-service repairs have reached our Service goal. In short, these gains mean that Marines are able to keep existing aircraft in a mission capable (MC) status for longer periods, affording aircrew more flying hours and training time. In addition to our dedication to fully funding aviation readiness accounts, other readiness recovery initiatives include the CH-53E Reset program, Depot Readiness Initiative, MV-22 Readiness Program, and talent retention efforts aimed at retaining experienced maintainers in operational squadrons. Leading indicators of readiness improvements resulting from these efforts include: an increase in overall flight hours, an increase in average monthly flight time for our aircrew, an increase in MC rates of our aircraft, and an improvement of our aggregate aviation T-Rating. These gains are a direct result of funding provided in the FY17 and FY18 defense appropriations bills, which allowed investments in readiness enabler accounts at maximum executable levels. These investments are now realizing significant results. Should funding decrease in FY20 or beyond – aviation readiness will also likely decrease.

The Secretary of Defense released guidance to the Services directing accelerated readiness recovery of tactical aviation (TACAIR) to achieve 80% mission capable rates by the end of FY19. The Marine Corps is taking action to achieve this goal along five lines of effort. The Marine

Corps is working towards this goal by increasing the number of aircraft available and operating within aircraft and maintenance capacity levels. Our investments in FY17, FY18, and FY19 will produce ready aircraft from our depots, \$1.6B in spares from Navy Supply, and \$16M in additional consumables from DLA. Additional goals from industry partners include accelerated completion of aircraft modifications and retrofits, accelerated depot repair capability, and shifting maintenance to the appropriate levels. Successful implementation of these efforts will ensure we meet the 80% goal and sustain it in the future.

#### Ground Equipment

Ground equipment readiness rates continue to show significant gains after years of focused effort to reset our equipment. As of 1 October 2018, the Marine Corps completed reset of 99% of our ground equipment programs and returned 72% of our ground equipment to the operating forces. The operational readiness of key Principal End Items (PEI) remains high, and we project to complete our ground equipment reset efforts in third quarter FY19. High operational readiness rates of key PEIs, however, mask certain underlying readiness issues. Units preparing to deploy are still experiencing shortfalls in equipment to train for core mission tasks as we support global equipment sourcing for forward deployed units such as Special Purpose MAGTFs. Equipping requirements for these rotational forces are disproportionately high due to their unique mission sets, placing high demand on low density equipment that approaches or exceeds availability. The result is risk in equipment availability to respond to contingencies and training for non-deployed units. We are addressing these issues through aggressive acquisition and redistribution actions.

#### Amphibious Fleet

Use of the sea as maneuver space remains as vital today as any time in our history. The Joint Force must maintain access to, and the ability to maneuver through the global commons, assure access, compete in the maritime domain, and defeat any competitor attempting to deny our freedom of action. To adequately accomplish these tasks, the naval force must be distributable, resilient, and tailorable while being employed in sufficient scale and for ample duration. The amphibious fleet allows the naval force to do three basic things:

- Conduct steady state operations around the world, including TSC, building partner capacity, HA/DR, and NEO.
- Execute a global cost imposition strategy if we have to fight.

- Project and sustain the force in a contested environment.

Due to existing shortfalls and maintenance issues within our amphibious ship capacity, the naval force currently struggles to satisfy these basic requirements – an issue that will only grow worse over time if not properly addressed. The operational availability of the existing amphibious fleet is insufficient to meet global demands and negatively impacts the unit training necessary to recover readiness for major combat operations. Consequently, the strategic risk to the mission and the larger Joint Force is increased.

The Navy and Marine Corps are currently operating below the minimum amphibious shipping requirement detailed in the 2016 Force Structure Assessment and 30-year shipbuilding plan. The stated requirement of 38 amphibious warships is the minimum number required to fulfill our Title 10 obligation. Resourcing to a lower number puts contingency response timelines and the Joint Force at risk. Yet, amphibious readiness is more than the simple product of capacity and availability; it requires an amphibious fleet with the right capabilities to remain survivable, resilient, and lethal in a contested environment. Today's naval campaigns still demand an amphibious fleet capable of conducting raids, demonstrations, assaults, withdrawals, and support to other operations (TSC, HA/DR, NEO, etc.) in both permissive and non-permissive environments. The naval force must be able to maneuver; gain temporary lodgments to establish expeditionary advanced bases from which Marines hold adversary naval, land, and air forces at risk; and then withdrawal quickly as the naval campaign advances. Our amphibious fleet lacks the ability to protect itself from air, surface, sub-surface, cyber, and information attack; and absent organic ship-to-ship and ship-to-shore strike weapons, must rely on support from other combatants to perform sea control and assured access missions. To increase the lethality and readiness of our amphibious fleet, the naval force must:

- Upgrade C2 suites, introduce organic ship-to-ship and ship-to-shore precision strike weapons, organic air defense, and decrease ship signatures to become less targetable.
- Modernize the manned and unmanned surface connector fleet that, when combined with our aerial connectors, enable the naval force to establish a web of sensor, strike, decoy, and sustainment locations based on land and sea that will complicate the strategic and operational decision making of our most advanced rivals.
- Address modernization in our repositioning program to ensure persistent forward positioning of our critical equipment and sustainment supplies in a manner that is scalable, flexible, expeditionary, and survivable in a contested environment; and that will further enable our naval

expeditionary inside forces to persist inside the enemy's weapons engagement zone (WEZ).

- Continue to explore innovative ways to employ alternative platforms for amphibious and maritime operations in more permissive environments in order to compensate for the shortfall of amphibious warships and provide more global coverage in the most resource-appropriate manner.
- Continue to develop and employ Naval Task Force elements consisting of multiple ship types for optimal lethality and force protection; including possible development of more functional and operationally suitable naval vessels and craft to expand the competitive space and create an asymmetric maritime advantage globally.

#### Deployment-to-Dwell

The rate by which Marines deploy largely depends upon what unit they are assigned to and the operational demand for those units. The majority of Marine units experience a deployment-to-dwell (D2D) ratio that is challenging; we confront this daily. While these demands are clear and unmistakable evidence of the continued relevance of Marines, this tempo is difficult to sustain as it limits our time to train to our full naval mission sets. Our goal is to return to a 1:3 D2D force, which would allow us time to train for the high-end fight and achieve balance for our Marines and their families at home.

There are three types of Marines in our Corps: those who are deployed, those getting ready to deploy, and those who just returned from deployment. PB20 supports an 186,200 Active and 38,500 Reserve component end-strength force, maintaining an overall 1:2 D2D ratio. Operating at a 1:2 D2D ratio, although challenging, is a conscious, short-term decision to balance modernization, meet current demand, and simultaneously recover our readiness. We owe our Marines and their families the necessary time to reset and train for the next deployment or contingency. For many decades prior to the attacks of September 2001, Marines in the operating forces benefited from a 1:3 D2D ratio. The Marines that were not deployed had time to prepare, time to train, and were ready to reinforce their fellow Marines if a major contingency happened. A return to a 1:3 D2D would require a substantive increase in manpower, or decrease in operational requirements – we do not seek a significant increase in end-strength in this year's budget and we continue to experience high operational requirements. Although we manage the risks associated with a 1:2 D2D in the short-term, our long-term goal is to return to a 1:3 D2D force.

#### Infrastructure

The Marine Corps previously accepted risk in facilities funding to protect near-term

readiness and service-level training. Taking risk in the facilities sustainment, restoration and modernization, and military construction programs resulted in the degradation of our infrastructure, which in turn increases lifecycle costs. We must ensure our infrastructure, both home and abroad, is resilient against attacks, and long-range precision strikes while modernizing to support future capability integration and training facilities needed to hone our warfighting skills. Our Infrastructure Reset Strategy must be a priority – we must improve infrastructure lifecycle management and ensure investments are aligned with Marine Corps capability-based requirements to support our warfighting mission and contribute directly to current and future force readiness. The state of our facilities is the single most important investment to support four critical force enabling functions our installations provide:

- Housing for our Marines and their families
- Deployment platforms from which our expeditionary forces fight and win our Nation's battles
- Training facilities required for our MAGTFs to train and hone their combat readiness
- An organic industrial base for depot-level maintenance, storage, and prepositioning of war reserve equipment to maximize readiness and sustain combat operations

As leaders we have fallen short of our full obligation to our Marines and their families with respect to privatized military housing; we are correcting this shortfall. The Marine Corps has instituted a voluntary Marine Housing Outreach program aimed at every Marine and Sailor residing in government quarters, privatized military housing, or an off-base civilian rental property. This outreach program is designed to raise our awareness of the Marines' living conditions to ensure it is safe, secure, and environmentally healthy; identify maintenance or safety issues affecting the residence, determine any actions taken to date to remedy them, and determine how the chain of command can assist in the resolution process; and ensure our Marines and their families are aware of and understand the support processes and programs available. In concert with the Department of the Navy, the Marine Corps is also reviewing the reporting mechanisms and oversight procedures that govern the way privatized military housing discrepancies are reported, remediated, and verified through our Public-Private Venture partners. The Marine Corps is committed to our Marines and families, to improving the military housing offered aboard our installations, and to ensuring unit commanders are personally involved in advocating for the wellbeing of the Marines they serve.

The Marine Corps' Infrastructure Reset Strategy ensures every dollar is targeted and spent on the highest priorities at the lowest total lifecycle costs, optimizing investment over the long-term to

support our warfighting mission and align investment with our strategic priorities. These prioritized investments align with NDS guidance to increase lethality by supporting new capabilities and platforms; modernizing inadequate and obsolete facilities; relocating and consolidating forces; and improving quality of life. FY20 Military Construction (MILCON) and Facilities Sustainment, Restoration and Modernization (FSRM) accounts support:

- Guam relocation investments: Barracks, central fuel station, and central issue facility
- MCF 2025 initiatives: Consolidated Sensitive Compartmented Information Facility (SCIF) for I MEF MIG and 10<sup>th</sup> Marines HIMARs complex
- New platform investment: F-35B/C hangar, apron, landing pads, and training simulator; ACV maintenance facility; and CH-53K cargo loading trainer
- Training: Wargaming Center at MCB Quantico
- Quality of Life: Barracks replacement at MCB Hawaii and mess hall replacement at MCB Camp Pendleton
- Recapitalization and replacement of inadequate facilities

### Manpower

Our people – Marines, civilian Marines, and families – are our institutional center of gravity, and remain fundamental to our ability to *Make Marines and Win Battles*. Maintaining the most ready, lethal Marine Corps possible requires talented and dedicated people. Our PB20 budget provides \$16.1 billion towards manpower accounts, approximately 35% of our total submission, to continue implementing MCF 2025. The strategic environment our Nation faces requires a more experienced, better trained, and more capable Corps. It requires more than just new equipment and technologies, it requires the right force structure and Marines with the right skills to effectively operate. Modernization priorities require a complementary element of force structure changes to ensure we have the right people, with the right skills, for the deployment and employment of new capabilities and to ensure the future force is compatible and mutually supportive. Our goal is to provide a more mature, experienced force to leverage individual skill and professional talent with emerging technology through select force structure changes that recruits, trains, educates, and sustains the most lethal force possible.

To achieve our goals, our actions focus personnel growth in the right areas. Our PB20 end strength plans for an 186,200 Active and 38,500 Reserve component force. This limited growth of 100 Marines is targeted in specialized fields such as MARSOC and several specialties encompassed by OIE: intelligence, electronic warfare, and cyberspace operations. Equally important, our manpower efforts are addressing the need for more experienced and better trained

leaders within our infantry formations to ensure the superiority of our close combat formations. In order to optimize selection of the most talented infantry squad leaders, we have increased the pool of infantry Sergeants by 330 Marines through realignment efforts within our internal structure. Everything we do must focus on making Marines better, more resilient, lethal, and capable of outpacing our adversaries.

Central to our role in providing a lethal force is recruiting the most qualified men and women within our Nation who are willing to raise their hand, affirm an oath, and earn the Eagle, Globe, and Anchor. We must ensure that we recruit the right people, devoted to upholding the values of Honor, Courage, and Commitment. Our new Marines must be provided the highest level of training that not only prepares them for the rigors of combat, but also successfully transforms and sustains them in their career paths. As such, a fourth phase has been added to Recruit Training. This fourth phase focuses on mentorship and leader-led instruction to better prepare new Marines for transition to the operating forces.

Education and training is continuous for Marines. We must ensure we *train to fight, and educate to win*. New technologies require smarter, more mentally agile Marines capable of exercising sound judgment and decision making in uncertain and challenging situations. Professional Military Education remains essential in developing leaders with the analytical and critical thinking skills required to adapt in ever changing environments. To increase the capabilities of our leaders, the Marine Corps has developed the College of Enlisted Military Education (CEME), creating a pathway for enlisted leaders to increase skill and proficiency through continuing education. We have revamped our PME process, adding new PME courses, and enhancing academic rigor to grow our force with the intellectual skills and capabilities necessary for the future.

As a Marines, we must hold ourselves to the highest standards of personal conduct and ensure all Marines and family members are treated with dignity and respect. This requires us to take an introspective look at our culture to ensure the long-term success of our efforts. To demonstrate our commitment to strengthening our culture, we created the Talent Management Oversight Directorate (TMOD). This office supports the Assistant Commandant in his role as the Talent Management Officer of the Marine Corps, and addresses all personnel and cultural issues impacting the Corps' ability to invest in and leverage a diversely skilled and talented force. The TMOD's mission is to ensure compliance with all objectives, policies, and directives that supports

the Corps' efforts to recruit, promote, and retain the best talent the Nation has to offer. Focused on mission readiness, the TMOD helps ensure we maintain an organization where all members are valued based on their individual excellence and commitment to warfighting. Treating all Marines and their families with dignity and respect, as well as fostering a culture of inclusion throughout the service, is central to our core values.

Taking care of Marines and their families is a key element of overall readiness and combat effectiveness. The adage “we recruit Marines, we retain families” remains as true today as ever. Our comprehensive system of services, to include Sexual Assault Prevention and Response; Suicide Prevention; Personal and Professional Development; Drug and Alcohol Abuse Counseling/Prevention; Business and Recreation Services; and Spouse Employment; seeks to create the holistic fitness and readiness of our Marines and families – body, mind, spirit, and social. In addition, our Wounded Warrior Regiment continues to execute our Recovery Coordination Program to “keep faith” with those who have incurred life changing impairments in service to our Nation.

Our civilian workforce has the leanest civilian-to-military ratio of all the military services, at a current ratio of one civilian employee to every ten Marines. Approximately 95% of our appropriated funded civilians work outside the Washington, DC beltway at 57 bases, stations, depots, and installations around the world. Sixty-nine percent are veterans who have chosen to continue to serve our Nation; of those, 18% are disabled veterans. Civilian Marines perform vital functions at our bases and stations, and are integral to the daily operations and overall capability of the Marine Corps. Challenges with recruitment and retention – notably burdens like the threat of sequestration, possible furloughs, antiquated hiring processes, and limited pay increases – inhibit our ability to retain top talent. Thanks to the hard work of Congress in passing a civilian pay raise this year, we continue to fund these critical members of our team.

### Conclusion

The Marine Corps serves as a naval expeditionary “inside” force that is *most ready, when the Nation is least ready*. We seek a constant state of readiness – lethal, forward postured, assuring allies, deterring adversaries, capable of absorbing the initial blow, and holding the line – and if required, prepared to fight and impose our will on the enemy. We are an integrated naval



force – transiting the oceans, aggregating at sea, fighting at sea, and coming from the sea. We are organized, trained, and equipped to operate across the range of military operations, in every domain, and thrive in uncertainty – facilitating assured access operations, sea control operations, or maritime security in support of the fleets. We are self-sustaining for pre-determined lengths of time, and capable of quickly reconstituting for follow-on tasking globally to support dynamic force employment. We continuously live “with our sea-bags packed” and remain the most lethal, credible combat forces available.

However, despite notable improvement in readiness during the past two year years, the preceding seventeen years of war have perilously degraded our overall capability and capacity, as those of our adversaries have increased. We must increase the lethality of our “inside” combat credible forces in order to compete with our threats, deter our adversaries, assure our allies, and if necessary – prevail in any fight. As the force at the forward edge, the force first to make contact and hold – we require the most modern, technologically advanced, *capable* Marine Corps our resourcing will allow. To achieve this end, the Marine Corps must evolve from today’s “1.0” force capable of addressing our current warfighting needs; to a near-term “1.1” modernized force that leverages select, existing platforms to achieve new warfighting concepts; to a “2.0” future force with revolutionized capabilities and the ability to execute new warfighting concepts.

The Marine Corps is increasing lethality and evolving our force through prioritized investment in modernization, readiness, and manpower. This evolution is necessary to ensure we maintain current operational readiness and address whatever contingencies may arise today, and anticipate what our force of tomorrow must look like to be capable of addressing unforeseen threats. But we need Congress’ continued support. To accomplish this goal, adequate, sustained, and predictable funding is required to properly plan for and resource a ready, capable force. Our Marine Corps will ensure there will never be a fair fight...our Nation is not afforded that luxury. We will continue to innovate and build a 21<sup>st</sup> century Marine Corps – a lethal, adaptive, and resilient Corps that can dominate all domains, that is ready to *fight tonight – and win.*

Mr. VISCLOSKY. Thank you very much.  
Mr. Calvert.

COLUMBIA CLASS SUBMARINE

Mr. CALVERT. Thank you, Mr. Chairman. The Navy has identified the *Columbia* class submarine, as was mentioned in your testimony, as its top acquisition priority. According to the GAO, you plan to invest over \$100 billion to develop and purchase 12 nuclear-powered ballistic missile submarines to replace the *Ohio* class submarines by 2031.

The *Columbia* class submarine program is vital, there is no disagreement to that, to the strategic nuclear deterrents and to the nuclear triad. I think all of us here understand the complexity of building advanced weapons systems. However, as appropriators, it is important for us to understand the risk of a major defense acquisition program. We have seen that many times in the past.

A recent GAO study stated that the cost estimate for the *Columbia* class is not reliable due to optimistic labor hour assumptions, and there is no—virtually no margin in the program for cost overruns. And while the Navy has provided a margin for schedules slip, unless more time is built into the margin, the Navy is in a position where there is little room for error in order to meet the 2031 date for the lead ship first patrol.

Mr. Secretary, given the importance of the *Columbia* class submarine program and the imperative that we meet the timeline, what steps are being taken to reduce risk in the program? Why is there a zero margin for cost overruns? The program is already eating into the margin for schedule slip. What is your confidence level on meeting the 2031 first patrol date?

Secretary SPENCER. Congressman, those are all good observations, and they have caused us to step forward. I believe it is going to be early next week where we are sitting down with industry to do a collective assessment because as you know, while the *Columbia* class submarine is our number one acquisition program, it is in concert with the *Virginia* class program which is probably one of our most successful acquisition platforms that we have in the Navy. We are balancing risk in both of those portfolios. We do have concern. I would be remiss if I didn't say that. We are sitting down with industry to look at the supply chain, to look at both primes that are involved, to ensure that we can manage the risk, that we can build in some margin where we can, that we can sweep risk on a continual basis. If we do not do this in lockstep with industry, it will run off the rails. I guarantee you that. We are focused on this from the executive level on down. I think you have heard me say this before.

When I came into my seat, the attitude that we have is one of enforcing and supporting competition but to work with our prime suppliers in the most partnership manner that we can which means shared risks, shared responsibility, shared benefit. They are with us side by side on this program.

F-35BS

Mr. CALVERT. Thank you for that answer.

Real quick, General Neller, recently F-35Bs were successfully integrated in operations supporting the 31st Marine Expeditionary Unit. I believe you called the lightning carrier concept as a strategy that can be employed to overcome adversaries like China who have several long-range precision weapons specifically designed to hit land bases and aircraft carriers.

How would the lightning carrier concept which involves arming the America class amphibious assault ships with F-35Bs overcome this threat and increase the Navy and Marine Corps ability to project power?

General NELLER. Well, Congressman, you are aware that the capability of the F-35 as a fifth gen fighter gives it clearly—it is not invisible, but it gives us stealth capability, and it gives us some opportunity to fly in regimes and envelopes that other aircraft don't.

So if we are going to have to strike these long-range targets that ideally could be anywhere, even in the mainland of the home nation that is firing them, it gives us an opportunity to penetrate the air space and take down these targets.

So when we put the 10 airplanes on I believe the USS *Essex* that went down to the Philippines, that was just a demonstration to potential adversaries of our ability to embark those airplanes and move into that area and fly in that regime.

So as we work through this with the part of the Navy Marine Corps team and the future experimentation, we are going to figure out and learn more about this airplane and what it can do and what capabilities it brings. That said, we do need to increase the range of our weapons because the adversary is increasing the range of theirs. And so even if we have to penetrate their airspace, optimally we want to stay outside the range and fire longer missiles.

So there is a whole lot of work going on with this, with experimentation and fleet experiments. I would ask the CNO if he wants to comment. But there isn't a carrier strike group or an amphibious ready group that doesn't sail from either the East Coast or the West Coast of the United States or from overseas forward deployed bases that when they deploy, they don't go out and do what is called a fleet experiment where they operate in a strict electronic regime, and they try to work out how they are going to employ their weapons against this type of a threat.

Admiral RICHARDSON. And maybe if I could pile on just to talk about the survivability of both this type of a platform and a traditional aircraft carrier, you know, I would say that with respect to launching strikes into forward theaters, these are your most reliable, most survivable air fields in that theater under attack. These nuclear-powered aircraft carriers can move 700 miles a day and can generate 100 sorties a day.

So in concert with the amphibious ships, the big decks, F-35, we have to make sure that F-35 can be fully exploited by making sure that they have got the combat systems and communications on those ships to stitch them into the battle space. But a well-operated carrier in a campaign plan, you mentioned it in your opening statement, is a survivable platform, and in fact, maybe more survivable now than it has been since World War II and effective in delivering strikes.

Mr. CALVERT. I look forward to hearing more about survivability in the future.

Admiral RICHARDSON. As you can imagine, sir, this is highly classified to get into the real details of that, and we will bring everything that you need.

Mr. CALVERT. Right. I appreciate that.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Kilmer.

#### SHIPYARD MODERNIZATION

Mr. KILMER. Thank you, Mr. Chair. I have got a couple subjects I was hoping to cover.

First, the shipyard optimization and improvement plan I know lays out a 20-year, \$21 billion effort to optimize and modernize the for public shipyards covering everything from dry dock recapitalization to facility layout to just trying to modernize some of the capital equipment.

I was hoping you could speak to the importance of that shipyard modernization work in terms of ensuring the readiness of the fleet. What kind of capability gaps do you see that filling, you know, particularly as we build the 355-ship Navy? What sort of gaps will we see if we don't make those investments in modernization? I have heard the yards are pretty much at capacity at this point. Do you envision that to continue to be the case if we make these investments?

Secretary SPENCER. If I can provide a 30,000-foot overview from a Title X position and then turn it over to the CNO. Congressman, this is, in the infrastructure category, one of our most critical programs that we have. One of the things that we are really focusing on, and you see it in this year's budget, is the fact that infrastructure is readiness. It has been a bill payer in the past. No longer. We cannot afford to do that.

When it comes to the modernization program, it is not simply making a new dry dock. One of the first steps we made this year as an example was to bring in contractors with expertise in industrial flow. They have visited Hawaii. They are on their way to the Pacific Northwest. Then they will come to the East Coast. Just to increase our ability to get flow through and parts and touch on these hull forms is going to increase flow through, and I can get existing platforms I have back out to the fight quicker. That is the primary drive from my point of view you know.

Admiral RICHARDSON. And that flow will lead directly to Naval power which is ships at sea and not in maintenance, and so this is one of our more challenging areas right now in terms of just wrestling through the complicated scenario of ship maintenance. If we don't modernize the dry docks, some of the ships that we are building right now just simply won't be able to be using those dry docks, and so we have got to do that. That is an imperative.

And then to the Secretary's standpoint, if you map out the work flow in a current shipyard, it looks like you just threw a bunch of spaghetti on a plate. Some of these shipyards were built to build the Constitution, you know. And they have just kind of maintained that same format. This optimization plan redoes that using modern techniques for flow.

And then also, as you pointed out, some of the equipment that we use is stunningly capable compared to some of the 24-, 25-year-old equipment that we have got. So it is a full court press across the entire spectrum, and it translates directly to ships at sea versus ships in maintenance.

#### ENVIRONMENTAL IMPACT STATEMENT

Mr. KILMER. Very good. Related to that, one of the unique challenges in my neck of the woods is we have 11 Native American tribes, federally recognized Tribes, many of which have treaty rights around fishing. When we build stuff on the water, whether it be a new dry dock or a pier or as we did a few years back at Bangor, an explosive handling wharf, that can impact the tribal treaty rights.

And there was a couple questions I want to ask quickly on that front. Right now, there is a government-to-government consultation that happens. Usually that happens as part of the Environmental Impact Statement, but at that point it is usually sort of too late to develop any sort of changes to a project and mitigate the impact of treaty rights.

So with that in mind, would it be possible—I guess two questions. One, would it be possible to start that consultation before the beginning of the NEPA process and the issuance of a draft EIS? Is there any sort of regulatory or statutory barrier that would prevent that consultation from happening earlier?

And the other question I have on that front is I have heard that the Navy limits its ability to mitigate tribal treaty impacts to the mechanisms that are spelled out in the Sikes Act which was really designed to mitigate environmental damage. Is there a reason for that limitation? Is there a reason the Navy kind of equates a right guaranteed by a treaty to an environmental impact, and could we look at sort of other mechanisms outside of that Sikes Act?

Secretary SPENCER. Congressman, to answer both questions up front. One, the move that we are taking now is a continual conversation with our tribal neighbors and partners. There is nothing that precludes involvement from day one. And to my knowledge, going forward since I have been on board, we have been actively involved.

When it comes to Sikes, we also have other abilities to us. One thing I want to frame is the whole concept of impact is where does the impact end? I have to admit there has been—in my review of some of the cases, we were remediating way beyond the impact or asked to remediate possibly way beyond the impact of where we saw it, and there is where natural torque and tension happens, and we will get an arbitration to solve it.

But yes, doors of communication are wide open at Navy at all times on all projects. The formality of the EIS does not mean that you can come in at X point in time. You can be involved all the way to the lead up and through.

Mr. KILMER. Thank you.

Thank you, Mr. Chair.

Mr. VISCLOSKY. Mr. Womack.

## READINESS

Mr. WOMACK. Thank you, Mr. Chairman, and thanks to the gentlemen for your expert testimony here this morning.

General Neller, I will start with you. I want to thank you for your service to the country and to the Marine Corps. I wish you well as you turn over your responsibilities.

You have always of been a candid sort of guy with the committee, and I appreciate that, and I am seeking your candor one more time. I want you to tell this committee about the readiness challenges that you have faced in the last few months, particularly with regard to some of the destruction that has taken place as a result of things beyond our control, shall I say.

General NELLER. Well, the biggest challenge has been trying to get reprogramming or whatever assistance we can to rebuild Camp Lejeune. I was asked with another Member what is your insurance policy? I said you. You are our insurance policy. We don't self-insure.

So just like the Air Force at Tyndall when they had Michael come ashore, we suffered a generational storm last September. And not so much the winds, but the fact that the storm sat on top of the eastern Carolina region and rained for three straight days, and they got about 40 inches of rain. And there was enough damage to the older buildings that the rain just came inside, and it was—so we could fix it, but I can tell you that, you know, people are concerned about climate and storms. And I can tell you that all the new buildings we have, and we have a lot of new buildings because the Congress has been very generous with us and MILCON around the world. None of those new buildings had any damage. The buildings that were damaged and the buildings we could repair, but we recommend they be replaced. They are anywhere from 40 to 70 years old. And so that was our dilemma because we didn't program that.

Some of them were programmed for being razed and rebuilt in the future years like the MEF headquarters building is in the fiscal year 2020 budget. It was already there. But now we are living in that building, and so that has been the biggest thing.

And then the discussion about other fiscal matters that is before the Congress and where money is going to go and the ability to reprogram money which has been kind of a normal order of business where you could come in if there were certain abilities to reprogram money, and we appreciate the \$400 million of reprogramming. That has kind of been caught up in the discussion about other requirements for the administration and the Congress.

In the meantime, though, as the Secretary mentioned, other readiness has improved markedly, particularly fixed wing aviation. I can give you by type, model, series the number of hours that are being flown, the readiness. In fact, the other day on the East Coast, we did break 80 percent for F-18s on a single day on a Friday. Now, is that there today, no, but we have been running pretty consistently with F-18 anywhere from 70 to 80 percent and Representative Calvert mentioned F-35s are out with the 31st MEU. We had F-35s out on the 13th MEU. They ran pretty consistently in the mid 70s, those six jets out there.

So how did that happen? A lot of different things, but at the end of the day, we invested in parts, and you gave us the money to do that, to fly, to get the parts to fix the planes. So in the overall readiness situation, I think we are in a good place and we continue to get better, but at the end of the day, I have got to come up with a solution for Camp Lejeune.

Mr. WOMACK. And at the same time, we are sitting here today without any real clarity on what happens or doesn't happen on October 1st, so if you are worst casing it, would you guys make a practice of doing, you have to, you have to provide for all contingencies. How dire would it be if this Congress cannot give clarity to the October 1 fiscal?

Secretary SPENCER. Congressman, I will be more than happy to answer that. It would be devastating. For all the money that you have given us, the 2017 RAA, the 2018 and 2019 budget, we are up on the bicycle. We are pedaling down the street. We go into a CR, we fall off the bike, period.

#### RESTARTING THE TOMAHAWK LINE

Mr. WOMACK. Well, I hope the Congress is paying attention. I have got one more question, and then I will add more in round two.

Admiral, last year's defense appropriations bill directed the Navy take a look at the viability of restarting production on the Tomahawk. It is my understanding that the analysis of alternatives led the Navy to conclude that more Tomahawks were required which led to a decision to restart production this year. Can you address the importance of restarting the Tomahawk line?

Admiral RICHARDSON. Sir, you have to appreciate the Tomahawk in the family of missile systems that is going to really be the punching part of our Navy, particularly moving forward where I think missiles are becoming more and more a part of our both offensive and defensive push. And so for this maritime strike Tomahawk, it is a reengineered version of that missile. It is a big part of—it occupies a big space in that family both for land attack and anti-ship attack, so it is extremely important.

Mr. WOMACK. Thank you.

Mr. CALVERT. Will the gentleman yield—

Mr. WOMACK. I would be happy to.

Mr. CALVERT [continuing]. For a moment on a subject you just discussed both on the supplemental and the sequestration that we are dealing with, and the October deadline. And I am sure the chairman will bring this up also, but the administration needs to step up here pretty quickly to come to a budget agreement. We don't have a lot of time here. The chairman intends on marking these bills up as rapidly as possible, and the Budget Committee obviously has challenges, but that doesn't change the calendar. And we need a budget agreement between the House, the Senate, and the White House, and I would hope the White House will step forward here pretty soon.

And please send that message back because we need to get this going sooner rather than later. Time is not on our side, and I hope as part of that agreement that we come up with a supplemental to take care of these bases that have been devastated. This can't continue to stagnate.

Mr. WOMACK. It should have already been done. I yield back.  
 Mr. VISCLOSKY. Mrs. Bustos.

#### ROCK ISLAND ARSENAL

Mrs. BUSTOS. Thank you, Mr. Chairman.

Mr. Secretary, I come from Rock Island County, and I want to thank you for visiting the Rock Island Arsenal which is one of our largest employers, absolutely critical to our economic health in the Congressional district that I serve, so thank you.

We are really proud of it. We are really proud of the work that the men and women do there and that they produce readiness not just for the Army but for all services. And sometimes people don't always know that. I am sure those of you sitting there do know that. And I am glad you were able to see the capabilities that the arsenal provides our organic industrial base. And so, and that includes the work that we do at the Quad Cities cartridge case facility.

So that is housed under the Joint Munitions Command, and I know I am telling you something that you already know. That oversees the distribution, the storage, the demilitarization, and production of munitions across all of the military services. So a few questions for you along those lines. Do you envision being able to leverage other capabilities that the arsenal can provide, if you have a feel for that?

Secretary SPENCER. Most definitely. Congresswoman, on my trip there, one of the things that really, really impressed me was the work Rock Island was doing in additive manufacturing. We are also doing that indigenously at the service level, but obviously at the level of a Rock Island, it would be terrific to have a depot level in sync with that of the fleet. It would be great.

Mrs. BUSTOS. That is great to hear. So you know that if you envision, like, other partnerships, so that is under the JMTC, that would help the Navy build on your advance manufacturing into the industrial base. Like, in other words, how would the Navy evaluate if there is a business case for using the arsenal as a provider of capabilities to the Navy? What do you see going forward of how you could take advantage of that?

Secretary SPENCER. So one of the things that we are doing when it comes to the Navy sustainment system is looking at all avenues of capacity, internal and external. And if, in fact, we can take any of our best practices that we are using in Navy and bring them to a Rock Island or Rock Island can bring them to us, we look for that on a continual basis. That is the whole concept of the sustainment system. Where are the best pockets of capacity and efficiency?

#### BIOFUELS

Mrs. BUSTOS. Very good. One other line of questioning, and then I will yield back.

In addition to the arsenal being very critical, agriculture is very, very critical to the region that I serve, and I know that you have been a leader in biofuels. Wondering as you look ahead, what do you see as the future for biofuels as it pertains to the Navy?

Secretary SPENCER. So our position on biofuels is much like innovation, to be very frank with you. I am looking for industry which



is now leading the area in biofuels, and if, in fact, they can provide me a fuel that has both sufficiency and effectiveness, I will entertain it.

Mrs. BUSTOS. Okay. All right. Very good. Mr. Chairman, I yield back.

Thank you, Mr. Secretary.

Mr. VISCLOSKY. Mr. Carter.

#### UNMANNED SYSTEMS

Mr. CARTER. Thank you, Mr. Chairman and thank you to each of you for being here today. This is an interesting discussion, and I want to ask a question about unmanned systems.

Quite honestly, unmanned systems would include air, surface, and under sea platforms. It kind of blows my imagination a little bit, and you have asked for a significant increase in this area. Admiral Richardson, the budget request includes significant increases for unmanned air, under sea, and surface vehicles. What traditional programs or platforms had funding decreased in order to fund some of the new research in these areas? What potential risks may decrease in these areas incur?

The budget request includes \$507 million for unmanned surface vehicles including significant funding for the large operational manned surface vessel. What is the goal of this program? What is the cost estimate? What is the proposed acquisition strategy? What are the policy challenges and implications and the possibility of implementing deadly force from an unmanned ship?

And finally, the feasibility of these unmanned ships, will that count in future shipbuilding plans as we go forward? I am trying to imagine these vessels.

Admiral RICHARDSON. Right. Sir, excellent questions. And as technology continues to improve, particularly those technologies that will lead to more and more capability autonomous systems, our budget, as I said in my opening statement, leans pretty heavily into that future. And so this is an area where we want to be in the lead as a Nation in unmanned. I mean, unmanned systems can have the endurance and performance limits that far exceed what a manned vessel can do.

And so many of those questions in terms of how that unmanned system will conduct itself, navigate itself, communicate with other systems, this is why much of this is still in the R&D budget. We have these questions ourselves.

With respect to where did the money come from, it is really the result of a comprehensive balancing act as we bring the budget together, mindful that this is going to be an extremely important part of our future. I was just up in Washington State where the unmanned under sea vehicle squadron just stood up to move those vehicles sort of out of the lab and into the operational world.

The have got tremendous potential to extend the influence of our manned platforms to go places where we wouldn't want to send people, and also, as I said, to endure there for much longer. So it is an important part.

But all of these ethical decisions with respect to the policies of weapon employment and all of that, this is the focus of our efforts

too, as we dive into this from a research and development perspective.

Mr. CARTER. And you know, we already have some form of unmanned aerial vehicles.

Admiral RICHARDSON. Right.

Mr. CARTER. It is pretty easy to envision unmanned underwater vehicles. But the surface vehicle to me seems to be—I am wondering the size of the platform they are envisioning.

Admiral RICHARDSON. Sure.

Mr. CARTER. The target that somebody would be shooting at.

Admiral RICHARDSON. Right.

Mr. CARTER. Maybe a small vessel, I can see it, but something the size of a cruiser or a Baker would be interesting.

Admiral RICHARDSON. We will have to see where it goes, sir. I will tell you. Certainly the small ones, we are thinking about those in sort of mine countermeasure missions where you want to send that unmanned system into a minefield towing a very capable platform, so that is—

Mr. CARTER. I can see that.

Admiral RICHARDSON. Medium size. The Commandant and I are talking about how you can use that for lift, intra theater lift to move equipment for the Marines, move Marines themselves. This is something that will free up, you know, a lot of manpower for other things that only people can do, and so this is sort of the effort and all the way to, as you said, potential weapons employment as the technology and the policies develop.

Mr. CARTER. Well, I love people that think outside the box. The General acts like he wants to say something.

General NELLER. I just—I think if you are using a kinetic weapon, I think normally as there is today, there is going to be a human being that is going to make the call on whether you are going to engage or not unless the situation is so dire, like an air attack by, you know, a large number of swarming drones, for example, and you don't have time for the human to do that. Then there has got to be a machine interface.

But I think right now, I think, as the CNO said, a lot of this is you have surface vessels that are able to move fuel, supplies, things that go from A to B ahead of the other force, or they are prestaged, or maybe they are submersible, and then you arrive, and they come to the surface, and then they come in which eliminates your ability to have to haul this stuff with you.

Now, most of this is going to require a network that is reliable and resilient and protected. So I mean, at the end of the day, on top of almost everything we are doing, whether it is delivery of munitions, whether it is navigation, whether it is secure communications, we are going to have a reliable secure network.

But this is stuff that is happening right now. I mean, there is things, and we just have to scale it. I mean, like you said, finding this stuff under the water which has always been really hard for a human to do, now we think we have got a way to do that and to find obstacles or mines or stuff like that and then potentially take them out in a very ineffective—in a very inexpensive but very effective way.

Mr. CARTER. Thank you very much for giving me a good picture of that. Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Ruppertsberger.

#### UNITED STATES NAVAL ACADEMY

Mr. RUPPERSBERGER. Yes, Mr. Secretary. Thank you for being here. And I just want to acknowledge Admiral Richardson and General Neller. You managed during some very difficult times including sequestration which is probably one of the worst things this Congress has ever done to our country and to our military. And you were able to go through that, and we respect you, and we wish you well in your future lives.

I want to talk to you about the infrastructure at the Naval Academy, Mr. Secretary. Prior to 2013, the United States Naval Academy operated under what they called a flagship agreement which was instituted in 2005. And this agreement ensured a minimum level of funding for maintenance of the United States Naval Academy physical complex and provided for recapitalization of facilities.

By 2012, the United States Naval Academy was receiving about \$36 million per year for sustainment and \$35 million per year for renovation and modernization. However, sequestration and other budget factors placed pressure on the infrastructure spending which led to reductions at the Naval Academy. This caused a significant backlog of maintenance and deterioration of the United States Naval Academy's infrastructure.

In 2017, a new agreement was implemented which provides approximately \$30 million per year in sustainment funding for the Naval Academy and starting in 2020, \$15 million per year in recapitalization funding, and starting in 2012, \$15 million per year in the recapitalization funding but only every other year.

Now, I have been on the board there for 10 years. I am Vice Chair of the board right now, and part of the reason that we have Members of Congress on the military boards is to advocate for them. I know that Steve Womack is on the West Point board. Then we have the Air Force. I think these institutions are one of the reasons we are still the most powerful country in the world, but we need to support them.

The infrastructure of the Naval Academy is basically falling apart. There have been newspaper articles about it, Bancroft Hall there is fungus and all in the dorms, and it is just a matter of funding, and it is really, really important. I know the Naval Academy which, you know, we all worked to get this done, have built a new building for cybersecurity which is really important. And that is going to be very positive, and in fact, that was the fastest curriculum that we had moving ahead and with people graduating in the cybersecurity end.

So what I really want to really say is that—or my question is the Navy considering an adjustment to its budget in the out years to resolve the issues, and I am not going to go over them now. I think you know what they are. The Naval Academy can stop deferring maintenance and sustainment. These institutions, in my opinion, are as good as any Ivy League school; the training, the honor, the commitment to whatever their expertise is going to be once they graduate.

So I am asking you the question. What can we do to get help get more money? We are willing to do this on our board. Steve, I am sure you are having some of the same issues, and again, a lot of it goes back to sequestration which hopefully we will resolve that once and for all.

Secretary SPENCER. Congressman, music to my ears. This is when it all comes down to portfolio management, to be very frank with you. Yes, I could deal with more money. I do not want to ever see the Navy investing 70 percent in infrastructure ever again. We will not do that because as I said in the opening comments, infrastructure is a direct correlation to readiness, and when it comes to what we just did with our education for sea power which was the study that we just did, education is our answer to a root cause problem which is to make us that much smarter out in the war field. We can expand the competitive advantage if we fight smarter. That starts with our educational institutions.

In the Navy alone, I have three. I have not only the Naval Academy, I have the Naval War College and the Naval Post Graduate School, all suffering from the same thing. I will make you a commitment. We will try to put every single dollar we can forward to improve those because we must.

Mr. RUPPERSBERGER. Well, with that regard is end game, and I would like someone from your staff to work with my staff to make sure we start focusing on this amount of money. I am sure Steve will be when it comes to the Army, but the bottom line, we just don't want to be in a hearing and hear what we want. We want to get it done, and we can both do it together, I think.

So when this hearing is over, I will have my staff get with you, and then we can decide where we can go, what the plan is to help resolve this issue once and for all.

Secretary SPENCER. Congressman, I would love it, and I would also like to think outside the box. I would like to open up more authorities to the foundation so we can get private dollars to help us.

Mr. RUPPERSBERGER. Well, you know, there are a lot of private dollars coming in. Unfortunately, they might not be focused where they need to be. That is another issue.

Secretary SPENCER. That is where we might need some authorities.

Mr. RUPPERSBERGER. It is a very active alumni that is working on that right now.

Secretary SPENCER. Exactly. Look forward to working with you on that.

Mr. RUPPERSBERGER. I yield back.

Mr. VISCLOSKEY. Mr. Diaz-Balart.

#### LITTORAL COMBAT SHIPS/SUPPORT FOR SOUTHCOM

Mr. DIAZ-BALART. Thank you, Mr. Chairman. Gentlemen, thank you for your service to the country.

Let me talk for a bit about this hemisphere. The Navy operates some of its *Perry*-class frigates in the Caribbean to assist the Coast Guard with drug interdiction, but those ships are obviously retired, so that stopped happening. And so what we hear is about 25 percent of what we see coming up from that part of the world coming to the United States to poison our families, our kids, we are able

to intercept. And the Coast Guard continually repeats something that we think makes a lot of sense which is a lot more effective and efficient to intercept there than when it comes and already hits our streets.

Secretary, you, I guess, wrote a letter in December of 2017 asking that the Navy provide at least four Littoral Combat ships and expeditionary fast transfer ships to once again support again, the counterdrug, counternarcotics, again coming from the southern part of our hemisphere. Your letter noted that the figure of four ships was well below SOUTHCOM's request amount which is obviously accurate. And more recently, in February it was reported that a single LCS with an embarked Coast Guard law enforcement attachment will be headed to SOUTHCOM this year to combat, again, these type of operations.

So where do things stand now as far as the Navy support for SOUTHCOM, for the counter drug operations? Has the Navy been able to provide the ships that the Secretary has requested? If not, what level of support is there available and can be provided, and when does the Navy anticipate being able to provide at least four of the ships which again, as you mentioned, Mr. Secretary, is below what a lot of us and what SOUTHCOM believes the need is. So what are the plans, and where are we on that?

Secretary SPENCER. So Congressman, just a month and a half ago, both the CNO, or you actually went down sooner than that, and I have been down into the South American remaining specifically spending time with the folks in Colombia and Brazil talking about exactly what could be done in coordination with Admiral Fowler. There obviously is a need.

The LCS, which would be a great ship in this regard, now that we have them coming back into deployment have been working with the CNO to see how we can actually have those deployed down in that area, and I will turn it over to the CNO.

Admiral RICHARDSON. Just as the Secretary said, it is really a multi-full spectrum approach that we need to take, so not just the U.S. contribution. It would be a joint effort, the Joint Interagency Task Force that is down there, and we work also very closely with our Coast Guard partners.

I am reviewing plans to send LCSs down there now on a more habitual basis. They can really help with the final intercept part, particularly with the law enforcement detachment that you mentioned that brings the authorities to do that type of intercept. And then as the Secretary alluded, are working very closely with allies and partners in the region to just really kind of have a full court press on this area.

Mr. DIAZ-BALART. I appreciate this. You know, DIAZ, one of the things that—and really, Mr. Rogers is the one who always kind of reminds us, unfortunately, of the number of Americans that, frankly, lose their life every year.

Is it 70,000, Mr. Rogers, something like that a year?

Mr. ROGERS. Seventy thousand.

Mr. DIAZ-BALART. And again, you know, we can do better. And obviously, I know it has been an issue of not having the resources. So I am hoping that those days can be behind us, but it would be great if you could just keep us informed as to how that is going be-

cause obviously it is a huge priority for a lot of us in this subcommittee.

Admiral RICHARDSON. We will do that, sir.

Mr. DIAZ-BALART. I yield back. Thank you, Mr. Chairman.

#### OFFSHORE DRILLING IN EASTERN GULF OF MEXICO

Mr. VISCLOSKY. Mr. Crist.

Mr. CRIST. Thank you, Mr. Chairman.

And thank all of you for your service to our country. Appreciate you being here today.

Mr. Secretary, as I understand, the military uses the eastern Gulf of Mexico for research, testing, and training activities. Can you talk about the importance of these operations and how those operations would be impacted if the eastern Gulf were open to offshore drilling?

Secretary SPENCER. Congressman, those ranges are critical to not only the Navy, but the Air Force also in that area. The way that I think it is phrased, from a DOD point of view, which I agree on, is if, in fact, you can do mineral extraction and/or exploration subsurface, we would have no impact with that, or major issues with that. Where the primary issues are on the aviation range is anything that is sticking up in the air, to be very simple with that.

Mr. CRIST. So any drilling rig would be an impediment?

Secretary SPENCER. Traditional drilling rig. If, in fact, we could do it subsurface, which I am sure technology can probably provide us at some point, I think that would be a way to go forward.

Admiral RICHARDSON. Sir, if I could just add on, we are also, every time we have these discussions, work in very close coordination with the local community in particular to make sure that we are not overstretching, we are going to the minimum that we need to meet the training mission, so that we provide maximum flexibility for these other types of activities.

#### IMPACTS OF CLIMATE CHANGE ON MILITARY INSTALLATIONS

Mr. CRIST. Thank you.

I wanted to talk about climate change with you a bit. In January, the Department of Defense completed their report on the impacts of climate change on military installations. Apparently, the report found that 18 Navy installations are at risk—and 16 of which are currently at risk—of recurrent flooding. This report did not look at foreign installations, so the worldwide number is likely higher than that.

Can you talk about the problems rising sea levels are causing the Navy and what you are doing to try to mitigate the effects of climate change itself?

Secretary SPENCER. Rising waters, Congressman, are a continual concern. They are in our forward planning. Right now, one of our MILCON projects for Norfolk is flood control, flood prevention, in the Norfolk area.

But I will say that it is any major weather event, whether rising waters. Camp Pendleton, we worry about the fire impacts out there, wildfire impacts. We are continually working this into our assessment of risk.

## STAFFING AND TRAINING ISSUES

Mr. CRIST. Great. Thank you.

In 2017, we had back-to-back fatal incidents involving the USS *Fitzgerald* and the USS *John McCain*. Seventeen sailors lost their lives. According to a report by ProPublica, systemic issues dogged these vessels and ships across the Navy: inadequate training for sailors, working 100-hour weeks, vessels not properly maintained, a command structure that silenced senior military officers and Naval officials that spoke up with concerns.

I understand that the Navy is investing heavily in new technology and next-generation vessels, which is important to keeping our superiority. However, we need to also invest in the men and women who carry out the missions.

What have you done specifically to address the staffing and training issues exposed by these tragedies? And how can our committee be of further help to you?

Secretary SPENCER. Again, if I can give you an overview.

And then, CNO, if you would like to dive in.

Post the accidents, Congressman, as you know, CNO set out with the vice on the comprehensive review, and I set up the strategic readiness review. We just reviewed the numbers, at 111, and we have implemented 89 of these. These are critical. They range from policy procedures of turning on AIS, an automatic identification system, when transiting commercially heavily trafficked areas, to longer-impact educational and training devices, schools that we put together. We are committed to it. We are already seeing some of the better product coming out to the fleet.

CNO, turn it over to you.

Admiral RICHARDSON. Sir, I will just say that, as you said, this happened in 2017. We just issued our sort of 1-year report card in that effort. This remains our highest funding priority, and it really is a comprehensive approach. The manning situation in our forward-deployed Naval force in Japan is much different than it was then. The training, both the amount of training and the technology to support that training, is on a right-on glide path.

The schedule rigor of the commanders out there, really, to make sure that we provide enough time to do maintenance and training and that we adhere to the certification requirements, that was a big part of what we saw when we explored some of the causal factors—contributing factors, I should say—to the collisions. And then managing the surface warfare career paths.

So it has really been a comprehensive approach, as the Secretary said, many, many recommendations. But what we are really after is a climate change that the entire Navy learn from, but particularly the surface warfare community.

I can provide you that report card. It is completely releasable. And we have testified before this committee and other committees in Congress to make sure that we are keeping everybody as informed as possible.

Mr. CRIST. That would be great, Admiral. Thank you very much. Thank you both, and appreciate your service again.

I yield back, Mr. Chairman.

Mr. VISCLOSKY. Mr. Rogers.

## BLACK HORNET UNMANNED AERIAL VEHICLES

Mr. ROGERS. Thank you, Mr. Chairman.

Gentlemen, welcome.

General Neller and Admiral Richardson, I understand you are both fixing to retire, and we wish you much happiness in your next life. We profoundly appreciate your lifetime of service to your country. You have served it admirably, and it is something of which we are all very proud.

General Neller, I understand the Army, after years of research and investment, much of it advanced by this subcommittee, awarded a contract under the Soldier Borne Sensor program for the Black Hornet. That is a highly capable, squad-level reconnaissance asset, a small, miniature drone helicopter, with television capabilities, highly capable, to give troops and Marines immediate over-the-fence or around-the-corner capability both night and day.

Are you aware of that program, and that the Army is now putting it in place, General?

General NELLER. I am aware the Army is looking at a number of different unmanned quadcopters or small-squad element. In the past 2 years we fielded probably something a little bit more robust, because our experience has been you get in a little bit of weather and something that small tends to get buffeted around.

But I wasn't aware that they were actually at a program of record for that particular capability, Congressman, and so we will take a look at that.

But we clearly are trying to push unmanned aerial vehicles down to the smallest elements of the ground maneuver force so that they have the ability to look into buildings or look over the next hill, so they don't have to send a Marine or a soldier in there to do that. But I will take a look at that.

Mr. ROGERS. Well, tranche 1 systems are now being delivered to the Army for initial integration into the force. FLIR has delivered over 8,000 Black Hornet-named UAVs around the world. The research done by the Army over years is through and is now fruitful. So it would be a big savings for you to adopt this system rather than try something new and spend more money.

General NELLER. Well, we will certainly take a look at that.

## SOUTH CHINA SEA

Mr. ROGERS. Good.

Let me quickly change, Mr. Chairman.

South China Sea, this political tectonic plate collision that is occurring before our eyes. Tell us about the significance of what is going on there. And what are the Chinese doing to prepare and/or execute?

Admiral RICHARDSON. Sir, I will take that question.

The South China Sea, an extremely important body of water. As we talked about in my opening statement, really the United States remains a maritime nation. About 67 percent of our economy is directly tied to the seas, and about one-third of the world's trade flows through the South China Sea. Trillions of dollars of trade. And so it is extremely important.



We have great national interests in there, and our economy depends on that flow, which is why we are there. And we have been there for 70 years and we are not leaving, because we have got to protect those national interests.

We have been consistently steady. We haven't done anything to elevate our level of presence. But, as I said, we are there to make sure that freedom of navigation is maintained and to advocate for the rules-based order that has allowed all of the nations of the world, particularly in that area, to flourish.

China has taken a bit of a different approach, unilaterally constructing a series of islands and then militarizing those islands. They have been opaque about their reasoning behind that, and it has created a very uncertain situation as people are trying to figure out exactly what their motivations are.

And I would say that a recent development is that more of our—this is not a bilateral issue between the United States and China, this is a regional issue, and more of our regional allies and partners are realizing that and are starting to advocate for this same system.

Mr. ROGERS. Can you speak to the military implications of China's military goals of a Blue Water Navy and how this applies to the security of us, our allies, and our interests in the region?

Admiral RICHARDSON. Right. Well, when a nation's economy grows to the point that it has really reached the capacity of its continental bounds, the next step is to go overseas. And so China has—the People's Republic of China has been very vocal and transparent about their Belt and Road Initiative that they are using. A big part of that is our sea lines and harbors, dual-use harbors, and they need a global navy to secure that infrastructure and those trade routes.

And so they are building, in fact, the last 10 years they have transformed their Navy. They are building aircraft carriers, cruisers, destroyers, a very capable navy, increasing their submarine force, and everything new. The nation, they are the world's biggest shipbuilder.

And so this is a great challenge, that some of the asymmetric capabilities in our budget, in terms of unmanned, hypersonic, directed energy, are designed to address this increasing threat from the People's Liberation Army Navy.

Mr. ROGERS. Can you speak to the quality of the new ships and the new equipment that you are seeing out of China?

Admiral RICHARDSON. Growing.

Mr. ROGERS. I am sorry?

Admiral RICHARDSON. Growing more capable and higher quality every day.

Mr. ROGERS. Higher quality than?

Admiral RICHARDSON. Higher quality than they were before. Improving.

Mr. ROGERS. Higher quality than us?

Admiral RICHARDSON. In some areas they are probably peer, as good.

Mr. ROGERS. Thank you.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Ms. Kaptur.

## HYPERSONICS

Ms. KAPTUR. Thank you, Mr. Chairman.

As with others, thank you very much, Commandant Neller and Admiral Richardson, for your patriotic service to our country. It has really been a privilege to work with both of you and with all of those whom you have served.

I wanted to quickly ask first on the subject of hypersonics. Admiral Richardson, do you know if the Navy in selecting—how is the Navy involved, if at all, in the selection of at least three sites to expend over \$250 million? Were you involved in creating the criteria by which those sites were selected in any manner, or were other branches more involved?

Admiral RICHARDSON. Ma'am, I can speak in general terms about hypersonics, an extremely important capability. We are working with our partners in the Army and the Air Force to team together to make sure that we all are kind of playing to our strengths with respect to hypersonic vehicles and conventional prompt strike. But I would have to get more details on the sites that you are talking about, ma'am. I am not—

Ms. KAPTUR. Okay. As I understand it, it is at China Lake—let's see—Naval Ordnance Lab at White Oak, Maryland, and Arnold Air Force Base. The information I have shows these facilities will cost significantly more than other facilities that actually have been mothballed and are near ready. And I will give you a series of questions to answer, but I am curious whether the Navy has toured facilities that would be cheaper and take less time to construct and bring online for those test capabilities.

Secretary SPENCER. Congresswoman, if I could answer that. I would be more than happy to take those questions.

We have been working in lockstep with the Army and the Air Force. In fact, we signed a memorandum of agreement to work together on this, to find the most effective and efficient way to go forward, so we specifically won't be siloing each other's events.

I am more than happy to take this, questions from you, and respond.

## HARPOON BLOCK II

Ms. KAPTUR. All right. I would very much appreciate that, Mr. Secretary.

I have a follow-on question for the admiral.

And that is, in your procurement of Harpoon Block II do you know whether—how many contractors will be involved in providing those weapons to our country? To the Navy?

Admiral RICHARDSON. Ma'am, I just want to make sure I am accurate. I will take that for the record as well so that I don't misspeak.

I think about the capability that the Harpoon brings us, particularly the new ways that we employ it, but I would want to make sure that I link up with the Secretary in our acquisition arm to make sure that I am not—I give you the very latest data on suppliers.

## CIVILIAN WORKFORCE

Ms. KAPTUR. That will be extremely interesting for me to take a look at. And over the years, just so you know, Ohio has lost a capability that its people manufacture the internals of that missile, and no longer do for the most part. It is quite a disappointment to us, especially when it was one of the best missiles that the Navy ever had.

So just what has happened in the private sector is very interesting. And we are very disappointed in what has occurred over the years on that. So I just wanted to bring it to your attention.

Secretary Spencer, in your testimony you said that you have invested in civilian workforce, including enhanced hiring and training at our public shipyards, but you are sometimes short in the talent that you need. Could I ask you, have you ever networked with Great Lakes ports and public shipyards on the Great Lakes or just on the other coast?

Secretary SPENCER. Primarily the other coast. But when it comes to the Great Lakes, where we look to the private sector, Marinette has done a great job of reaching out into the community.

One of the things that we took as a best practice from some of our shipyards down south, to be very frank with you, was what they had done teaming together with their States to provide vocational training and/or technical expertise to allow candidates to become qualified for employment within our shipyards. I believe Marinette, the Lockheed-Marinette team up there is doing the same thing.

Ms. KAPTUR. Well, we would be very interested in having you suggest a way for us to bring some of our public shipyards on the Great Lakes together and maybe develop a program to help you provide the talent that you need, but we need to understand better what you are trying to do. And that would be of great benefit to us.

Secretary SPENCER. We will respond.

## EXPEDITIONARY ADVANCE BASE OPERATIONS

Ms. KAPTUR. Thank you.

And finally, Commandant Neller, in your testimony you say: "The Navy-Marine Corps team no longer relies on concepts and capabilities premised on uncontested sea control. We must establish a forward deployed defense-in-depth, anchored on naval 'inside' forces, capable of Expeditionary Advance Base Operations in support of the naval campaign."

I would like to ask you, in view of what is happening north of North America, with the melting of the seas, north of the Hudson Bay, could you talk a little bit from your perspective on what your statements relative to becoming more lethal, resilient, and capable competitors, a deterrent, with what is happening up there, what does that mean? What does it mean for the Marine Corps?

General NELLER. What it means for the Marine Corps, Congresswoman, is we know that the Russians have, not to the level they were during the Cold War, but they have reestablished bases and airfields and capabilities on their northern frontier, which would

allow them, dependent upon what the climate is or what the weather conditions are, to potentially control those sea lines.

Ms. KAPTUR. I would love for somebody to come and show me a map of that.

General NELLER. We can do that, but that would be—obviously, the actual, specific capabilities are classified.

So our ability, as all the U.S. forces have been focused, for understandable reasons, on the Middle East and the CENTCOM AOR for the past 17, 18 years, I think you find that the Naval force—Trident Juncture, the exercise we did in Norway last fall, is a perfect example. We are starting to operate again in the more northern climates because it is a different environment for you, not just because it is cold, but because it affects your equipment, it affects your personnel, it affects your aircraft, and it affects all the things that you do.

So we realize we have got to get back into operations into that area. The Expeditionary Advance Base Operations concept is a way—is kind of geographically agnostic, that you would go into an area, establish a base in support of the Naval campaign, where you could potentially control sea lines of communication from the land, where Long Range Precision Fires provide the Army, and then refueling for aircraft, to extend your range, which is kind of what the Chinese have done in the South China Sea. They are using that area to extend their range out into the Pacific.

So we are looking at, along with our shipmates in the Navy, how we can potentially occupy bases, regardless of the geography, be there, and then continue to maintain maneuver to create a dilemma for the adversary.

Ms. KAPTUR. Thank you very much.

Again, if there is anything—yes, Admiral.

Admiral RICHARDSON. I just was going to pile on to say that we have been exercising up there a lot more than we used to as well in response to this climate change that has opened up sea lanes, exposed continental shelves, et cetera.

And so starting, really, we have had a steady program up there with submarines. Every 2 years we go up there and surface through the ice and do a number of military and scientific experiments.

In 2018, we had an exercise, Arctic Edge, in March. We did the ICEX in March and April. We took a carrier strike group north of the Arctic Circle in November of last year for the first time since 1991. We did an exercise in February this year up there, and we are planning for an amphibious exercise with our partners in the Marine Corps later on in September.

And so in response to that changing security dynamic, the Navy-Marine Corps team is exercising and regaining those skills it takes to operate in that environment.

#### BLACK SEA

Ms. KAPTUR. Not to abuse my time, could I just say, could you comment on the Black Sea and what you see as the role of the free West in what is happening there.

Admiral RICHARDSON. Well, like the South China Sea, we are present. We have a destroyer in the Black Sea at regular intervals

to make sure that that doesn't become a denied area for us. And like the Western Pacific, very much a regional issue. We have got to continue to strengthen our partners there by exercising with them so that they are more resilient, particularly to the challenge posed by Russia at sea.

Ms. KAPTUR. Thank you all.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Ms. McCollum.

#### RUSSIA AND CHINA ACTIVITIES IN THE ARCTIC REGION

Ms. MCCOLLUM. Thank you.

You have had a couple of questions on climate change and what is going on in the Arctic, and I am going to follow up on that a little bit.

As you alluded to, the sea lanes are opening. Both China and Russia are working hard on establishing themselves in a northern sea route. They are investing in an Arctic posture. And that is going to create security vulnerabilities, not only for the United States but for some of our allies in the Arctic.

Last month, CNN reported that a new Russia base in the Arctic Circle; also reported that Russia has 50 percent of the Arctic coastline and is working to expand it by another 1.2 million square kilometers. So clearly, and you know it well, our adversaries are active up there.

So if you don't have all the information you would like to present in a short period of time, I would really like for you to share with the committee an update on Russia's and China's recent activities in the Arctic region. Or if it needs to be done in a different format, please work with the chair on that. What type of weaponry our near-peer adversaries are introducing and how are our allies, especially in the Scandinavian nations, are viewing these activities. I have had some quite frank discussions with some of the Nordic nations.

And so how does this fit into your budget request in 2020 with looking at what we need to be doing in the Arctic?

And as you know, Congress finally—and I do mean finally—appropriated funds to construct the first Coast Guard heavy polar icebreaker in over 40 years. We are way behind in the icebreaker updates. And even though the Arctic is slowly melting, ice is always going to be a problem up there with storms and navigation and that. So what is the Navy looking at as far as having assets for icebreakers in the future?

So I know I asked a lot of things kind of rolled together, but some of us, as you can tell, are really starting to track this with a great bit of detail.

Admiral RICHARDSON. Yeah. And, ma'am, we are tracking it as closely as that as well. Partnering with the Coast Guard in terms of acquiring that icebreaker, so we have got a joint program office that is helping them do the shipbuilding decisions. We have just recently signed out the strategic outlook for the Arctic, which talks about our need to, one, continue to defend U.S. sovereignty and protect the homeland from attack from the Arctic, to ensure that the Arctic remains stable.

And so there is a strategic approach to this. I would be happy to bring you all the details on that.

And then, as I pointed out through the last question, exercising more and more up there. We are finding that a lot has changed in the last 20 years, but it is still really cold and heavy seas up in the—north of the Arctic Circle in November.

So a lot of this is just taking some old books, updating those lessons, and getting back up there, and so this is the way that we are addressing that.

#### ENVIRONMENTAL REMEDIATION

Ms. MCCOLLUM. Well, there are certainly cold weather places to train besides Alaska, too. We have a National Guard unit in Minnesota. I know General Waldhauser from South St. Paul, Minnesota, is in Africa. It is a little warmer working in AFRICOM. But we certainly have cold weather conditions up there and work a lot with the Norwegian Home Guard. So I look forward to learning more about this.

I am late to this meeting, in part because I am the chair of the Interior Appropriations Subcommittee that oversees the EPA. I am going to really switch gears on you and talk about environmental remediation, particularly the cleanup of the PFAS and PFOA.

I am very alarmed by what I keep reading in the paper about the Department of Defense looking to set its own standard for cleaning contaminants, maybe having one standard for water, another standard for soil contamination. And it is not up to the Department of Defense—and the chair and I have made this very clear—to decide what the standards are. It will be up to the EPA, not the Department of Defense, what is important for life, health, and safety for our men, women, and families who live on our bases.

So to get down to where you folks are, there are 401 known locations that the Pentagon has reported. The Navy and Marine Corps have responsibility for 127 of them. And I realize in your current positions you are on the receiving end of the OSD policy and guidance. But in 2019 Congress appropriated millions of dollars toward sampling, site investigations of these two contaminants on DOD installations.

If you can't do it today, in the near future—and I do mean in the near future—can you walk us through the Navy's process for allocating these future fiscal year 2020 resources for cleanup, and explain how you focused your 2019 environmental restoration funds?

And additionally, we are hearing a lot about firefighting and foam contaminating from these chemicals, particularly contaminating groundwater, and that is a problem anyplace where there is an air base, airfield, as well in the civilian side. So this is a national problem, but it is a problem for the Department of Defense.

So what additional capacity do you need in either identifying or cleaning up these pollutants to the best standard possible? Can you comment on what the Navy and the Marine Corps has been finding with PFOA?

Secretary SPENCER. Certainly, Congresswoman. I would like to start by saying DOD is not looking to set, from my observation from Navy, to set the standard. They were just commenting on the standard. It is going to be set in an open forum.

But more importantly, we are everyone's neighbor in which we live and we are a responsible neighbor. We have proven that in all our previous cleanups when there are issues. I am dealing with one in Bethpage right now.

If I was to make an overarching headline, while we have 147 points, there are 630 airports in the United States that did the exact same thing that the Navy has done. This is an all-of-government approach.

I would beg of you to either take this to the EPA, where we can get standard and qualification to have a superfund to pull on, like we are doing with the spills we are working on in Bethpage, as an example.

We are more than happy—and we have done this historically—to apply our resources to monitor, whether it be Red Hills, whether it be Bethpage, to make sure that we are an environmentally responsible neighbor.

When it comes to cleaning up, this is an issue that I really truly believe is an all-of-government approach, because when you look at DOD, we are a minority in the whole players nationwide.

Mr. CALVERT. Will the gentlelady yield on that subject?

Ms. MCCOLLUM. I will, and I have a followup, but I am happy to yield to the gentleman from California.

Mr. CALVERT. I thank her.

We had this discussion recently. And the technology that is being used today, the old technology of pump and treat, is not working.

And there are new technologies out there, biologicals and so forth, that do work at less cost and clean it up 100 percent. And EPA has been slow to move to these new technologies by just bureaucrats and so forth.

And I would hope that the DOD can show the way in cleaning these sites up using these new types of technologies, and maybe we can use this across the spectrum of all these sites throughout the United States, not just on DOD facilities, but facilities all over the country.

I just wanted to make that point. Thank you.

Ms. MCCOLLUM. I thank the gentleman for his comments, and I share what you were saying. And that is why I was very clear that this is a national, and it is an international, issue.

But having worked on cleanup from Army facilities—and many of us in the room have—the DOD comes in and says: Oh, we are only going to clean to industrial standards. Industrial standards are not the same as being a good neighbor with State standards in Minnesota. The Minnesota Pollution Control Agency has been successful in getting remediation cleaned up to our State standards, which are higher, and in redeveloping land, making sure that they have been cleaned up to residential standards.

And because you have such mixed use on the bases with people constantly coming in contact, sometimes family members present on certain parts of the bases with certain activities and that, I really think we—and I mean the Federal Government—we need to be challenging ourselves to go to the highest standards when it comes to cleaning up these contaminants.

So I want you to know, I stand ready to work with you, the chairman and I. I am asking the same tough questions of the EPA.

We cannot just sit on our hands on this, nor can we just say, well, we are going to just clean up to this standard here because it is industrial, and it will be less money, because these will be legacy issues we will be leaving forward.

And there are also things that we are going to have to address in this committee, as far as, as these contaminants emerge, with our servicemen and -women who have been exposed to them, just as firefighters and other people have who come in direct contact with massive quantities of these chemicals.

Secretary SPENCER. I am sure you have heard the statistics, Congresswoman, that 87 percent of Americans test positive for it in their blood serum. So it is everywhere, it is not just firefighters, it is not just the military.

Ms. MCCOLLUM. I am very familiar, very familiar.

Secretary SPENCER. Yeah. It is a whole of government. We have got to get the EPA, yeah.

Ms. MCCOLLUM. I understand that, and I said that, but I am saying that the Department of Defense has a special responsibility, the Federal Government has a special responsibility to clean up some of this. I mean, you look at the budget in the Department of Defense, I think we can come up with environmental remediation.

Secretary SPENCER. I am not disagreeing with you. We are totally in line on this. All I need, is, I need policy and guidance, and that is what I am asking for.

Ms. MCCOLLUM. But I am also saying that certain job occupations—and I realize it is in the bloodstream. I am pretty familiar with this stuff. But some people, with their occupations, have been more exposed to it than other individuals. Some people have come in greater contact with it than other individuals. And we need to do our due diligence now, rather than have another Agent Orange or something else—

Secretary SPENCER. Totally agree.

Ms. MCCOLLUM [continuing]. Where we are dealing with It later. That is my point.

Secretary SPENCER. Yeah.

Ms. MCCOLLUM. You have people here who want to work with you to keep it—

Secretary SPENCER. We are in violent agreement.

Mr. VISCLOSKY. Mr. Secretary, you just said that you need policy and guidance to proceed. From who?

Secretary SPENCER. Well, it would be great to have an EPA standard where we are all working in the same—off the same page.

Mr. VISCLOSKY. Of course.

Mr. Aguilar.

#### ADDITIONAL VIRGINIA-CLASS SUBMARINE

Mr. AGUILAR. Thank you, Mr. Chairman.

Mr. Secretary, a third *Virginia*-class sub has been added to the Navy's budget request for fiscal year 2020. What complications do you foresee in adding this additional submarine? And do you believe that industry has the shipyard capability to handle the increase?

Secretary SPENCER. We do believe they have the capacity to build this. It will build as a later ship. But as stated earlier—I can't re-



member if you were here, Congressman, or not—combined with the *Columbia* and the *Virginia*, this is—the *Columbia* being our number one acquisition program, *Virginia* right alongside it—they are both being built in the same, quote/unquote, industrial environment.

We are very attuned to the fact that there is little margin involved and there is risk present in the development of a new program. We are sitting down with industry next week to go through specifically, step by step, what is available out there, where the risks reside, and what the calendar line looks like.

May 16, we are sitting down with the CEOs, myself and the three CEOs, and acquisition, and walking through what are going to be resources applications on all team sides.

Mr. AGUILAR. I appreciate it.

Admiral RICHARDSON. Sir, if I could just add on to that.

With respect to the attack submarine, it is the warfighting platform that is furthest below its warfighting requirement, right, so we are headed down to a force level of about 40s, and we are—against a requirement in the mid-60s. And so this is why we prioritized that submarine in fiscal year 2020.

Mr. AGUILAR. Sure. Larger deficiency, greater need.

Admiral RICHARDSON. Right.

#### UNMANNED SURFACE VESSELS

Mr. AGUILAR. I understand.

Mr. Secretary, could you go into a little depth on the Navy's plans to build multiple unmanned surface vessels over the next 5 years? What will be the main function of the vessels? And how do we get from the R&D phase to the procurement phase?

Secretary SPENCER. Unmanned, whether air, surface, or underwater, is going to be a key area. It already is a key area of research and development, an application for the Navy going forward. We are now in the learning phase of what we will do with that.

But I mean, as you have seen with *Sea Hunter*, already made a successful transition from San Diego to Honolulu and back, unmanned, using COLREGs, the rules of the road for surface navigation. Great hope here.

What would it be? I defer also to the Commandant and the CNO in this case. I see it as additive capacity. They might have a finer point on it. But, again, if I was to use an analogy, the Ford F-150 truck, to help existing ships have more capacity. Also in logistics, being a backbone for logistics, freeing up jobs that might be done more with a human interface. Those would be the two primary areas.

Admiral RICHARDSON. Sir, I will tell you just, we are looking at a family of unmanned surface vehicles just to focus in on the surface unmanned issue. The small ones that would go into mine fields, they would be towing sensors. They could find in-water and bottom mines. Obviously a much better option than sending a manned platform into a minefield. And so this is a use for the smaller ones.

The medium-sized vessels, we are partnering with the Strategic Capabilities Office so that we can buy some of those. We could use those, as the Secretary said, just for logistics, to move things

intratheater. We could use those possibly for decoys, payloads, a lot of different possibilities there.

And then we have got to think about a larger version of this as well as we mature the algorithms and such that will allow for more and more autonomous behavior.

Mr. AGUILAR. And what could we expect from a projected timeline when we come to that from the R&D side over the next—

Admiral RICHARDSON. It is happening right now. It is very vigorous in this budget. We are looking at north of 200 unmanned systems supported in the budget, including surface vessels.

Mr. AGUILAR. So in, again, walking through kind of a hypothetical, let's say 5 years out, fiscal year 2025, what can we expect a future budget request would look like when it comes to unmanned?

Admiral RICHARDSON. All of that is contained in our current 5-year request, and so we would be looking at about 226 unmanned vehicles, yes, sir.

Mr. AGUILAR. Thank you.

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

#### CHILDCARE

Mr. VISCLOSKY. Thank you very much.

Admiral, I would like to talk about childcare, and, Commandant, as well. The Navy, as I understand it, currently has a wait list of about 7,800, with the bulk, about 68 percent, in the most heavily populated installations—San Diego, Hawaii, the District of Columbia metropolitan area, and Norfolk. The Marine Corps waiting list is smaller. It is 573 people, as I understand it, today.

Given that, looking ahead to 2020, the Navy is not planning on increasing the number of child development centers or family care homes, even though the number of facilities has remained stagnant for the last 2 years. It is my understanding that the Marine Corps also is not looking to expand the number of daycare centers, if you would, even though that has also remained unchanged for a number of years.

For the budget for 2020, the Navy is asking for what looks like a \$50 million increase in spending for daycare. My understanding is, in fact, it is a \$7 million increase over this year's spending. The Marine Corps is looking to, in their request, spend \$11.8 million less than they did 2 fiscal years ago.

I think of people wanting to serve in the military and worried about their children and only at a base for 3 years or 2 years, or less than that if they are deployed. What is the problem here about not providing more daycare services? I mean, 7,800—over 8,000 people under your commands waiting for daycare here. And there are no plans in 2020 to increase that capacity.

Admiral RICHARDSON. Sir, I will take a first stab at this.

We agree 100 percent. And as the Secretary said in his opening statement, you can recruit a sailor, but you are going to retain a family, and a lot of those decisions are going to be made based on childcare.

As you pointed, in some of our greater fleet concentration areas is also the area where we have the longest waiting list. We are about probably 75 percent of our total projected need.

We look forward to expanding that capacity. The quality is something that we think is about right, but it is just we don't have enough.

Another option that we have looked at is to provide some subsidies so that, if you can't find it on base, you can go out into town. But in those population centers where our bases are, the childcare situation is even worse outside the gate. The waiting lists are longer and there are even fewer spots being met. It is another national problem where the Navy and the Defense Department are a part of that.

We look forward to looking at every possible solution. Admiral Mary Jackson, Chief of Naval Installations Command, has solicited, put together some teams to look at every possible idea, and we look forward to working with this committee to mitigate this shortfall.

Mr. VISCLOSKY. But there is no request for additional facilities in 2020. When is this going to happen?

Admiral RICHARDSON. We will take a look at it, sir. But you are right, there is nothing in 2020.

Mr. VISCLOSKY. I appreciate, in the absence of facilities, the subsidies. And you are right, it is a very uneven world out there. I remember when my son, who is in his thirties now, was born. My wife and I had every resource in the world and it took us 9 months to find good daycare.

Admiral RICHARDSON. Right.

Mr. VISCLOSKY. And I am thinking, recently being in San Diego—I don't want to pick on southern California—but if I have a subsidy and it is a great daycare center off base and I am living somewhere else in the metro facility, I am getting up at 4 o'clock in the morning, by the time I get my kid to daycare. And then I get to the facility to start working, let alone then I got to go pick my child back up and get home.

And looking forward to dealing with this with a backlog of 8,000 people between the two commands and not having any plans next year, in 2020, to deal with it, I don't think that is looking forward to dealing with it.

Admiral RICHARDSON. Right. Yes, sir. We will address that, maybe not with facilities this time, we are still studying the requirements, to see that there are other creative possibilities. But we do agree with you 100 percent, this is a chronic problem and we have to get after it.

Mr. VISCLOSKY. We are going to mark up our bill very shortly. We are in the process of putting the pieces together. So time is of the essence. But I do not want to wait until fiscal year 2021 to work down that list of over 8,000 marines and sailors who are desperate for daycare. I am really looking to work with you, I think we are all agreed, in 2020 to start dealing with this problem.

Admiral RICHARDSON. We will work with you, and we will meet your timeline. And we do look forward to participating in the national problem that is childcare. So you mentioned San Diego

County. If I go out, the shortfall in San Diego County is almost 200,000 spots.

#### LOSS OF LIFE

Mr. VISCLOSKY. Right.

Admiral, another question is, unfortunately, an 18-year-old female recruit died at a Navy boot camp in Great Lakes last week. My understanding is that earlier this year a 20-year-old female recruit died while undertaking her own physical fitness assessment.

I don't mean to trivialize the loss of two lives by saying, is this an aberration? But what were the circumstances? Is there a pattern? I am struck that both of the recent deaths are female recruits.

Admiral RICHARDSON. To the degree that we have investigated it so far—and some of the investigations are still in progress—there really is not a pattern between the two, and it appears that there is no smoking gun or anything that we can point to in terms of some precaution that we should have taken or something like that. But we continue to investigate it, particularly in light of this most recent, second passing.

#### SUBMARINE MAINTENANCE

Mr. VISCLOSKY. Okay. What I would like, and then I turn to Mr. Calvert, is have a discussion about submarine procurement as well as submarine maintenance, but particularly a focus on maintenance.

The budget request has \$11.6 billion in for procurement—we have had a number of people touch upon submarines—for three *Virginia*-class submarines, advanced procurement for one *Columbia* class, and advanced procurement for two *Virginia*-class submarines.

Because there has not been any advanced procurement for that third submarine that is in the request for 2020, my understanding is that would be a ship for 2023, give or take.

Talking about maintenance, from fiscal year 2012 to 2018—and this is cumulative for—and I will just talk about submarines for a moment—had maintenance delays of 7,321 days. Looking at a graph from GAO, it would appear, for fiscal year 2018, that for submarines the number of day delays is somewhere between 1,750 and 2,000. And I am struck that the graphs for surface ships and submarines all tend over those years to move to the right with longer numbers.

The Navy has requested in excess of \$10 billion in base and OCO for maintenance funds for these types of activities. The Navy has also submitted unfunded requests for \$814 million. That figure includes \$653 million for submarines, and I want to focus on three in particular.

It includes \$290 million for the USS *Boise*, \$306 million for the *Hartford*, and \$57 million for the *Columbus*. And all three, as I understand, are *Virginia*-class. Currently, *Boise* and *Hartford* are in dry dock. *Columbus* is in need of repairs.

According to a GAO study on Navy readiness, the *Boise* was scheduled to enter shipyard in 2013, but due to several delays the

Navy has postponed their repairs. The *Boise* has now lost its dive certification as of February of 2017.

So we are asking for additional submarines, and we have got two in dry dock and another one waiting. And for those three submarines in particular, they are asked in the budget, in the unfunded requests. And the additional *Virginia*-class wouldn't be ready until 2023. I don't understand the economics of that at all.

Secretary SPENCER. If I could start, Mr. Chairman, and then, again, more than happy to have the CNO dive in.

At the whole level of ship maintenance, am I satisfied? No, not at all. And I don't want to pull out a crying towel of sequestration, but on historical review on my part, that really did hurt us as far as allocation of dollars, where we were putting dollars forward.

Let's talk about where we are and how we are getting out of it. The shipyard modernization program is one of the keys to get flow, maintenance flow, through our shipyards.

That unto itself is not an inexpensive program. I think I have said this before, yes, I like buying new things, but by God, I like fixing old things I have to get them back out into the fight.

We expanded our capacity by having private shipyards assist in the maintenance of our submarines. To be very frank with you, that has not gone as quickly and as fast and as efficiently as we had expected. We are addressing the issues at hand.

The increase in manpower in the public yards is addressing that. It is not moving as quickly and as fast as we would like, to be very frank with you. But we are having improvement, albeit incremental.

CNO, I don't know if you want to—

Admiral RICHARDSON. Just I think the Secretary captured it. There are a lot of different aspects in your question, Mr. Chairman. There is the new shipbuilders, primarily for submarines, Electric Boat and Newport News Shipbuilding. That is one industrial base, if you will. They do some repair. There is the public shipyards that do our nuclear power warship repair. And then there is the private shipyards that do our surface ship repair.

All of these, I think, were leaned out. They are on the recovery path. I would say that if you look in the aggregate—and I look forward to bringing you those numbers—the amount of idle time, if you want to call it that, has been shrinking over time for ballistic missile submarines and carriers, and we are looking forward to bringing that discipline into the SSN world as well.

Secretary SPENCER. Mr. Chairman, I want to make sure everyone doesn't leave here with the wrong impression. We are after this issue. I mean, this is one of the key issues that we are working on, in the sustainment side of the house, is how we get flow through so we can get our ships back out onto the sea. Submarines are a prime example.

Mr. VISCLOSKEY. I appreciate the consequences of sequestration, but that was some time ago, and the Congress has provided a lot of relief.

And I guess my specific question still remains. The Navy, for the first time now, has put the third *Virginia*-class in. I am not saying I am for it or against it. They put it in.

I have got a *Boise* that was scheduled for 2013 that has now lost its certification, and it is in the unfunded requirement request. It is not even in what you are asking for this year to catch up on your maintenance.

Secretary SPENCER. I see them as two different—I am sorry.

Mr. VISCLOSKY. And the third is not in your request for 2020. It is in the unfunded request list. And the *Columbus* is in the unfunded. You got three subs out there, two of which are in dry dock, and they are not even in the basic request for 2020, and I want another sub.

Secretary SPENCER. The other sub, Chairman, is we have our retirement schedule—

Mr. VISCLOSKY. Let me ask you this. Why didn't you ask for the money in the maintenance for these three ships for 2020?

Admiral RICHARDSON. Some of this is a matter of what we discovered. Some of this is a matter of industrial capacity. So with respect to the *Boise* in particular, it is a little bit of a timing, right?

So the public shipyard—I am sorry—the private shipyard that was designated to do the *Boise* repair is currently still working through other submarines that they are doing. So there is a bit of a cascading effect that is at play as well.

Mr. VISCLOSKY. I know maintenance is different than procurement of a new sub. But the fact is, if we have a problem as far as capacity in the request from the administration, we don't have a capacity problem as far as asking for a new sub, we have got a capacity problem on repairing three existing subs.

Mr. Calvert.

#### AMPHIBIOUS SHIPS

Mr. CALVERT. Well, since we are on the subject of maintenance and what we are trying to do to address those issues, we also have a problem, not just with submarines but with the amphibious ships that the Marine Corps relies upon, and new amphibious ships where we need lift capability, obviously.

It is good to have a capable Marine Corps, but you have got to get them to the fight. And it seems to me that we have some challenges when we talk about the status of our amphibious fleet.

Do you want to comment on that, General?

General NELLER. We are in a similar position. And, again, as a Marine, I have tracked the readiness and the maintenance of all the amphib ships, of which we are up to 33 with a requirement of 38.

So I think I am not familiar with the yard issues that deal with other platforms, but in talking with the CNO and his staff that help us with this, it is a similar issue with contracts and finding things in these ships that they contracted for a certain amount of work, and then they got into the middle of the ship and then they found other stuff, and then they had to relitigate the contract. So there are a lot of reasons, no excuses.

But I think we are making some progress. We keep track of that. Ideally, we would put a ship in the yard, it would have a scheduled time, it would come out on time, and it would fill the deployment schedule.

On the big decks, it is a more difficult challenge because you are having resurfacing going on, because you have to resurface the deck in order for it to handle F-35s. So there are certain things you have to do in addition to that.

So I would think—I am not going to speak for the Secretary or the CNO—I don't think any of us are where we want to be, but I think we are well aware of the problem and we are working hard with the yards to try to get these ships out and try to avoid any second and third extensions.

And so we will work with that. It does impact on the deployment schedule from time to time and we have to adjust. So we are tracking it. It is not where we want it to be. But we are working hard with the yards to try to fix it.

Mr. CALVERT. It seems to me, Mr. Chairman, we have a capability—a capacity problem, too, in the domestic shipyard, which leads to the question, should we do a better job of incentivizing our domestic shipyard operations to take on more? Obviously, a tremendous amount of demand out there.

Secretary SPENCER. One of the things I want to make clear, Congressman, when I talk about sequestration, the dollars aren't what is the question here. During sequestration we lost people out of the industry who never came back. That is the biggest thing that it cost us, is that there was uncertainty, so they went to different professions. And now we are starting to respool up there. That is one of the biggest contributors.

I agree, we are trying to work with every single tool we have to incent. But there is the concept—you asked about the third submarine. You have gross hull numbers that we have to manage, and then we also have existing hull numbers. In those existing hull numbers, the maintenance clock never stops ticking. So I have got to get them through quickly. And when they sit there, they are still expiring.

So you still have to manage the gross hull number. That is why the third. Our top priority is to make sure that these attack submarines are available to us on a gross number. I am not apologizing for the maintenance—

Mr. CALVERT. I wouldn't disagree with that. But obviously, too, the United States is not a reliable customer because of all these other issues out there. And, obviously, if you are in the private sector, you are going to pick people that are going to pay their bills and do things on time and all the rest.

Secretary SPENCER. Exactly.

Mr. CALVERT. And so we have to be a better customer in the future.

That is one of the things—I will go back to where we started out, with what Mr. Womack brought up, is that we need to get this budget agreement completed, because if we don't have a defense budget or a defense appropriation bill on time we are going to have the same—we will go right back in the tank.

Mr. WOMACK. Will the gentleman yield?

Secretary Spencer, you just mentioned that we lost people in the trade, which we all knew was going to happen. I mean, when you mess around with certainty, people that are talented to do certain

skill sets are going to move to other things if we are not a reliable customer.

And I am concerned that we are sitting here today, tomorrow is May 1, and I am a defense appropriator, and I can't answer a question about defense appropriations in time for an October 1 deadline. And, of course, I spent last year working on budget process reform that I thought would fix part of this problem and we missed on that.

We could be headed right back into the same dilemma, could we not?

Secretary SPENCER. Yes, sir.

Mr. VISCLOSKY. Mr. Calvert.

Mr. CALVERT. I yield back the balance of my time.

Mr. VISCLOSKY. I will recognize—

Mr. CALVERT. Mr. Chairman, I am going to ask Mr. Womack to cover for me, because I have got to go to a meeting upstairs for a few minutes.

Ms. MCCOLLUM. I am just here learning.

#### PAC-3 MISSILE ENHANCED SEGMENT

Mr. WOMACK. I have got a couple more questions.

Admiral Richardson, I received a briefing showing that the PAC-3 missile enhanced segment would fit in a surface ship's vertical launching system and that this missile being agile, hit to kill, bullet-to-bullet technology can defend against hypersonic weapons, which we have talked about already in the brief.

What can you tell me about the possibility of this Army program of record missile being used on ships? Is this something that the Navy is exploring? And if not, should we be exploring this?

I know we talk a little bit about old strategies and new, with a new direction, those kinds of things, multi-domain operations, attacking old problems from new angles. What can you tell me about the prospect here?

Admiral RICHARDSON. We are working very closely across the entire Defense Department to look for efficiencies where we can, particularly in weapon systems, where we can use each other's warheads, use each other's boosters, that sort of thing.

Right now our Ballistic Missile Defense System uses the SM, the standard missile. Those are in production. That is how we have met that need to date, sir.

But I think there is enough warfighting demand for both the PAC-3 and the standard missile. That is kind of how we sliced it and diced it to date.

#### REPLENISHMENT OF STOCKPILES

Mr. WOMACK. And then finally, for anybody, particularly the Secretary, a little worried about replenishment of stockpiles. I can envision if we are in some kind of a great power competition and we end up with a major confrontation that we get a week or 2 into a conflict and we have emptied our stockpiles. A lot of this stuff takes a while.

So is that something that we need to be concerned about? I mean, some complex missiles, like HIMARS and Tomahawks, you just don't create those overnight.



Secretary SPENCER. Congressman, one of the great things that you gave us was the 2-year budget, and that sent the signal to industry, and we allocated the dollars. We did a whole analysis last fall on the global floor minimums for our weapons across services. But the fact that we had a 2-year, eye-to-eye, send the signal, got industry back in gear again.

Now, you are right, some still have a long lead time, we are not out of the woods, but we are making progress.

Mr. WOMACK. Yeah. And I will just say one more thing about budget process reform. The Secretary mentions a 2-year budget, and this is one of the changes that the Joint Select Committee had advocated, got right to the finish line, and could not quite get it across the finish line for a lot of really political reasons. But that 2-year budget, has been—was proven effective, was it not, to create certainty?

Secretary SPENCER. Instrumental. Instrumental. And you can ask any of our prime suppliers and/or supply chain members.

Mr. WOMACK. Thank you.

Mr. Chairman, I will yield back.

#### PROCUREMENT OF SHIPS

Mr. VISCLOSKY. And I would associate myself with the early remarks of Mr. Womack and Mr. Calvert that, to the extent you can, suggest to the administration strongly that—and there are three parties here, the House, the Senate, and—is, we can't wait until September 27 to start these negotiations—and do a 2-year deal.

Because I am convinced the will is here in the House and the Senate on the committee to get our work done by the first of the year, but it is all for naught if we don't get those numbers. So to the extent that you can do that, that would be a great service.

What I would like to do now is talk about procurement of ships. And as you are well aware, there was a GAO report that was unflattering, to say the least, relative to the deployment of new ships with either minor and/or major defects, and who ends up paying for those problems.

I have a series of questions for the record. But what I would like to focus on is, in the GAO report, they indicated that, on average, the shipbuilder pays to correct 4 percent of the flaws, while the government pays 96 percent. To determine this percentage, the GAO reviewed the contract terms for a nongeneralized sample of six fixed-price incentive contracts for the detailed design and construction of 40 ships in five different shipbuilding programs.

Would you have a response to how those costs for minor and major defects are paid for between the government and the contractor? Because we are talking defects.

Secretary SPENCER. Mr. Chairman, I don't at the tip of my tongue, and I will obviously get back to you on it. I am just thinking about some of the programs that we have in place right now, such as the LCS, which we are delivering with four-star on the star reports, that are coming out with literally no discrepancies.

If, in fact, these are the earlier ships—and you gave me the universe, so allow me to get back to you if I could. But our present line, I look at DDG. I look at LCS. I look at the learning curves we are doing there. They are quite impressive. First ships, as you

well know, are always pretty dramatic. That is a large universe you have provided, so I would like to be able to respond for that record.

Mr. VISCLOSKY. With that historical record, I think it is all the more important to——

Secretary SPENCER I agree.

Mr. VISCLOSKY [continuing]. Protect ourselves on the contract side with the vendors when we deal with them and understanding the historical issue.

I would ask, for the record, information on the *Gerald Ford*. The *Gerald Ford* was delivered to the Navy in May 2017. This is not the distant past. It will not be deployed until 2022. But there were numerous deficiencies in systems that have been identified, including the main turbine generators, the Electromagnetic Aircraft Launch System, the Advanced Arresting Gear, the advanced weapon elevator, Dual-Band Radar, and the integrated warfare system.

What I would ask, for the record, is if you could, just in this one instance for the *Ford*, break out how much of a delay each of the system deficiencies caused to the program; for each of the deficiencies, the total cost overrun to fix each of the systems; and finally, to split between the contractor and the government as to who will pay for it.

Secretary SPENCER. We will do that, Congressman. I can tell you right now that the October 15 date, the biggest issue that we are looking at right now are the elevators. The electronic launching system, I have high confidence, after reviewing what is going on, that will be perfectly fine. The arresting gear, we have issued—we have gotten all the issues out of that. The phased-array radar, we are online with that.

Like I said, the biggest gating event we are going to have is making sure we get the main thrust bearings and the propulsion system outstanding along with the elevators.

#### ADVANCED TECHNOLOGY

Mr. VISCLOSKY. Looking ahead, because I can understand anytime I do something for the first time there are unintended outcomes, fiscal year budget 2020 requests \$1.3 billion for the lead frigate. What cautionary actions is the Navy taking to make sure we don't continue to hit our head against a wall like we always have because it is the first one?

Admiral RICHARDSON. So I would say that one of the big——

Mr. VISCLOSKY. What will be different this time?

Admiral RICHARDSON. Right. The big lessons from *Ford* is that with respect to—well, we bit off a tremendous amount of advanced technology, and we decided to put it all on the lead ship, technology that was not developed. So this technology needed to be both invented and then integrated into the larger aircraft carrier itself.

With respect to the frigate, we are learning from that, so that we are using mature technologies. We brought industry in much, much earlier into the requirements process to understand the technology maturity, what is really the art of the possible.

So we are going to use, as I said, mature technologies across the board, proven hull designs. And then it really just remains to be

an integration challenge, which is a much more manageable problem.

So that is what has allowed us to move to a contract award, only sort of 2 years after setting the requirements for the ship. Industry has been lockstep with us in terms of determining the balance between cost, schedule, and warfighting requirements.

And so this gives us more confidence that we are going to be able to deliver this on schedule and for the budget that we asked for and to step up. And then we will have to be poised to continue to modernize that, to integrate more advanced technologies as they mature.

TRANSITION OF MILITARY TREATMENT FACILITIES TO DEFENSE  
HEALTH AGENCIES

Mr. VISCLOSKY. Okay. Again, we have a number of questions for the record. And please don't misinterpret my remarks. Admiral, we have gone back to when you were in the nuclear reactor program.

The information we have received to date in rebuttal or commentary on the GAO report I would say is lacking. So I would want to continue this conversation as far as ship procurement, defects, and particularly who is picking up the tab. I always think of that person waiting at a diner in pick a State in rural America on tips. And some of that money, somebody is getting paid on these defects, is coming out of that person's pocket.

The last question I have is on the transition of military treatment facilities to the defense health agencies. My understanding is the Naval hospital in Jacksonville was first—or was one that was transitioned last October. We have heard concerns about the transition, including that the services are continuing to support the Defense Health Agency more than anticipated.

Admiral or Secretary, do you know, is that concern true? And are there problems? How are things going?

Secretary SPENCER. Chairman, I will tell you that right now I am going to reserve my comments for you, if I could follow up. In the fall, when we were sitting down there as the three service secretaries working on this transition, there was concern. We sat down with DHA and hammered out where we believe there was a construct to go forward.

It is not as much as a concern as it was before if, in fact, we are following those edicts, shall we say, but if you would allow me to go back and pulse the system to make sure that those statements are correct, I would appreciate it.

Mr. VISCLOSKY. Good. And one thing I would add is when you get back to us, because we will have a hearing next year, God willing, with whoever the participants will be, we would like to be able to look back and say last April we had this discussion and here were some benchmarks we would want to make a decision as to whether we are moving in a positive direction or not.

If you could provide us that, so not, again, to find fault, but is this working as advertised, both from your perspective, as well as from the health agency, I would appreciate it.

Admiral RICHARDSON. Mr. Chairman, if I could just add onto that, the pace of this transition is of concern to me. How many medical treatment facilities we are transferring in a relatively

short amount of time. You know, as I talk to people in the healthcare industry in the private sector, they would never try to take on a pace like that.

So we want to do this right, at a pace that is executable, that doesn't allow these sorts of things to fall in the cracks just because we are slave to a pace that is really faster than we can execute.

Secretary SPENCER. Right, artificial.

Mr. VISCLOSKY. Appreciate that very much.

No further questions.

Again, gentlemen, thank you very much. We are adjourned.

[CLERK'S NOTE.—Questions submitted by Mr. Visclosky and the answers thereto follow:]

#### TRIDENT II MODIFICATION PROGRAM

*Question.* The Navy's FY 2020 budget request for Overseas Contingency Operations (OCO) includes \$84.27 million for warhead components under the Trident II modification program. According to the Navy's request, some of these funds are for the deployment of a new low-yield warhead, the W76-2, on Trident II missiles.

If the Navy's most important mission is nuclear deterrence and the Columbia-class SSBN remains the Navy's top priority program, why is the Navy requesting funds for the Trident II modification program—and for the near-term deployment of the W76-2-OCO instead of the base budget? By utilizing a budget gimmick, are you worried that the program will at risk?

Answer. The President's FY2020 Budget request reflects what is required to comply with the National Defense Strategy (NDS) and what we need to defend America. As outlined in the FY 2020 Budget request, the Administration prefers to limit base National Defense funding to the current law discretionary cap, while using both Overseas Contingency Operations (OCO) and emergency funding to provide the necessary resources to support the NDS. To make it transparent, the budget material broke out OCO into two distinct groups—traditional OCO and OCO for Base. OCO for Base includes items traditionally funded in Base. Nuclear deterrence and the Columbia-Class ballistic missile submarine program remain the Navy's top acquisition priority. By including some of the funding for the Trident II modification program in OCO, the Navy is making clear the total funding required for this program and looks forward to working with Congress to ensure there is adequate, stable, and predictable total funding in this budget.

*Question.* Setting aside the budget games, I struggle to see the value in creating a low-yield SLBM warhead. It will be expensive, potentially destabilizing and further blur the lines regarding the strategic and not tactical purposes of nuclear weapons. Could you please explain to the committee the value of a low-yield option for the Trident?

Answer. The low-yield SLBM warhead announced in the Nuclear Posture Review (NPR) provides a flexible range of deterrence options needed to meet today's spectrum of adversaries and threats. Introduction of a low-yield SLBM warhead provides scalable, proportional response options that enhance deterrence by signaling to adversaries that nuclear escalation will not result in achieving their objectives.

[CLERK'S NOTE.—End of questions submitted by Mr. Visclosky. Questions submitted by Mr. Ruppertsberger and the answers thereto follow:]

#### FRIEND OR FOE IDENTIFICATION SYSTEMS

*Question.* Admiral Richardson, as you know the Federal Aviation Administration has a requirement that all aircraft operation in the National Airspace System (NAS) must be equipped with an Automatic, Dependent, and Surveillance-Broadcast (ADS-B) transmitter by January 1, 2020. The FY2019 NDAA temporarily waived this requirement. Many current medium and small military Unmanned Aerial Systems (UAS) cannot meet this requirement. Additionally, Unmanned Aerial Systems are proliferating as a platform of choice. As a result, all branches of the military need a small, lightweight, secure Identification Friend or Foe transmitter capability that can be fielded in time to meet the 2020 deadline. My Questions Are:

Can you provide the Committee with details about the Navy's efforts to develop such a Micro-IFF capability to meet or exceed all the size, weight, and power requirements for the Navy's UAV fleet?

Answer: The ADS-B mandate applies to all aircraft—manned or unmanned—that will operate in most controlled airspace within the NAS. Today, Navy small UAS do not operate in controlled airspace and are not envisioned to require such access in the near term. To mitigate UAS fratricide risk, and in the event that Navy would one day require small UAS access to controlled airspace within the NAS, the Navy is pursuing solutions via two approaches: in-house development by the Naval Air Warfare Center Aircraft Division (NAWCAD) and a Small Business Innovation Research (SBIR) project.

- As an interim solution, the NAWCAD Combat Integration & Identification Systems Division (NAWCAD-4.11.2) has been developing an organic Micro-IFF solution. It uses an existing NSA-approved KIV-77 crypto appliqué in order to provide the Navy with a stop-gap solution in 2020. The interim Micro-IFF solution is approximately 40 cubic inches.

- Small Business Innovation Research (SBIR) Topic N142-102. This will result in Micro-IFF prototypes that are compliant with Air Traffic Control Radar Beacon System IFF Mark XII System (AIMS) 03-1000B. Prototypes are being developed to support mid to small size UAVs, and will be less than 7 cubic inches when FOC.

*Question.* When will the Navy's budget reflect the funding required for this capability development?

Answer: The Navy's current budget (Rl #148, PE 0604777N / PU 1253 and C472) contains funding that began in FY 2019 and continues into FY 2020 that will mature organic and SBIR Phase II prototypes into production-representative units by 1Q FY21 and will include NSA Cryptographic Certification and AIMS Box-Level Transponder Certification.

#### MARITIME NETWORKS

*Question.* Secretary Spencer or Admiral Richardson, this question is for either of you.

The Navy operates in geographically challenging environments where network bandwidth is limited. These limitations impact the Navy's ability to analyze and transmit the data that is collected by various weapons platforms and sensors.

I understand that to address one specific gap, the Navy has established the Maritime Dynamic Over the Horizon Targeting System (MDOTS). This system will utilize advanced integrated technologies to generate a secure high-bandwidth network for a new over-the-horizon weapons system. It is my understanding that the Navy is looking to deploy MDOTS onto the USS ESSEX in order to conduct a Fleet battle experiment in the fall of 2019. My Questions Are:

Could you please tell me what the status of this program is, if the funds have been committed for it, and if there are any obstacles for achieving the pilot this year?

Answer: The Department of the Navy (DON) is evaluating this concept and capability relative to requirements and warfighting needs. Given that this area is such a critical capability for our warfighter, the DON's evaluation needs to be comprehensive to ensure the Navy's strategy is sustainable for the long term. Elements of this concept are scheduled for demonstration during a July 2019 Advanced Naval Technology Exercise at Camp Lejeune, NC providing additional insight.

*Question.* Could you please identify other critical capability gaps, such as the massive amount of data generated by the F-35 and deployed in an afloat environment where real time data transmittal and retrieval in a secure network would be beneficial?

Answer: DON has and continues to identify critical capability gaps related to the collection and movement of data. Principally, these needs are defined by the location and mission of sensor platforms such as the F-35, critical computing infrastructure, and ultimately the specific needs of the end users. The critical network characteristics for each stage of data movement is highly dependent on the nature of the mission and platform/end user location. In particular, there continues to be an increasing need for those networks that move data to/from the tactical edge back to various command infrastructure elements. Communications solutions to/from the tactical edge platforms require highly specialized technologies to survive current threat and exploitation environments.

[CLERK'S NOTE.—End of questions submitted by Mr. Ruppertsberger. Questions submitted by Mr. Cuellar and the answers there-to follow:]

#### F/A-18 SERVICE LIFE MODIFICATION

*Question.* Admiral Richardson, the Navy has been focused on reducing the tactical aviation shortfall by both procuring new aircraft—F/A-18s and F-35Cs—and extending the service life of the existing Super Hornet fleet. In San Antonio, we are about to support the Navy's efforts through the Service Life Modification program that will take existing Super Hornets and modify them for additional service life and capabilities. Some of my constituents will be working to keep those Super Hornets relevant for the warfighter for decades to come.

Can you talk about the importance of the SLM program to the Navy's tactical aviation inventory? And, how does SLM fit into the Navy's plans to achieve higher readiness for its tactical aviation fleet?

*Answer.* The F/A-18E/F Service Life Modification (SLM) program is foundational to achieving the required capability and capacity of the Navy's Strike Fighter inventory. Initial SLM production will increase F/A-18E/F aircraft service life from 6,000 to 7,500 flight-hours. Starting in FY23, SLM is expected to reach full maturity. Once the material and standard work packages achieve this status, Super Hornet SLM will transition to a 12-month program designed to increase F/A-18E/F service life from 6,000 to 10,000 flight hours and add Block III capability which includes:

- Conformal fuel tanks for enhanced range,
- Advanced cockpit displays,
- Signature improvements, and
- Advanced networking.

SLM establishes a 10,000 flight-hour Block III Fleet for all F/A-18E/F aircraft. These efforts coupled with F-35C procurement serves as the backbone to the capability and capacity mix of 4th and 5th generation aircraft in support of the National Defense Strategy (NDS).

[CLERK'S NOTE.—End of questions submitted by Mr. Cuellar. Questions submitted by Mr. Aderholt and the answers thereto follow:]

#### TRAINING AND SAFETY

*Question.* My understanding is that there is no formal training process for surface warfare officers like there is for aviators. In light of the recent fatal accidents what are you doing to formalize the surface warfare officer training process to provide for explicit milestones and uniform standards across the whole service, as opposed to every Captain having his/her own standard, including perhaps having multiple senior officers signing off on the training of each junior officer?

*Answer.* Navy has a formalized training process for Surface Warfare Officers (SWO). The revised SWO Career Path, is comprised of a rigorous training and assessment continuum that develops, assesses, and sustains proficiency across the milestones comprising a SWO's career. The requirements for qualification and designation as a SWO are published within CNSP/CNSLINST 1412.1A (SWO Qualification and Authority to Wear the Insignia). This instruction codifies the responsibilities of Commanding Officers regarding the eligibility, training, and qualification of Prospective SWOs (P-SWOs) under their supervision. Additionally, this instruction delineates all of the following:

- SWO eligibility requirements
- SWO qualification requirements, to include:
  - Schoolhouse training (achieved via the Basic Division Officer Course (BDOC))
  - Personnel Qualification Standards (PQS) (spanning Fundamentals, Systems, and Watchstations)
  - Requisite leadership skills and proficiency in the performance of Division Officer duties as well as Bridge, Combat, and Engineering watchstations
  - Proficiency validation via completion of an oral board chaired by the Commanding Officer.
- Procedures to be followed by Commanding Officers regarding the non-attainment or revocation of SWO qualification by applicable officers under their supervision.

- Summaries of the requirements, quotas, and funding for the training courses and assessments that precede and immediately follow SWO qualification during the First and Second Division Officer Tours.

Other relevant instructions that address explicit milestone requirements and ensure uniform standards across the Surface Warfare Community include:

- CNSFINST 1412.4A (Surface Warfare Officer Requirements Document (SWORD)), which defines SWO Competencies during the career progression from Division Officer to Major Commander.
- CNSFINST 1412.5 (SWO Milestone Mariner Skills Assessments, Evaluations, and Competency Checks), which establishes required milestone events during the career progression from Division Officer to Major Commander.
- CNSFINST 1412.6 (SWO Watchstander Proficiency Requirements), which establishes minimum requirements for watchstanders to attain qualification and maintain proficiency across seven specific shipboard watchstations.
- CNS/CNSLINST 1412.9 (SWO Mariner Skills Logbook Requirements), which establishes guidance for the implementation and use of the SWO Mariner Skills Logbook as an experience tracking tool.

*Question.* I am concerned that junior officers denied a continuance of their career don't have an appeals process which reflects the time and money the taxpayer has invested in their training. If a Captain reviews the record of a denied officer, and wanted to have that junior officer serve on his/her own ship, does it seem a worthwhile idea to you to allow that so that the junior officer might experience a useful course correction, you might say, under the second Captain?

*Answer.* Junior officers are given opportunity to continue their career in the event of qualification non-attainment through the Probationary Officer Continuation and Re-designation (POCR) Board. The purpose of the POCR Board is to carefully consider, without prejudice or partiality, the military record of each eligible probationary officer (an officer with less than six years of commissioned service) and make a recommendation as to whether it is in the Navy's best interests to retain them in their current designator, transfer them into another community or separate them from active duty naval service. POCR board voting members also consider the desires of the probationary officer and the manning needs of other communities to best match talent to a potential new designator.

Primary responsibility for evaluating junior officers prior to any re-designation process resides with the Commanding Officers (COs) who are responsible for monitoring the warfare qualification progress of their junior officers. In some cases a CO may make a decision when they recognize that an officer in training lacks the aptitude, comprehension, motivation, interest or application to attain a warfare qualification in their current community. If this is the case, a CO will submit a report containing the circumstances leading to this determination, discuss the officer's potential for service in another capacity, and provide a recommendation concerning retention in the naval service. Upon submission to the CO's chain of command the junior officer has the right to comment on the CO's report. If approved for qualification non-attainment and the junior officer desires to continue service in another community their record is reviewed by a POCR Board for a determination and possible selection and assignment to another community.

#### ZERO-BASED BUDGETING

*Question.* Secretary Spencer, it is my understanding that at a hearing earlier this year you discussed a transition to zero-based budgeting where all expenses must be justified for each new period. Would this effort result in the divestiture of programs specifically designated a formal requirement, and funded by this Committee?

*Answer.* Zero-based budgeting (ZBB) effort will not divest programs specifically designated or funded by any Committee. To help further Policy Reform, the Department of the Navy (DON) implemented a ZBB review and Performance-to-Plan initiative to ensure alignment of goals and resources, increase transparency, and ensure analytical rigor in our resource allocation. The ZBB effort has commenced during the Projected Objective Memorandum-21 budget review and will consider all programs, activities, and contracts while identifying resources for reprioritization. Every program will be mapped to the National Defense Strategy (NDS) and assessed as whether Core or non-Core to meeting NDS Objectives. The intent is that a ZBB approach within the DON will identify savings and define how it will tighten the margins of our spending.

#### ADDITIVE MANUFACTURING

*Question.* With additive manufacturing emerging as a way for our military to operate beyond the limits of traditional manufacturing constraints, what efforts are

being implemented to partner with academic institutions to support research, development, and workforce training to overcome barriers to high-volume additive manufacturing of metals?

Answer. The Department of the Navy has a broad portfolio of metallic additive manufacturing (AM) activities with academic institutions ranging from basic research to training curriculum development. Our university partners are funded through numerous methods including Multidisciplinary University Research Initiatives, Small Business Technology Transfer, and naval funding of projects through the National Center for Defense Manufacturing and Machining. Basic and applied research funding for universities covers current AM technology thrusts in rapid qualification, tailored materials and processes, AM repair, and digital logistics. Workforce development efforts include curriculum support for university students as well as external naval workforce training and AM metal machine operations journeyman/apprentice certification programs. We are also fostering technology transfer through cooperative research and development between small business and research institutions.

#### EXPEDITIONARY FAST TRANSPORT (EPF)

*Question.* Based on the positive feedback from the Fleet on value of having EPFs to conduct a range of missions, what is the role of EPF in the upcoming Force Structure Assessment?

Answer. The requirement for EPFs (formerly JHSVs) is to support multi-disciplinary teams doing humanitarian and security force assistance, and to provide economical transportation of Army and USMC units for exercises. In wartime, EPFs provide intra-theater lift for forces. The 2019 Force Structure Assessment (FSA), like each FSA since 2005, will assess the need for these capabilities in order to comply with the National Defense Strategy.

*Question.* What is being done to leverage this highly effective and economical (hot) production line to help achieve the mandated 355 ship Navy?

Answer. With the delivery of the 10th hull (USNS Burlington) in November 2018, the objective number of Fast Transit ships within the mandated 355-ship Navy was achieved. EPF 11 and EPF 12 are under construction with deliveries planned in FY 2019 and FY 2020, respectively. The final two EPFs are planned for delivery in FY 2022. The Navy's FY20 Long Range Shipbuilding Plan meets or exceeds the 10-ship requirement over the next 30 years.

#### GUIDED MISSILE FRIGATE (FFG(X)) AND SMALL SURFACE COMBATANT SHIP REQUIREMENTS

*Question.* You still have a requirement for 52 Small Surface Combatants (SSCs). Since the path to a more expensive and larger ship means that it will take longer and cost more to meet the SSC requirement, what is being done to make sure that we get to that requirement in a timely way especially in view of the South China Sea challenges?

Answer. The reemergence of Great Power Competition, as outlined in the 2018 National Defense Strategy, requires a more capable SSC than the Littoral Combat Ship (LCS) for operations in contested environments, to include potential challenges in the South China Sea. FFG(X) will meet the validated Navy and Joint Staff capability requirements to support those operations and is on an expedited acquisition timeline to deliver the first ship in FY26.

FFG(X) is executing ahead of schedule with the draft request for proposal (RFP) released three months early and the final RFP planned for issuance this summer to support a FY20 award for the lead ship.

The FY2020 Shipbuilding Plan added an additional ship in FY2021 (two total FY2021), and a projected steady state of two per year thereafter and projects that the SSC requirement of 52 will be met in FY34. The Navy plans to procure at least 20 guided missile frigates as part of the PB20 Shipbuilding Plan.

#### ZUMWALT

*Question.* Has the Navy looked into buying an all-steel version of the ZUMWALT Class destroyer instead of the Block III ARLEIGH BURKE class? My understanding is that the ZUMWALT was designed from the ground-up for high electrical output ideal for directed energy weapons, while the ARLEIGH BURKE was essentially maxed out in the previous IIA version and that an all-steel ZUMWALT might overcome the cost barriers to continuing the ZUMWALT as much of the cost was due to the unique carbon superstructure.



Answer. USS LYNDON B. JOHNSON (DDG 1002) was outfitted with a steel deckhouse, superstructure, and aft peripheral vertical launching system modules as a cost saving measure. Even with this, and other cost cutting measures, the DOG 1000 platform is not affordable compared to DOG 51 Flight III, which includes significant upgrades to the power system over its Flight IIA predecessor.

*Question.* Why wasn't a cost effective round developed for the ZUMWALT Class's Advanced Gun System in the past decade since the decision to reduce the number of ships to three was made, and since these multi-billion dollar ships were essentially built around the guns?

Answer. The 2008 decision to reduce the number of ZUMWALT Class destroyers down to three ships did not alter the program of record developmental plans for the ships Advanced Gun System (AGS) and its projectile, the Long Range Land Attack Projectile (LRLAP). In 2016, the decision to cancel the procurement of LRLAP was made due to a low quantity procurement driving high unit cost per round. In 2017, the Navy conducted a live fire demonstration to assess an alternate, affordable 155mm guided projectile. The demonstration confirmed three potential projectiles that could be integrated with varying degrees of risk for cost, schedule, and performance. However, none of the projectiles fully met the DDG 1000 Land Attack mission requirement. As a result, Navy decided not to pursue an alternate solution. In November 2017, Navy changed the mission from Land Attack to the Offensive Surface Strike with the integration of existing program of record systems, SM-6 BLK 1A (IOC FY21) and Maritime Strike Tomahawk (IOC FY24).

*Question.* What is the plan for that gun system?

Answer. The Navy is currently examining possibilities for a new weapon system and does not have a final decision regarding a plan for the AGS.

[CLERK'S NOTE.—End of questions submitted by Mr. Aderholt.]



WEDNESDAY, MAY 1, 2019.

**FISCAL YEAR 2020 DEPARTMENT OF DEFENSE BUDGET  
OVERVIEW**

**WITNESSES**

**HON. PATRICK M. SHANAHAN, ACTING SECRETARY OF DEFENSE  
GENERAL JOSEPH F. DUNFORD, CHAIRMAN OF THE JOINT CHIEFS OF  
STAFF  
DAVID L. NORQUIST, PERFORMING THE DUTIES OF DEPUTY SEC-  
RETARY OF DEFENSE**

**OPENING STATEMENT OF CHAIRMAN VISCLOSKY**

Mr. VISCLOSKY. The committee will come to order.

Today we will hear from Acting Secretary of Defense Patrick Shanahan, and General Joseph Dunford, the Chairman of the Joint Chiefs of Staff, and David Norquist, performing the duties of the Deputy Secretary of Defense.

Secretary Shanahan, although you are not a stranger to the subcommittee, this will be your first time testifying before us, so do welcome you.

Welcome, Deputy Secretary Norquist, as well. Good to see you back in an appropriations room.

General Dunford, I do believe that you have testified before the subcommittee annually since 2013 in three different roles, which must be some sort of record. I realize this will be your final time before us, and I would want to take this opportunity from the bottom of my heart, I think for all of us, just to thank you for just being a stellar human being and for your service to this country. You have just been terrific to deal with.

Gentlemen, in your written testimonies and previous briefings for the fiscal year 2020 budget request, it is clear the Department is going to great lengths to tie most decisions to the priorities laid out in the National Defense Strategy. While I disagree with some of several aspects of the NDS, I do think the document provides an accurate assessment of the strategic environment and generally points the Department in the right direction.

However, as with many ambitious plans, the question is how are we going to pay for it. The next two fiscal years, it is impossible to answer that question without discussing the Budget Control Act, also known as the BCA.

The initial impact of the BCA caps was admittedly severe. However, the Department of Defense has received a total of \$264 billion in base budget relief from the caps since 2012. Most of that occurred in fiscal years 2017 through 2019, when the Department's budget increased by 13 percent in nominal terms.

The fiscal year 2020 budget request proposes another increase of 4.9 percent, or \$33 billion. Further, there are about \$11 billion in

unfunded requirements and priorities requested by the services and combatant commands for fiscal year 2020.

Even the fiscal year 2020 budget request recognizes that the funding increases of this magnitude are unsustainable and slows the rate of growth across future years. In the outyears, the Department claims that it will be able to prioritize modernization by relying on savings, reforms, and efficiencies that have been notoriously difficult to achieve in the past.

I do wish the administration could muster the same courage to attack the BCA caps with the same relish that it is using to implement the National Defense Strategy. Rather, the Department's budget request eschews the caps by using the overseas contingency operation accounts, which are exempt from the caps, to fund base activities.

In both fiscal year 2020 and fiscal year 2021, the budget requests nearly \$100 billion in OCO to base to support the National Defense Strategy. These OCO for-base funds are in addition to traditional OCO, which is projected to exceed \$60 billion in each of those years. Admittedly, OCO for base is not a new concept, but the amounts requested in the budget are staggeringly out of proportion with prior efforts to avoid the caps.

However, in fiscal year 2022, after the BCA caps' sunset, OCO for base disappears, and traditional OCO miraculously shrinks to \$20 billion. People's cynicism about this approach can be understood.

I must also say that as a member of the legislative branch, I am grossly offended by the unconstitutional actions taken by the executive branch to fund the construction of an unauthorized wall on our southern border. Using funds that Congress declined to appropriate for that purpose, and over the denial of this committee and others, the Department of Defense is in the process of conveying billions to the Department of Homeland Security.

There is no emergency at the border that requires the use of the United States Armed Forces. We are here to appropriate funds needed for the military, not to make good on a campaign promise.

It is in that same vein last night that Congress was notified that OMB will be submitting a \$377 million supplemental request for border security. A portion of that will be in support of military personnel deployed at the border. There will likely be questions on the cost and value of the troops deployed to the border, so I am going to ignore that for the time being.

But I cannot ignore the fact that Congress is still waiting for OMB and the Department of Defense to send over a comprehensive supplemental request to address the extensive damage to key military installations for national disasters. Just yesterday, the commandant of the Marine Corps said one of his biggest challenges is getting assistance to rebuild Camp Lejeune. We heard similar comments from the Air Force leadership earlier this year about Tyndall Air Force Base. And I am baffled by the administration's decision not to prioritize the rebuilding of these very important installations.

With that, I do thank you for appearing before the committee today. We will ask you to present your summarized testimony in

a moment. But first, I would want to recognize my colleague, Mr. Calvert, for any opening remarks he has.

OPENING REMARKS OF MR. CALVERT

Mr. CALVERT. Thank you, Mr. Chairman.

Mr. Secretary, General Dunford, Mr. Norquist, welcome. We appreciate your appearance before this subcommittee.

And, General, also, I want to congratulate you on a job well done. I know you are probably happy about this being your last time to come before Congress, but we certainly appreciate having you here. And I know that you have done fantastic service to this country, and we all appreciate it very much.

As you prepare to depart, General, we certainly want to get your assessment of readiness, given your vantage point of seeing across the services for many years.

The budget submitted by the Department dovetails with the National Defense Strategy, which calls for more of a focus on near-peer threats. However, the recent bombings in Sri Lanka show that there is still violent extremist groups willing to conduct suicide bombs to achieve their goals. It doesn't cost a lot of money to plan, coordinate, and carry out these attacks that can kill hundreds of innocent citizens in minutes.

The Taliban has also announced its spring offensive. They killed four of our troops in Afghanistan just a few weeks ago. And despite nearly two decades of fighting, we clearly still face threats emanating from that region.

While we have rightly been focused on the Middle East, our adversaries surged. We now need to redouble our efforts to ensure that the U.S. remains a beacon of strength around the world and can remain competitive across the spectrum of threats. We must build and enhance our technical superiority, strengthen our cyber capabilities, provide the best training and equipment for our men and women in uniform.

I look forward to working with Chairman Visclosky and the rest of the members of the subcommittee to ensure the Department has the resources it needs.

I do want to point out to my good friend, the chairman, that the wall is authorized. We did the Secure Fence Act in 2006, and we partially appropriated funds for about 700 miles along the southern border. Our good friend Jerry Lewis was involved in that at that time, along with Chairman Rogers. But I know it is one of our meticulous subjects to talk about and we may have disagreements on, but we do have a problem along the southern border, and I hope we can address it in a meaningful way.

But I am sure we will be having those discussions today, and I certainly thank our witnesses. Thank you all for your service to our country, and looking forward to hearing from you.

Mr. Chairman, I yield back.

Mr. VISCLOSKY. Thank you very much. The full committee chair, Mrs. Lowey, for her opening remarks.

OPENING REMARKS OF MRS. LOWEY

Mrs. LOWEY. Thank you, Mr. Chairman.

It is a pleasure for me to welcome Acting Secretary Shanahan, General Dunford—and I too join our colleagues in wishing you the very, very best. It has been an honor for me to interact with you, to learn from you, to work with you, and our very best wishes—and, of course, Acting Secretary Norquist. Thank you all for your service.

In the last 2 years, the world has become more dangerous with adversaries seeking to harm the United States and our interests around the world. The Department of Defense's ability to address an evolving threat landscape is of paramount importance, and the security of our Nation, as well as our allies, depends on your service.

While I am pleased your budget focuses on readiness and further strengthening our military, I am concerned by the shortsightedness of shifting nearly \$100 billion into OCO accounts. I know it has been said before, but maybe it has to be said again, so I will proceed. Your fiscal year 2020 budget for this subcommittee requests \$697.263 billion, which includes a staggering \$163.98 billion for OCO.

The OCO request is further divided into two categories: OCO at \$66.7 billion and OCO for base activities at \$97.9 billion. Of the \$97.9 billion for OCO for base, \$85.2 billion is requested for the operation and maintenance account which funds readiness for all of DOD.

We owe it to our servicemembers and their families to put forth serious spending proposals. The idea of using OCO spending for base requirements is a thinly veiled attempt to skirt budget caps and increase defense spending without a complementary increase for nondefense spending. Moreover, requesting OCO funds for base is fiscally irresponsible, as costs to increase end strength dovetail in future spending bills as servicemembers receive raises and eventual pensions. Our servicemembers deserve the stability and to know they will be taken care of in the future, and the administration's proposal makes that look less likely.

Our national security apparatus does not exist in a vacuum. It relies on the health and stability of Americans and our economy, and this requires adequate budgeting and investments in both defense and nondefense priorities.

So I thank you for your service, and I look forward to your testimony.

Mr. VISCLOSKY. I now recognize our former chair and the ranking member on the full committee, Ms. Granger.

#### OPENING REMARKS OF MS. GRANGER.

Ms. GRANGER. Thank you, Chairman Visclosky. I would like to welcome today's witnesses, Acting Secretary of Defense Shanahan, General Dunford, and Mr. Norquist. Thank you for appearing before this subcommittee.

I first would like to recognize General Dunford, who served with distinction as the Chair of the Joint Chiefs of Staff since 2015, and you will step down from this position in September. General Dunford, thank you for all that you have done, your many years of service, and we look forward to hearing your assessment of the military readiness today. Thank you for being here.

For almost two decades, our military has focused on the threat of terrorism, and counterinsurgency efforts have dominated our military planning. We are now at a very important crossroads. The National Defense Strategy emphasizes a shift to deter and, if necessary, defeat more traditional adversaries such as Russia and China.

Unfortunately, the recent Easter Sunday attacks in Sri Lanka showed we have to remain vigilant against violent extremists around the world. To guard against all of these threats, we have to work together to build on the gains we have made with our allies and our partners, develop more advanced weapon systems, and recruit and retain highly trained personnel.

The Department of Defense is also being asked to play a supporting role at the southern border where law enforcement agents and officers are beyond overwhelmed. I have been to the border many times, and I can tell you this is indeed a crisis. We thank our soldiers and our military personnel for the work they are doing to keep our country's border secure, and we are going to have to do more.

I know members of this committee agree that supporting our national defense is one of the most important roles we take on as Members of Congress. We have accomplished so much over the last 2 years, but we have work to do. We must avoid unnecessary delays in enacting next year's funding for the Department of Defense, and we need a budget agreement that prevents sequestration. Otherwise, the gains we have made together to rebuild our military will be reversed.

Chairman Visclosky, thank you again for holding this important hearing. I look forward to hearing from our distinguished witnesses, and I thank them for their tireless service to our country. And I yield back.

Mr. VISCLOSKY. Thank you very much.

Mr. Secretary, you can proceed, and then General Dunford. I would ask, for the sake of time, so members have a chance for a dialogue, if you could hold your summaries to about 5 minutes or so, that would be preferred. Thank you very much.

#### SUMMARY STATEMENT OF SECRETARY SHANAHAN

Mr. SHANAHAN. Chairman Visclosky, Ranking Member Calvert, distinguished members of the committee, thank you for this opportunity to testify in support of the President's budget request for fiscal year 2020. I am joined by Chairman of the Joint Chiefs of Staff, General Joseph Dunford, and the Department's comptroller and chief financial officer, Mr. David Norquist.

It has been a great privilege and honor to serve alongside the men and women of the Department of Defense. It was a pleasure to work with Secretary Mattis to craft the 2018 National Defense Strategy. Released in January 2018, that strategy laid the foundation for restoring military readiness and modernizing our joint force for an era of great power competition. I now oversee the continued execution of that strategy, which is the undisputed driver of today's budget request.

It was extremely helpful for the Department to receive authorization and appropriation bills on time at the requested top line last

year, which marked the first time in a decade a defense appropriations has been enacted by the beginning of the fiscal year. The strategy you supported last year is the same strategy we are asking you to fund this year.

The \$750 billion top line for the national defense enables DOD to maintain regular—irregular warfare as a core competency, yet prioritizes modernization and readiness to compete, deter, and win in a high-end fight of the future. This budget is critical for the continued execution of our strategy, and it reflects difficult but necessary decisions that align finite resources with our strategic priorities.

To highlight some of those decisions, this is the largest research, development, testing, and evaluation budget in 70 years. The budget includes double-digit increases to our investments in both space and cyber, modernization of our nuclear triad and missile defense capabilities, and the largest shipbuilding request in 20 years when adjusted for inflation. It also increases our end strength by roughly 7,700 servicemembers, and provides \$3.1 percent pay increase to our military, the largest in a decade.

Now to the specifics. The top line slates \$718 billion for the Department of Defense. Of that total, the budget includes \$545 billion for base funding and \$164 billion for overseas contingency operations. Of the OCO funds, \$66 billion will go to direct war and enduring requirements, and \$98 billion will fund base requirements. To round out the numbers, \$9.2 billion will fund emergency construction, including support for hurricane recovery and border barrier efforts.

Here I must note the Department appreciates this committee's support for hurricane recovery. Thank you for approving the \$600 million reprogramming which will help start our recovery efforts. I ask for your support for the hurricane supplemental to address the remaining \$1.8 billion needed in fiscal year 2019, as well as the budget request of \$3 billion in military construction and operation and maintenance to continue recovery efforts in fiscal year 2020.

As this committee fully understands, no enemy in the field has done more damage to our military's combat readiness in years past than sequestration and budget instability. And there is no question today our adversaries are not relenting. In short, we cannot implement the NDS at sequestration levels. Sequestration would not only halt our progress in rebuilding readiness, growing our force, modernizing for the future, and investing in critical emerging capabilities like AI, hypersonics, and directed energy; it would force us to cut end strength and critical modernization efforts that ensure we outpace our competitors.

A continuing resolution would also hamstring the Department. Under a CR, we cannot start new initiatives, including increased investments in cyberspace, nuclear modernization, and missile defense, I just mentioned. Second, our funding will be in the wrong accounts. And, third, we would lose buying power.

We built this budget to implement our National Defense Strategy, and I look forward to working with you to ensure predictable funding so our military can remain the most lethal, adaptable, and resilient fighting force in the world. I appreciate the critical role Congress plays to ensure our warfighters can succeed on the battle-



fields of today and tomorrow, and I thank our servicemembers, their families, and all those in the Department of Defense for maintaining constant vigilance as they stand always ready to protect our freedoms.

Thank you.

[The written statement of Secretary Shanahan follows:]

HOUSE APPROPRIATIONS COMMITTEE – DEFENSE

STATEMENT BY

THE HONORABLE PATRICK M. SHANAHAN

ACTING SECRETARY OF DEFENSE

DEPARTMENT OF DEFENSE BUDGET HEARING

MAY 1, 2019

(EMBARGOED UNTIL RELEASE BY THE HOUSE APPROPRIATIONS COMMITTEE –  
DEFENSE)

## INTRODUCTION

Chairman Visclosky, Ranking Member Calvert, distinguished members of the Committee, I appreciate the opportunity to testify in support of the President's budget request for Fiscal Year (FY) 2020. I am joined today by Chairman of the Joint Chiefs of Staff, General Joseph Dunford, and the Department's Comptroller and Chief Financial Officer, Mr. David Norquist.

The size, scale, and importance of collaboration between Congress and the Department of Defense (DoD) shows we are united in our purpose to protect and defend our Nation. During my time as Deputy Secretary of Defense and now as Acting Secretary of Defense, I have engaged in substantive discussions with many members of this Committee. I look forward to continuing our engagements, in this hearing and beyond, with both long-serving and new members, as the Department drives results along our strategic priorities.

We in DoD appreciate Congress's partnership in repeatedly demonstrating the bipartisan nature of defense. I thank Congress for voting to lift budgetary caps and providing sustained funding increases over the last two years, which have helped our military meet today's challenges while preparing for those of tomorrow. Members of this Committee, the entire Congress, and the American people can rest assured that DoD has efficiently and effectively invested your money. Thank you, in particular, for your support of the FY2019 2.6 percent pay increase for our military personnel.

Our responsibility is to remain responsible stewards of your trust and the American people's hard-earned tax dollars. DoD has accelerated necessary changes in how we develop, posture, and employ our Joint Force. We are taking a clear-eyed approach to the strategic environment in which we operate and marrying our past experiences to new ideas, driving progress and fostering innovation in the process.

Our FY2020 budget reflects the President's vision for prioritizing the security, prosperity, and interests of the American people. It also reflects my vision for the future – one marked by a more lethal, results-oriented Department of Defense with the capabilities and capacity to ensure national security and implement our National Defense Strategy (NDS) at the speed of relevance. Today I look forward to discussing that vision and how it is reflected in DoD's posture and resourcing decisions.

## THE 2018 NDS: AN ENDURING FRAMEWORK

To provide context for that discussion, I want to take us back in time: two years ago, our Department had brand new civilian leadership ready to drive results. With a military enduring the longest continuous duration of combat in American history, we contended with a host of challenges, including an increase in North Korean missile testing; an aggressive Iran; violent

extremists in Iraq, Syria, and Afghanistan; and growing strategic competition with China and Russia. In addition, cyber and space emerged as contested, warfighting domains, further complicating an already complex security environment.

Amidst these challenges, the release of our 2018 NDS last January provided the strategic unity DoD needed, with clear direction on restoring military readiness and modernizing the Joint Force to address great power competition.

The 2018 NDS's unified framework enables a potent combination of teamwork, resources, and an unmatched network of allies and partners stepping up to shoulder their share of the burden for international security. The NDS also fosters alignment within the Department, the Interagency, industry, and Congress.

More than fifteen months after its release, I say with conviction: the NDS remains the most effective aligning mechanism for the Department. Its implementation is our most critical mission. Yet, strategy cannot be static; it must be constantly reevaluated. In February, my staff concluded a clear-eyed assessment of our NDS priorities and our progress in meeting them, highlighting our successes and making clear we still have more work to do. Most significantly, it reaffirmed that erosion of our competitive edge against China and Russia continues to be DoD's most pressing "central problem." Our three primary lines of effort – increasing our military's lethality, strengthening our network of alliances and partnerships, and reforming DoD's business practices – remain the most effective avenues for addressing this challenge.

I thank Congress for its own evaluation via the NDS Commission. Having reviewed the findings of both our internal DoD assessment and of the Commission's report, I am confident we are aligned on the most critical matters. The few areas where we did not agree reflect the reality that finite resources require tough choices. DoD stands by these choices as necessary components of our strategic approach.

As our Department has aligned behind our Strategy, our competitors have not been complacent. They have accelerated their own military modernization efforts and vigorously pursued the development and fielding of advanced technologies with a clear intent: create an asymmetric military advantage against us, our allies, and our partners.

## **PRIORITY THREATS & POLICY OBJECTIVES**

### **THE CHINA THREAT**

As this Committee recognizes, the Chinese Communist Party exports coercive influence far beyond its borders while internally wielding authoritarian governance over its own people. To achieve hegemony in the Indo-Pacific in the near term and shape a world consistent with its authoritarian model, China is: (1) aggressively modernizing its military, (2) systematically

stealing science and technology and seeking military advantage through a strategy of Military-Civil fusion; (3) undermining the rules-based international order, which has benefited all countries, including China, and (4) building an international network of coercion to further its economic and security objectives.

### *Military Modernization*

The trajectory of China's military spending is clear. In just twenty years, China's official defense budget soared from roughly \$20 billion in 1998 to \$170 billion in 2018, with actual spending even higher. In March, China announced a projected 7.5 percent increase in defense spending in 2019. China devotes these funds to aggressive military modernization and advanced weaponry development, from nuclear and missile capabilities to space and cyber. Accounting for purchasing power and the significant portion of our military budget going to pay and benefits, today, China's defense spending approaches that of the United States.

China has made investments specifically intended to offset U.S. advantages, including robust anti-access/area-denial (A2/AD) networks, more lethal forces, and new strategic capabilities. If deployed to overwhelm U.S. or allied combat power at initial stages of a conflict, these capabilities could seek to achieve a "fait accompli" that would make reversing Chinese gains more difficult, militarily and politically. Implementation of our Strategy ensures we have the capabilities, posture, and employment of forces so this never comes to pass.

On the nuclear front, China is developing long-range bomber capabilities that, if successful, would make it one of only three nations in the world to possess a nuclear triad. In addition, China is building up its inventory of missiles, focusing on those intended to circumvent U.S. and allied defenses and deny the United States critical military access to the Indo-Pacific. Within the past five years alone, China has successfully tested hypersonic cruise and boost glide weapons concepts for these purposes.

In 2018, China conducted more space launches than any other nation. In choosing to develop counterspace and dual-use space capabilities and enhance space-based intelligence, surveillance and reconnaissance, China has demonstrated its ability to weaponize space, if desired. We, in turn, cannot ignore China's ability to target U.S. and allied space capabilities. We also cannot ignore China's ambitions in the cyber domain, which it recognizes as the battlefield's "nerve center." With all People's Liberation Army (PLA) cyber operations coordinated under one roof, China can operate in this contested domain without bureaucratic red tape to slow it down.

### *Technology Theft*

The rate at which China is systematically stealing U.S. and allied technology for its own military gain is staggering. Reversing this dangerous trend – one which could impact our troops on the battlefield – means acknowledging reality: every Chinese company is at risk of being either a witting or unwitting accomplice in China's state-sponsored theft of other nations'

military and civilian technology. To quote China's own cybersecurity law, private companies are required to "provide technical support and assistance to public security organs and national security organs," whether they want to or not. Any U.S. or allied company that works with Chinese companies, without proper safeguards, thus opens itself to theft as well.

To grasp the pervasiveness of the problem, look to the Federal Bureau of Investigation (FBI). There are open Chinese economic espionage or technology theft cases in nearly all FBI field offices. For years, the U.S. Department of Justice (DoJ) has indicted members of the Chinese state and military for stealing U.S. technology. In January, DoJ recognized China's escalating tactics and took a step further, indicting executives of Chinese telecommunications company Huawei for scheming to steal T-Mobile's trade secrets.

Huawei exemplifies the Chinese Communist Party's systemic, organized, and state-driven approach to achieve global leadership in advanced technology. With initiatives like the Digital Silk Road, Made in China 2025, and Thousand Talents Program in play, which spur companies and individuals to carry out its bidding, China aims to steal its way to a China-controlled global technological infrastructure, including a 5G network. China pursues large-scale acquisition of foreign companies in sensitive sectors and pressures companies into transferring technology. Finally, China's Military-Civil Fusion strategy seeks to translate cutting-edge technology into advanced weapons.

Here I must note: some U.S. companies have voiced ethical qualms about working with DoD to develop advanced technology, in some cases even terminating relationships – often while continuing to work with China. DoD takes ethical considerations extremely seriously when researching and developing emerging technologies, and our efforts improve performance and allow human beings to make better decisions. China, on the other hand, repeatedly demonstrates little regard for international ethical rules and norms.

China's approach to technological advancement matters for our military advantage, and its ambitions threaten the security of critical U.S. capabilities and technological infrastructure, and thus our military operations, safety, and prosperity.

Let me be perfectly clear: the United States does not oppose competition, as long as it takes place on a fair and level playing field. However, we cannot accept the unfair and illegal actions of others who intend to tilt the playing field through predatory economics and underhanded tactics.

#### *Undermining the Rules-based International Order*

We all know China's population is comparable to the Americas and Western Europe's combined. But China is also geographically situated within arm's reach of 2.4 billion people, roughly a third of the earth's population, across Southeast Asia, Japan, and India. Make no

mistake – China is extending that reach by increasing its overt military and coercive activities vis-à-vis its neighbors.

China’s increasingly provocative behavior in the Indo-Pacific, particularly the South China Sea (SCS), should concern us all. Between 2013 and 2018, China increased its air and sea incursions into the SCS twelvefold. Within those five years, it also increased deployments of offensive and defensive weapons systems to the SCS by the same order of magnitude.

China’s land reclamation and militarization far exceed that of other claimants combined in the South China Sea. Between 2013 and 2015 alone, China created more than 3,200 acres in the SCS, building features within its self-proclaimed ‘nine dash line’ – a claim the Permanent Court of Arbitration in The Hague ruled in 2016 has no legal basis. These constructed features are almost four times the size of Central Park in New York City and roughly five times the size of this Capitol Hill neighborhood. Imagine walking from this hearing room to the Marine Barracks at 8<sup>th</sup> and I over what used to be part of the Pacific Ocean.

Now also picture Chinese interference in freedom of navigation. Yet for this, we do not have to use our imaginations. China habitually threatens this freedom, using both conventional military force projection and “gray zone” or irregular warfare activities. For example, in September, Chinese military vessels came dangerously close to the *USS Decatur* off the coast of the Spratly Islands. China’s force projection inside and outside the SCS disrespects and undermines our rules-based international order and threatens regional stability and security.

#### *International Network of Coercion*

Lastly, China is diligently building an international network of coercion through predatory economics to expand its sphere of influence. Sovereign nations around the globe are discovering the hard way that China’s economic “friendship” via One Belt, One Road can come at a steep cost when promises of investment go unfulfilled and international standards and safeguards are ignored.

Let us look at just a few examples. Saddled with predatory Chinese loans, Sri Lanka granted China a ninety-nine-year lease and seventy percent stake in its deep-water port. The Maldives owes China roughly \$1.5 billion in debt – about thirty percent of its GDP – for construction costs. Pakistan will owe China at least \$10 billion in debt for the construction of Gwadar Port and other projects.

In Africa, Djibouti owes China more than eighty percent of its GDP and, in 2017, became host to China’s first overseas military base. In Latin America, Ecuador agreed to sell eighty to ninety percent of its exportable crude oil to China through 2024 in exchange for \$6.5 billion in Chinese loans. And after leasing land tax-free to China for fifty years, Argentina is denied access and oversight to a Chinese satellite tracking station on its sovereign territory, unwittingly allowing the facility’s use for military purposes.

The list of nations entrapped by China's predatory debt tactics runs long, and some have started to push back. Yet, under the guise of good-intentioned development, Beijing continues to leverage debt for economic or political concessions – a practice we expect will intensify as more nations prove unable to pay China back.

#### POLICY OBJECTIVES TO MEET THE CHINA THREAT

Left unaddressed, China's success in unfairly tilting the playing field in its favor has serious implications for our own military advantage. While we do not seek to contain China, we expect China to play by the rules, meeting the same standards to which the United States and all other nations are held. We will cooperate with China wherever and whenever possible, but we also stand ready to compete where we must to ensure our military's competitive advantage for decades to come.

As German Minister of Defense Ursula von der Leyen said last month in Munich, "our partnerships are not built on domination. They do not create political and economic dependencies." Our pursuit of many belts and many roads creates alternative options for nations unwilling to succumb to China's increasingly coercive methods.

As such, DoD's priority policy objectives are to outpace Chinese military modernization to deter future conflict, or win decisively should conflict occur; protect U.S. and partner research and development of advanced technology from rampant Chinese theft, and; maintain a free and open Indo-Pacific built on strong alliances and growing partnerships.

#### THE RUSSIA THREAT

China is not the only nation attempting to undermine U.S. interests and security to alter the international order in its favor. Despite having an economy smaller than that of the state of Texas, Russia, against the economic odds, seeks a return to great power status. Though it has not reached that goal, Russia is playing a weak strategic hand well by: (1) aggressively modernizing its military; (2) projecting military might beyond its borders; (3) intimidating its neighbors, including exploiting their energy dependence for strategic gain, and; (4) undermining other nations' sovereign democratic processes.

##### *Military Modernization*

Russia is aggressively modernizing its military to gain an asymmetric advantage over the United States and NATO. Russia plans to spend \$28 billion to upgrade and modernize each leg of its strategic nuclear triad by 2020, and has already spent more than ten percent of its total military budget every year since 2011 on nuclear modernization efforts. In March 2018, Russian President Vladimir Putin announced Russia's development of six new strategic weapons systems – five of which are nuclear capable – including hypersonic systems able to



maneuver at ten times the speed of sound and intended to circumvent U.S. missile defense capabilities. One of those hypersonic systems is expected to enter service this year.

In addition to modernizing its strategic weapons systems and delivery platforms, including its submarine fleet, Russia is building a large, diverse, and modern set of non-strategic systems, including the dual-capable SSC-8 cruise missile, which clearly violates the Intermediate-Range Nuclear Forces (INF) Treaty. Every NATO Ally agrees on this point and supports our decision to withdraw from the INF Treaty in response to Russia's material breach. A treaty not followed by all parties cannot be an example of effective arms control. For any who doubt U.S. efforts to bring Russia back into compliance with the Treaty, I would emphasize: we held over thirty meetings with the Russians at every level of government for more than five years – across two administrations, one Democrat and one Republican.

Moving to space, Russian systems are intended to disrupt, degrade, and damage U.S. satellites in orbit. There is no question: Russia treats space as a warfighting domain to gain military advantage over the United States. Moscow has already fielded ground-based directed energy laser weapons and is developing air-based systems and additional novel counterspace capabilities to target our space-based missile defense sensors. Russia now has the third largest collection of operational satellites in the world, behind only us and China.

#### *Projecting Military Power*

On top of modernizing its military capabilities, Russia also projects its military might around the globe. In 2018, Russia conducted its largest strategic military exercise since 1981. Today Moscow deploys a variety of aviation and naval missions to the Pacific, the Arctic, the Mediterranean Sea, the Indian Ocean, and the western hemisphere. In December, Russia sent bombers to Venezuela, conducted several patrols in the Caribbean, and has since deployed military forces to Venezuela to support the failed Maduro regime. And in the Middle East, Russia has continued support for Syria's murderous regime with expeditionary operations and long-range strikes. These examples make clear Russia's ambitions for a more globally dominant military footprint.

#### *Strategy of Intimidation*

In addition to projecting military power far beyond its borders, over the last decade Russia has attempted to incrementally push geographic boundaries with its neighbors. From its 2008 invasion and continued occupation of twenty percent of Georgian territory to its 2014 invasion and continued occupation of Crimea, Russia demonstrates blatant disregard for other nations' sovereignty. Lest we forget, Russia still holds twenty-four Ukrainian crewmembers it captured last November, when it attacked three Ukrainian ships near the Sea of Azov in violation of international law.

Russia's escalating intimidation efforts are amplified by irregular warfare and "gray zone" tactics intended to sow confusion, conceal military movement, and limit accountability. By deploying mercenaries – like those of the Wagner Group to places like Crimea, Syria, Libya, and now Venezuela – instead of uniformed soldiers, Russia hopes its use of proxies will further muddy the already murky waters of conflict and limit international response to its actions. Russia's attempts at deception are not fooling anyone.

#### *Undermining Sovereign Processes*

Russia's duplicity also extends to the cyber domain, where it propagates coordinated disinformation campaigns to undermine sovereign democratic processes. In April 2018, Facebook estimated that roughly one million users followed a page operated by Russia's Internet Research Agency (IRA). Last year, Twitter identified more than 3,800 IRA accounts that had generated millions of tweets over a nine-year span. These accounts are intended to foster divisiveness in the West and undermine trust in democratic institutions.

Russian efforts extend beyond their bots and internet trolls – they conduct deliberate cyber operations against the United States and other sovereign nations. To name a few examples of Russian handiwork: it has targeted U.S. government and critical systems to allow damage or disruption of U.S. civilian or military infrastructure during a crisis; launched distributed denial of service attacks against NATO, Ukraine, and German government websites, and; released a potent cyber virus that caused billions of dollars in damage around the world.

In response, we are not complacent. DoD is getting after the problem, and we are achieving results, most notably in our recent successful efforts to stymie Russian disruption of our midterm elections. We are determining what other actions DoD and our Interagency partners must take to ensure the continued safety and integrity of our democratic institutions.

#### POLICY OBJECTIVES TO MEET THE RUSSIA THREAT

As these examples make clear, Russia is intent on undermining U.S. military advantage to alter the existing balance of power in its favor. In order to thwart Russia's efforts to regain peer competitor status, DoD is focused on modernizing our military to enhance deterrence and prevent future conflict, while bolstering burden sharing to ensure the NATO Alliance remains credible and capable against Russian aggression.

We are also working diligently with the Interagency, our allies, and our partners to deter Russia's physical intimidation and contest its cyber aggression, information warfare, and "gray zone" tactics in Syria and beyond. That includes ensuring Russia does not control the international narrative, casting its malign intentions and actions under a cloak of subterfuge, disinformation, and malign propaganda. We are strengthening our ability to counter this deliberate deceit, both on our own and with our allies and partners.

## REGIONAL THREATS: NORTH KOREA & IRAN

As DoD modernizes to win competition with China and Russia, we also remain alert to regional threats, like those posed by the Iranian and North Korean regimes.

While President Trump and our diplomats negotiate for the denuclearization of North Korea, its collection of nuclear weapons and ballistic missiles continues to pose a threat to the U.S. Homeland, as well as our allies.

Iran, for its part, relentlessly seeks to expand its malign influence across the Middle East and beyond. By providing advanced conventional weapons and military support to the Syrian regime and Houthi rebels in Yemen, and offering support and financing to terrorist groups like Lebanese Hizballah, Iran is entrenching and proliferating its clout across the region. In addition, Iran demonstrates reckless behavior in the maritime domain. Iranian leaders repeatedly threaten to close the Strait of Hormuz – the gateway for almost a third of all global sea-traded oil – to international shipping and allow Iranian-backed Houthis to conduct attacks on international shipping in the Bab al-Mandab.

Iran has also increased funding for its cyber efforts twelvefold under President Rouhani, as well as increased espionage and targeting of U.S. government and commercial entities since withdrawing from the Joint Comprehensive Plan of Action. DoD also remains closely attuned to the threat posed by Iran's ballistic missile capabilities and remains vigilant about the potential that Tehran may one day decide to pursue a nuclear weapon.

## POLICY OBJECTIVES TO MEET REGIONAL THREATS

In support of the ongoing negotiations for the denuclearization of North Korea, DoD aims to ensure our diplomats continue to speak from a position of strength. Our alliances in the region remain ironclad, including with the Republic of Korea and Japan. Together we deter North Korean aggression and maintain our ability to protect the Homeland and win decisively should conflict ever occur.

To counter Iran's destabilizing influence across the Middle East, DoD seeks to deepen and expand alliances in the region and strengthen local partners' capabilities and capacity to manage and counteract threats. We also seek to ensure freedom of navigation for all, bolster resilience against destructive cyber-attacks, and prevent weapons of mass destruction (WMD) from falling into the hands of irresponsible actors.

## THE TERRORISM THREAT

Working by, with, and through an expansive network of international partners, we have made meaningful progress in thwarting terrorist designs against the U.S. Homeland and interests. Yet we do not discount the threats that continue to emanate from violent extremist organizations

(VEOs), as they seek to conduct and inspire attacks, gain legitimacy by exerting control over territory, enjoy safe haven in under-governed countries, obtain access to WMD material, and proliferate their ideology to others across the globe.

Taking a step back from our hard-won successes against the Islamic State in Iraq and Syria (ISIS), we also recognize the global fight against radical Islamist terrorists is not over. From the 1980s to now, the number of nations, either unwittingly or willingly, providing safe haven to VEOs has increased eleven-fold. Today, radical Islamist terrorist movements are organized in more than two dozen countries, and the globe must contend with more than one hundred VEO-directed, enabled, or inspired attacks every year. VEOs continue to take advantage of instability in places like Yemen, Syria, Libya, Iraq, the Maghreb, Lake Chad, Somalia, and Afghanistan, preying on the conflict-ridden to grow their influence.

#### **POLICY OBJECTIVES TO MEET THE TERRORISM THREAT**

Recognizing terrorism as a global threat, we must pursue global solutions that utilize the unique capabilities and capacities of our allies and partners, in addition to our own. Military might alone will not eliminate terrorist ideology or the threat of future terrorist attacks.

However, we can and are reducing the likelihood of an attack on our Homeland, our troops, and our interests by contributing to a whole-of-government and coalition approach. Together, we are removing terrorists' ability to control and hold territory; bolstering the internal security and stable governance of vulnerable states; ensuring the proper safeguarding of WMD material from terrorist hands; checking their ability to exploit emerging technologies, including unmanned systems; targeting VEO financial networks and countering terrorist ideology online to limit its spread to the greatest extent possible; and sharing intelligence to limit the risk of attack around the world.

#### **WHAT DoD IS DOING ABOUT IT**

To meet our policy objectives, DoD cannot simply keep pace with our competitors as they increase their regional and global influence, grow their military capabilities, and develop and field advanced technologies. We must – and will – significantly outpace them.

We have made tough choices that align finite resources with our strategic priorities, reducing some day-to-day operational requirements now so we are prepared to deter, compete, and win against strategic competitors in the future. Our work bringing the NDS to life is far from over, but we are demonstrating clear progress along our three lines of effort.

*Increasing Lethality*

In order to protect the Homeland and remain the most lethal military in the world, we have begun a paradigm shift towards a more balanced, distributed, survivable, and cost-imposing Joint Force. In 2018, we closely linked our combatant commands' operations to policy objectives and our Service plans to capability and capacity, with a focus on execution and performance. We are adjusting our posture, increasing lethality, improving operational readiness, and beginning to modernize and innovate at scale. These efforts allow us to better exploit adversary weakness, project power in contested environments, and expand our combat credible forward presence.

We have shifted our posture in key regions, taking initial steps to economize for sustainable missions in the Middle East and South Asia to prepare for the possible high-end fight of the future. In doing so, we maintain strategic predictability and implement operational unpredictability via the Dynamic Force Employment (DFE) model. This approach provides assurance to our allies and partners, while keeping our competitors and adversaries on their toes. We demonstrated DFE in action last year, when one of our carrier strike groups returned early from deployment unannounced and quickly redeployed to the North Atlantic – the first carrier strike group to conduct operations there since the 1990s.

We encourage and welcome all individuals who can meet our exacting requirements to join our military's ranks. A key element of strengthening our military and increasing lethality is ensuring our warfighters achieve established physical, mental, and security vetting standards. War is unforgiving, and our mission demands we remain a standards-based organization. In upholding systematically applied standards, we ensure the readiness of our Joint Force and cohesion of our units. One of those standards is deployability. Since June, we have lowered the percentage of non-deployable Service Members by one percent – that means roughly 20,000 fewer non-deployable Service Members today than ten months ago.

DoD has also worked diligently to ensure our personnel have the capacity, training, and capabilities they need to achieve results. Last year, we accelerated delivery of more than 14,000 munitions and precision guidance kits to our warfighters, turned the corner on replenishing critical munitions stockpiles, and made strides to rapidly deploy cutting edge equipment to the warfighter. Our Close Combat Lethality Task Force continues to strengthen our infantry's lethality, survivability, resiliency, and readiness for close combat. Four out of five U.S. combat deaths occur in our infantry. Therefore, it is a strategic imperative to ensure those who confront war's grimmest realities never enter into a fair fight.

This work on personnel and munitions readiness feeds into complementary efforts to increase equipment readiness. In October 2018, we set an eighty percent readiness target for mission critical aviation platforms. In just a few months, almost every type, model, and series of aircraft targeted by that memorandum has demonstrated progress. This year, we will establish similarly ambitious readiness targets across the DoD enterprise. In addition, our Services have made

impactful readiness gains. As one example, the Air Force's operational squadrons are twenty-three percent more ready today than in 2017, and we will have twenty-five percent more pilots able to carry out missions in FY2019 than in FY2016.

On modernization, we remain committed to a safe, secure, and effective nuclear deterrent. Nuclear deterrence has kept the peace over the last seventy years, and its importance has been reaffirmed by every Congress and every president since Harry Truman. Last year, DoD released our Nuclear Posture Review (NPR), which details the need for modern and tailored nuclear capabilities and capacity that meet the realities of our times. We are moving out on those efforts. With FY2019 funding, we are recapitalizing and modernizing our aging legacy forces, including our nuclear command, control, and communications (NC3), while pursuing prudent, modest adjustments to our arsenal, which will increase the flexibility of our response options.

Here it is worth re-stating – Russia is aggressively developing and modernizing a suite of strategic and non-strategic nuclear weapons. Not only does this add urgency to the modernization of our legacy forces, it underscores the importance of the supplemental capabilities called for in last year's NPR. Both the low-yield submarine-launched ballistic missile (SLBM) and the sea-launched cruise missile (SLCM) close what we believe to be troubling gaps in regional deterrence. These are not redundant capabilities. The low-yield SLBM, deployed in small numbers, will provide a highly tailored response to specific developments in Russia's forces and doctrine that may lead Russia to mistakenly believe it could potentially use a small number of low-yield nuclear weapons without risking a U.S. military response. A nuclear SLCM will provide a similar capability in response to serious developments and trends in Russia's nonstrategic nuclear forces. These supplemental capabilities enhance deterrence and stability.

Turning to emerging technology fields, DoD has identified ten key areas: hypersonics; fully networked C3; directed energy; cyber; space; quantum science; artificial intelligence (AI)/machine learning; microelectronics; autonomy; and biotechnology.

We have invested in basic research, rapid prototyping, and experimentation to mature technology that can be used at scale. We are also updating our warfighting doctrine as the character of warfare changes. Take AI for example – competitors are investing heavily in this field, redefining the future of warfare. Last year, DoD established the Joint AI Center (JAIC), and we released our AI Strategy in February of this year. These efforts accelerate DoD's delivery and adoption of AI at the speed of relevance, while attracting and cultivating the best global talent.

In pursuit of stronger missile defense, DoD released our Missile Defense Review (MDR) in January, which recognizes the accelerating proliferation of advanced offensive missile capabilities around the world. The MDR articulates a comprehensive approach that combines deterrence, active and passive missile defense, and attack operations. We continue to maintain

ground- and sea-based missile defenses while also developing new capabilities to counter new threats.

As the MDR illustrates, our military is not constrained by earth's geography. We are taking steps to secure unfettered access to and freedom to operate in space, in accordance with our international agreements and obligations. Reforming the organization of the military space enterprise is fundamental for protecting our roughly \$20 trillion economy and our position as the world's strongest military. In March, we submitted a legislative proposal to Congress requesting authorization and associated appropriations for a U.S. Space Force. If approved, the Force would transform our approach to space, increasing our responsiveness in this warfighting domain. Establishing a sixth branch with dedicated military leadership will unify, focus, and accelerate the development of space doctrine, capabilities, and expertise to outpace future threats, institutionalize advocacy of space priorities, and further build space warfighting culture. I ask for your support of our proposal, so we can move out in this critical domain.

We recognize restoring military readiness, modernizing our Joint Force, and increasing lethality will not happen overnight, but as the above examples demonstrate, we are making meaningful progress.

#### *Strengthening Alliances and Partnerships*

Beyond DoD's efforts to improve readiness and lethality, we are expanding collaboration and cooperation outside the Department. DoD's participation in combined military exercises has increased by seventeen percent in the last two years, and our Foreign Military Sales have increased by more than sixty-five percent in the last three years. Across the globe, DoD has leveraged opportunities to expand and deepen our already unmatched network of allies and partners, while making real progress on burden sharing for international security.

Starting in the Indo-Pacific, our priority theater, we continue to pursue many belts and many roads by keeping our decades-old alliances strong and fostering growing partnerships. In all our actions, we demonstrate our commitment to a free and open region, marked by respect for the sovereignty and territorial integrity of all nations, big and small.

We are fortifying our bedrock alliances with Australia, Japan, the Republic of Korea, the Philippines, and Thailand while growing key partnerships across the Indo-Pacific. It is worth noting here that four out of the five nations in our Five Eyes intelligence-sharing network are also Pacific nations, further emphasizing the region's importance.

In 2018, the United States took historic strides with two key partners in particular, Vietnam and India. Our Navy conducted the first U.S. aircraft carrier visit to Vietnam since the Vietnam War, and we participated in the inaugural U.S.-India 2+2 Strategic Dialogue in New Delhi, showing growing trust between the world's oldest and largest democracies.

While our diplomats chart a path to the denuclearization of North Korea, DoD continues to enforce United Nations Security Council resolution sanctions against North Korean ship-to-ship transfers, alongside allies and partners. We have also improved integration of our missile defense assets on the Korean Peninsula to better protect U.S. Forces and allies.

In July 2018, we conducted the largest naval exercise in the world, the Rim of the Pacific or RIMPAC, alongside twenty-five other nations. That and our Southeast Asia Maritime Security Initiative have boosted interoperability and increased our allies and partners' ability to conduct maritime security and awareness operations on their own. Our efforts across the region have enabled our allies and partners to take a tougher stand against Chinese aggression in international waters. For example, this past year France, the United Kingdom, Japan, Canada, Australia, and New Zealand all increased their presence in the East and South China Seas, reiterating our collective stance to fly, sail, and operate wherever international law allows.

In Europe, the United States is fortifying relationships, realizing burden sharing gains, and developing a more lethal, combined capability. This year, NATO – the most successful Alliance in history – marks its seventieth anniversary as the bedrock of transatlantic security. NATO is poised to bolster deterrence through larger and more frequent exercises, mobility and infrastructure improvements, a revamped command structure, and increased force presence in territories most vulnerable to Russian aggression. We are rapidly pursuing our “Four Thirties Readiness Initiative” by 2020: thirty mechanized battalions, thirty air squadrons, and thirty combat vessels ready to fight within thirty days or less.

Over the last two years, NATO has made significant burden sharing progress, both financially and operationally. Since 2017, our NATO Allies have increased their defense spending by \$41 billion. The nine percent increase from 2016-2018 represents the largest in a quarter century. By 2020, NATO projects Allies will increase defense spending by \$100 billion. These are impressive numbers. Yet NATO contributions do not all boil down to simple dollar amounts. The Alliance continues to provide valuable manpower, specialized capabilities, and territory that no other partnership in the world can match.

I now move to the impactful work we are doing by, with, and through our allies and partners across the Middle East and South Asia.

In Syria and Iraq, the United States, as part of the seventy-nine-member Defeat-ISIS Coalition, and our local partners have liberated more than thirty towns and cities from ISIS control since January 2017 – that's all of the territory ISIS once held.

As we look ahead in Syria, we will continue to stand with those who fought and continue to fight alongside our Coalition, address Turkey's security concerns along Syria's northeast border, maintain the global Defeat-ISIS Coalition, and set conditions for continuing U.S. counterterrorism operations in the region. We fully support the Government of Iraq in its fight



against terrorism and will continue to enable the Iraqi Security Forces' progress in securing liberated areas and thwarting ISIS attempts to mount a clandestine insurgency.

In Afghanistan, we are executing President Trump's South Asia Strategy, R4+S (regionalize, realign, reinforce, reconcile, and sustain). In applying military pressure on the Taliban, we support Ambassador Zalmay Khalilzad and Secretary Pompeo's ongoing negotiations, which are Afghanistan's first chance for real peace in forty years. We are also applying maximum pressure on ISIS-Khorasan (ISIS-K) and other terrorist groups in Afghanistan, to stymie any threats to the U.S. Homeland.

Since 2016, our allies and partners have stepped up to create necessary conditions for negotiations. Afghan forces now lead one hundred percent of conventional ground missions. U.S. and coalition personnel perform train, advise, and assist roles, and the United States provides combat enablers to supplement Afghan capability gaps. In addition, U.S. and Afghan special forces regularly partner to conduct strikes against insurgents and terrorists. In 2018, international partners agreed to extend their roughly \$1 billion in annual financial sustainment of Afghan forces through 2024. NATO's fulfillment of requirements in Afghanistan has increased more than fourteen percent since the introduction of President Trump's South Asia Strategy, its highest level in the Mission's history. Since 2016, the number of non-U.S. Coalition troops to NATO's Resolute Support Mission has increased by more than thirty-five percent, and two new countries, Qatar and the United Arab Emirates, are formalizing their status as operational partners.

Defeating Al Qa'ida in the Arabian Peninsula (AQAP) and ISIS remains the United States' top national security interest in Yemen. At the same time, we fully support UN Special Envoy Martin Griffiths's efforts to bring all relevant parties of the civil war to the negotiating table. Though not easy, these is the necessary first step on the path to lasting peace.

In Africa, we are helping partners build their security forces' capacity to counter terrorist and other transnational threats, bolstering relationships to ensure U.S. influence and access against great power competition, enhancing our ability to conduct crisis response, and supporting whole-of-government efforts to advance stability and prosperity.

The last stop in our abbreviated walk around the world is closer to home – to our allies and partners in the western hemisphere and our efforts to protect our southern border. Over the last year, we have fostered strong military-to-military ties with our Canadian and Mexican neighbors, while bolstering relationships with Brazil, Argentina, Colombia, and Chile. We appreciate and applaud these nations' contributions to international security, demonstrated notably last year when Chile served as the Combined Forces Maritime Component Commander at RIMPAC – the first time in the exercise's history a non-English speaking nation has done so.

As we continue to monitor the situation in Venezuela, we are working closely with the Department of State, U.S. Agency for International Development, and regional partners to

provide humanitarian assistance, while maintaining our posture to protect our national interests and citizens abroad.

On the southern border – in February, I visited the El Paso area to assess the security situation and DoD’s role in supporting our Department of Homeland Security partners.

As these myriad examples illustrate, our thriving, global constellation of alliances and partnerships provides an asymmetric advantage no competitor or adversary can match. We take that advantage seriously, and we continue to foster its growth at every opportunity.

### *Implementing Reform*

Let me now turn inward – to reform of our internal business practices. Over the last year, we have made marked improvements to our fiscal transparency, instituting a wide range of reform initiatives that bolster efficiency, effectiveness, and performance.

We have focused reform in key areas, including healthcare, contract management, information technology (IT), acquisition, civilian resource management, and financial management. Let me provide a brief overview of our progress so far. Over the course of FY2017 and FY2018, we have saved \$4.7 billion from reform across our headquarters’ activities – a down payment on more to come.

On healthcare, we realized savings of almost \$519 million in TRICARE reform in FY2018, with \$3.4 billion in savings planned through FY2021. Our entire Fourth Estate has now participated in contract service requirement reviews to eliminate unnecessary contracts, resulting in \$492 million in programmed savings.

Within the IT field, we modernized our defense travel system, trimming our regulation by almost 1,000 pages. The reform allows for better industry competition and has saved nearly \$160 million to date. Within acquisition reform, our Services saved more than \$550 million in FY2017 and FY2018 by selling equipment to foreign partners and negotiating multi-year procurements over single-year contracts.

And within financial management, DoD completed our first-ever consolidated financial statement audit in 2018, covering roughly \$2.7 trillion in assets. DoD has developed corrective action plans to address ninety-one percent of the total audit findings and recommendations, with more corrective actions to come.

In addition to business reform, the Department has also made important structural reforms, including elevating U.S. Cyber Command to full combatant command status; standing up U.S. Army Futures Command; finalizing our split of the Acquisition, Technology, and Logistics office into two separate offices, Acquisition and Sustainment (A&S) and Research and Engineering (R&E); and appointing the Department’s first Chief Data Officer.

*The Way Ahead*

Our Department has been busy, but we are just getting started. I am encouraged by our initial progress. Focus and discipline are vital for our NDS's continued execution.

**OUR FY2020 REQUEST: A STRATEGY-DRIVEN BUDGET**

Our FY2018 funding stopped the erosion of our competitive edge by beginning to restore military readiness. Our FY2019 funding continued readiness gains and made key down payments on a more lethal military. Now our Department needs adequate, sustainable, and predictable funding to maintain momentum and expand our modernization and readiness efforts. Every line of our FY2020 request is designed to implement our Strategy. Therefore, every dollar of it – both in baseline funding and overseas contingency operations – is critical. I ask for Congress's support for on-time funding of our \$750 billion topline for National Defense, so we can continue to breathe life into the NDS.

Our strategy-driven budget drives further progress along our three lines of effort and brings our military modernization efforts to life at the speed of relevance. It enables critical shifts to compete, deter, and win in any high-end fight of the future, while preserving capabilities to support current operations. With this funding, we ensure America maintains our asymmetric military advantage with a more lethal, agile, and innovative Joint Force.

The FY2020 request includes the largest research, development, test, and evaluation (RDT&E) budget in seventy years, when adjusted for inflation. That is \$104 billion in total requested funds for FY2020 – \$9 billion more than what we will spend this fiscal year. We have made strategic choices to prioritize lethality for the high-end fight.

Across DoD, these choices move our capabilities from cost-accepting to cost-imposing, from the exquisite and purely survivable to the affordable and attritable. Through targeted investment, we will replace a federated approach with an enterprise one, enabling a more distributed, scaled path to innovation and modernization. This path prioritizes unmanned and machine capabilities, as well as the ability to “fight in the dark” without network dependency.

With that broader context in mind, I will now focus on four priority areas: (1) Investing in the contested space and cyber domains; (2) modernizing in traditional air, maritime, and land domains, as well as multi-domain enterprises; (3) innovating in emerging technology fields to strengthen our competitive edge, and; (4) building on readiness gains to meet requirements for our current operational commitments and future challenges.

*Space and Cyber Investments*

Our request recognizes the critically important role space will play in maintaining military superiority in the future. The \$14.1 billion dedicated to space will counteract the erosion of our competitive advantage by enhancing our existing space-based capabilities, like GPS, satellite communications, and missile warning, as well as increasing launch capacities. We will also stand up the U.S. Space Force Headquarters, U.S. Space Command, and Space Development Agency to best prepare DoD to assure freedom of operation in space, deter attacks, and when necessary, defeat space and counter space threats to the United States, our allies, and our partners.

We also note the cyber domain's crucial role, both now and in warfare's future. That is why we have requested \$9.6 billion to support offensive and defensive cyberspace operations, shore up network resiliency against adversaries, and improve our cyber posture. These efforts help ensure DoD has the information and communications technology capabilities necessary for implementing our NDS and realizing our mission.

*Traditional and Multi-Domain Investments*

The FY2020 budget will ensure the U.S. military maintains long-term competitive advantage on land, in the air, and on the sea. Across these three traditional domains, we are investing a total of \$107 billion for modernization.

In the air domain, this includes \$57.7 billion to increase the procurement and modernization of our fighter force. A balanced mix of fourth and fifth generation aircraft will effectively and affordably meet the entire spectrum of NDS missions, providing the stealth needed to gain air superiority, execute precision strikes, and conduct stand-in electronic attack against peer competitors in highly-contested environments, while also providing counter-air and strike in more permissive environments. We will also purchase additional tankers, Advanced Medium-Range Air-to-Air missiles, and Joint Air-Surface extended range missiles.

On land, we will invest \$14.6 billion to fund roughly 6,400 combat and tactical vehicles, including M-1 Abrams upgrades and Amphibious Combat Vehicles, as well as multiple combat systems that provide overmatch on the last two hundred meters of the battlefield.

In the maritime domain, we will increase and diversify our strike options, including offensive-armed unmanned surface and underwater vessels and advanced long-range missiles. FY2020 funds will also accelerate fleet growth, delivering more ships faster, including cutting edge unmanned variants.

The FY2020 request also invests \$14 billion in modernizing and recapitalizing all three legs of our nuclear capabilities, to include the Ground-Based Strategic Deterrent system, Columbia-class ballistic missile submarine, Long-Range Standoff Weapon, B-21 bomber, life-extended

Trident SLBM, and the F-35 dual-capable fighter aircraft; while also enhancing our missile warning and NC3 capabilities.

We also slate \$13.6 billion for missile defeat and defense modernization, increasing the capability and capacity of our ground-based defenses, Terminal High Altitude Area Defense, and Aegis Ballistic Missile Defense systems; enhancing our space-based missile warning and other capabilities to address hypersonic threats; and developing boost-phase missile defense systems, including directed energy and air-launched kinetic interceptors.

Also on the multi-domain front, we will invest \$3.4 billion for our Special Operations Forces. The FY2020 request refocuses on strategic competition by increasing funding for research and development, modernization, and expanded capabilities for the high-end fight, while maintaining irregular warfare as a core competency.

*Innovation and Advanced Technology Investments*

With more than \$7.4 billion directed toward DoD's development and fielding of technologies focused on the high-end fight, the FY2020 budget prioritizes funding across four key emerging areas: autonomy, AI/machine learning, hypersonics, and directed energy.

Let me expand on hypersonics for a moment as one example. Without the long-range, survivable, and fast strike capability of hypersonic weapons, it will be difficult for our military to maintain access to key regions or come to the defense of allies and partners in a crisis or war. Yet, with the \$2.6 billion requested in FY2020, projected doubling of funding requests in coming years, and close inter-service cooperation, we are accelerating pursuit of options deliverable from land, sea, and air, with some capabilities expected to deploy to the warfighter three years earlier than previously planned.

*Sustainment and Readiness Investments*

This budget sustains our Joint Force and builds on critical readiness gains. We will invest almost \$125 billion in operational readiness and sustainment, including \$1.5 billion for advanced training facilities and ranges, \$2.6 billion for improving and expanding cyber operations training, and \$41.2 billion for further improving tactical aviation readiness.

In addition, the FY2020 budget will allow an increase to our total end-strength by roughly 7,700 Service Members over the projected FY2019 level, as well as give our men and women in uniform a much-deserved 3.1 percent pay raise, the largest in a decade.

In concert with the funding priorities I have just outlined, we will continue to pursue opportunities that balance capacity and capability by realizing economies of scale in large equipment acquisitions, like aircraft carriers and the F-35 Joint Strike Fighter. As we do so, we will continue to assess the utility of our investments through a lifecycle lens.

**CONCLUSION**

With Congress's support and delivery of on-time funding at our requested topline, this budget ensures our military maintains the lethality, adaptability, and resiliency necessary to compete, deter, and win against any adversary in an increasingly dangerous world.

It is a privilege and honor to lead the most lethal military in the world. I thank those in uniform and their families for all they do, today and every day, to keep us safe, and I appreciate the critical role Congress plays to ensure our warfighters are ready to succeed on the battlefields of today and tomorrow.

The men and women of the Department of Defense stand ready, as always, to protect liberty and freedom.

Thank you.

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Mr. VISCLOSKY. Secretary.  
General.

#### SUMMARY STATEMENT OF GENERAL DUNFORD

General DUNFORD. Chairman Visclosky, Ranking Member Calvert, distinguished members of the committee, thanks for the opportunity to join Secretary Shanahan and Secretary Norquist here today. It remains my privilege to represent your soldiers, sailors, airmen, and marines.

While much of our discussion this morning is going to focus on the challenges we face, it is important I begin by assuring you that your Armed Forces can deter a nuclear attack, defend the homeland, meet our alliance commitments, and effectively respond should deterrence fail.

I believe we have a competitive advantage over any potential adversary defined as the ability to project power and win at the time and place of our choosing. But as members of this committee know, 17 years of continuous combat and fiscal instability have affected our readiness and eroded our competitive advantage.

As the Secretary highlighted, China and Russia have capitalized on our distraction and restraints by investing in capabilities specifically designed to challenge our traditional sources of strength. After careful study, they have developed capabilities intended to contest our freedom of movement across all domains and disrupt our ability to project power.

With the help of Congress, starting in 2017, we began to restore our competitive advantage. Recent budgets have allowed us to build readiness and invest in new capabilities while meeting our current operational requirements.

We can't reverse decades of erosion in just a few years, and this committee knows that as well as any. This year's budget submission will allow us to continue restoring our competitive advantage by improving readiness and developing capabilities to enhance our lethality. It proposes investments in advanced capabilities across all domains: sea, air, land, space, and cyberspace. This year's budget also sustains investments in our nuclear enterprise to ensure a safe, secure, and effective strategic deterrent, the highest priority of the Department.

We have also taken steps to more effectively employ the force we have and build the force we need tomorrow. We have implemented fundamental changes in our global force management process to prioritize and allocate resources in accordance with the Secretary's National Defense Strategy. We do all this while building readiness and a flexibility to respond to unforeseen contingencies.

And because two members raised it early in their comments, I can assure you that as we have made these adjustments to our global force management posture, we are also addressing the sustained requirement against violent extremism.

We have also redefined our process for developing and designing a future force that will enable us to pair emerging technologies with innovative operating concepts.

In closing, I would like to thank the committee for all you have done to support our men and women in uniform and their families. Together we have honored our solemn obligation to never send our

sons and daughters into a fair fight, and with your continued support, we never will.

[The written statement of General Dunford follows:]



HOUSE APPROPRIATIONS SUBCOMMITTEE ON DEFENSE

STATEMENT OF

GENERAL JOSEPH F. DUNFORD, JR., USMC

19<sup>TH</sup> CHAIRMAN OF THE JOINT CHIEFS OF STAFF

DEPARTMENT OF DEFENSE BUDGET HEARING

MAY 1, 2019

Chairman Visclosky, Ranking Member Calvert, distinguished members of this committee, it is an honor to join Acting Secretary Shanahan and the Honorable David Norquist in testifying before you today. It remains my distinct privilege to represent the Soldiers, Sailors, Airmen, and Marines of the United States Armed Forces.

Today, I can assure the committee that the United States military can defend the Homeland, meet our Alliance commitments, deter nuclear attack from any state actor, and effectively respond should deterrence fail. We have a competitive advantage against any adversary across all domains—air, sea, land, space, and cyber—and we can project power to advance the interests of the United States anywhere around the globe.

But that competitive advantage has eroded. This is the result of seventeen years of continuous combat against transregional violent extremism and the damaging effects of funding instability. China and Russia have capitalized on our distraction and our constraints. They have invested in capabilities specifically designed to challenge our traditional sources of strength and have sought to undermine the rules-based international order that brought prosperity and relative peace for the last seven decades.

With your help, starting in 2017, we arrested the erosion of our competitive advantage. Appropriations in fiscal years 2017-2019 allowed us to restore readiness and invest in new capabilities while meeting our ongoing commitments across the globe. However, we cannot undo decades of degradation in just a few years. This year's budget allows us to continue to restore our competitive advantage by enhancing our readiness and lethality.

### **STRATEGIC ENVIRONMENT**

Today's strategic environment is extraordinarily complex and volatile. The National Defense Strategy (NDS) characterizes and prioritizes our strategic challenges with a "2+3" framework that names China and Russia as the primary challenges with which we must contend, along with North Korea, Iran, and violent extremism. This framework provides a benchmark against which we can measure our capabilities. It is not intended to be predictive of future crises or armed conflicts; rather, it is an important tool for planning, managing risk, and developing capabilities. Our assumption is that if we build a Joint Force with the capabilities and capacities to meet these

challenges, either individually or in some combination, we will be well-positioned to respond to whatever threats the future holds.

China. China has paired its rapid economic growth with substantial military investment as it strives for regional hegemony and global influence. By investing heavily in the space and cyber domains while expanding air and maritime capacity and militarizing disputed land formations, they are developing the ability to deny us access to the East and South China Seas. The intended effect is to weaken our alliance structure in the Pacific and allow Beijing to rewrite the norms, standards, and laws in the region. They are also advancing their interests globally through the One Belt One Road Initiative, creating exploitive economic relationships across Asia, Africa, and Latin America. These relationships can be leveraged to reduce our influence and the access we need to project military power.

Russia. Similarly, Russia has invested in asymmetrical capabilities where they perceive they have a competitive advantage. They are using information, cyber, and unconventional operations combined with economic and political influence to advance their interests while seeking to undermine the credibility of NATO. We have seen examples of their revanchist behavior in the invasion of Georgia and Crimea, their ongoing activity in the Donbas, and the recent seizure of Ukrainian vessels near the Sea of Azov. We also saw their efforts to undermine democracy in 2016, both in Europe and the United States.

North Korea. While we remain hopeful for a peaceful denuclearization of the Korean Peninsula, after two summits between President Trump and Kim Jong-Un, it is clear that we must remain ready for multiple contingencies. We are still dealing with a country that has nuclear weapons and ballistic missiles that threaten our Allies in the region and our Homeland. Regardless of the expressed intent of the North Korean leader, that capability exists and we must retain the force posture to deter and defend against the threat.

Iran. Iran continues to project malign influence and present challenges with missile, cyber, proxy, and maritime capabilities. We also continue to monitor Iran's nuclear capability. The regime aims to establish itself as the dominant regional power; their military development is designed to restrict our access to their sphere of influence while their activities threaten freedom of navigation along important commercial routes, destabilize the government of Iraq, exacerbate civil wars in Yemen and Syria, and support proxies inside of Lebanon and Syria.

Violent Extremist Organizations. While we have made significant progress against ISIS, Al Qaeda, and affiliated groups, the threats to the United States and our Allies and partners remain. Violent extremism is a global, generational, society-level problem of which military operations can only manage the symptoms. In the meantime, we have implemented a fiscally, politically, and militarily sustainable counterterrorism campaign.

Our security, our prosperity, and the international system that makes them possible are threatened today by actors ranging from advanced and ascending militaries backed by nuclear arsenals to lone fighters inspired by radical ideologies. The Joint Force must respond by balancing the capabilities we need for today's operations with the depth, flexibility, and advanced technologies required to respond to the challenges of the future. If approved, the President's Budget 2020 (PB20) request will enable the Department to adapt the force we have today, while we design the force needed for tomorrow's challenges.

### **THE FORCE WE NEED TODAY**

The Joint Military Net Assessment—a rigorous tool we use to evaluate the Joint Force's ability to meet its strategic objectives—identified challenges across all domains in the context of our near-peer competitors. Other assessments and strategic reviews have also highlighted the sustained investment we need to improve readiness, capabilities, and capacities in the Joint Force. The FY20 budget provides funding for current operations and, building on budgets of recent years, continues to build readiness and improve lethality by modernizing existing capabilities and expanding capacity.

#### Readiness.

We have realized readiness improvements through fundamental changes in our global force management processes. As directed in the NDS—and in support of its 2+3 strategy—we have implemented Dynamic Force Employment (DFE). This is a top-down process of prioritizing and allocating resources against our strategic priorities with bottom-up refinement from the Geographic Combatant Commanders.

DFE allows us to position resources globally to mitigate strategic risk and be operationally unpredictable while remaining strategically predictable. This improves our ability to respond to

unforeseen crises—as well as opportunities—and provide strategic flexibility for senior decision makers while maintaining readiness across the Joint Force.

Within this new framework for global force management, your men and women in uniform are operating across the globe every day to assure Allies and partners, deter adversaries, and assist local forces in combatting violent extremism at its sources. PB20 provides them the resources they need to accomplish their missions and return home safely.

#### Current Operations.

China. U.S. forces conduct freedom of navigation operations globally to challenge excessive maritime claims—including those made by China—and demonstrate our determination to operate wherever international law allows. In the South China Sea and elsewhere in the region, we also fly bomber missions, demonstrating a resilient global strike capability that checks Chinese ambition and assures our regional Allies and partners. Throughout the Pacific, our troops exercise and engage with partners to signal our commitment and counterbalance China's challenges to the rules-based order.

Russia. In Europe, the European Defense Initiative and associated posture adjustments and combined exercise programs represent the largest reinforcement of NATO's collective defense posture—and the largest demonstration of its interoperability—since the Cold War. U.S. personnel also contribute to NATO's integrated ballistic missile air defense in Europe. In both the Atlantic and Pacific, we conduct sustained air and sea operations to monitor Russian activities and deter any aggression.

North Korea. U.S. troops on the Korean Peninsula are postured and trained to deter North Korean aggression, provocation, and coercion. Their current priority is supporting the State Department-led maximum pressure campaign to achieve the full, final, and verifiable denuclearization of the Peninsula. In concert with like-minded nations, we have expanded our sea and air operations to deter and disrupt illicit ship-to-ship transfers of refined petroleum and other materials restricted by UN Security Council Resolutions.

Iran. U.S. forces conduct freedom of navigation operations in the Strait of Hormuz. We continue our commitment to the stability of the government of Iraq, and our efforts to build the capacity of

our regional partners. In these and other ways, the Joint Force complements U.S. diplomatic and economic efforts to counter Iranian malign influence in the Middle East.

VEOs. The United States has assembled a global coalition to counter violent extremist organizations—leveraging a relatively small footprint of U.S. forces to enable local partners throughout the world. The immediate priority is achieving the enduring defeat of ISIS in Iraq and Syria through Operation INHERENT RESOLVE. We are also working by, with, and through partners in every region to cut the “connective tissue” of foreign fighters, resources, and the ideological narrative that enable violent extremists to operate transregionally.

Iraq and Syria. U.S. troops remain engaged in the D-ISIS campaign. As the campaign transitions from clearing ISIS-held territory to a focus on stabilizing the region, activities such as training local security forces, enabling local governance, and conducting counterterrorism operations will help prevent a power vacuum in Northeast Syria and a resurgence of ISIS. We are working with our Coalition partners to ensure we meet Turkish security concerns as well as protect those that fought with us against ISIS.

Afghanistan. Along with our Allies and coalition partners, we are setting the military conditions to fully support an Afghan-led, Afghan-owned peace process. Coalition forces train, advise, and assist Afghanistan National Security Forces, as well as provide critical aviation support, intelligence, and other capabilities to make them a more effective fighting force.

In addition to readiness gains from improved force management, DoD budgets in recent years helped arrest the decline of unit readiness across the Joint Force. In FY18 and FY19, we increased the quality and quantity of unit training, improved personnel deployment availability, increased stocks of key munitions, streamlined aviation depot processes, and added capacity to address shortfalls in maintenance and sustainment functions. PB20 enables us to continue on this path, but a decade of neglect will require years to correct. A full restoration of our readiness will require sustained, sufficient, and predictable funding into the future.

## A MODERN AND MORE LETHAL FORCE FOR TOMORROW

The NDS calls for a more lethal force that expands the competitive space to meet critical challenges and key operational problems. The PB20 request invests in a more lethal force by funding efforts to modernize current capabilities and expand warfighting capacity.

A primary modernization priority is our aging nuclear enterprise. A large-scale nuclear attack poses an existential threat to the United States. U.S. nuclear forces are the indispensable means of addressing this threat, making nuclear deterrence the highest priority mission of the Joint Force. The 2018 Nuclear Posture Review established the elements of the nuclear modernization program—a program that is necessary, prudent, and affordable given the nature and evolution of the threats we face. PB20 fully funds that program.

PB20 also enhances joint warfighting capacity by fielding the capabilities we need to project power. In the air, continued procurement of 5<sup>th</sup> generation fighter aircraft allows us greater flexibility to respond globally today and in the future. At sea, recapitalizing the naval fleet with modern and lethal platforms sustains undersea, surface, naval aviation, and fleet logistic advantages while increasing investments in unmanned, autonomous maritime capabilities. And on the ground, enhancement of long-range precision fires, development of the next generation combat vehicle, and investments in close combat systems ensure our Soldiers and Marines' overmatch on the battlefield.

Space continues to be a priority area for modernization and innovation. In response to the evolution of threats to U.S. assets in space, we will establish the U.S. Space Force Headquarters, U.S. Space Command, and Space Development Agency. To deter our adversaries, we are pursuing organizational constructs, systems, and capabilities that will produce a more lethal, resilient, and agile Joint Force. Additionally, this budget request includes substantial investments in Missile Warning, launch platforms, Space Situational Awareness, Space Control, and enhancements to Position, Navigation, and Timing.

In the cyber domain, PB20 allows the Joint Force to further develop and employ the necessary tools to defend DoD infrastructure, compete below the level of armed conflict, and operate as part of broader joint operations. This budget request increases our investments in required

capabilities to operate effectively in cyberspace and maintain our competitive advantage against near-peer adversaries.

While improving lethality in the near term, we will continue to develop and design a future Joint Force that can fight and win against any adversary on any battlefield of tomorrow. A joint concept-driven, threat-informed approach to capability development—leveraging wargames, exercises, and experimentation—allows us to more deliberately evaluate needs of the current force and prioritize future requirements. Our refined approach to Force Development and Design allows senior leaders to pair emerging technologies with optimal organizational constructs and innovative operating concepts to plan and execute joint operations now and in the future.

No investment is more important to the effectiveness of our future force than the development and education of our future leaders. The nation's ability to compete, deter, and win requires leaders who have the vision, intellect, and critical thinking skills to employ, develop, and design the future Joint Force. With a special emphasis on revitalization of the War Colleges, our leader development program is designed to fully support the development of these strategic thinkers and future senior leaders of the U.S. Armed Forces.

## **CONCLUSION**

This is my fourth and final appearance before this committee in support of the Department's annual budget request. I thank you for the great honor of representing your Soldiers, Sailors, Airmen, and Marines.

More importantly, I would like to thank the committee for all you have done to support our troops, as well as their families. In visits to the Joint Force at bases and posts, stateside and around the world, I continue to be amazed by their spirit and dedication to the mission. Through the support of the Congress and the people you represent, our service members in uniform will prevail in our current conflicts and be prepared to confront the threats the United States will surely face in the future.

Together, we have honored our solemn obligation to never send our sons and daughters into a fair fight. With your continued support for sustained, sufficient, and predictable funding, we never will.



Mr. VISCLOSKY. Mr. Calvert.

BUDGET AGREEMENT

Mr. CALVERT. Thank you, Mr. Chairman.

Before I get to my question, I just want to point out, I think everybody agrees here that we need to come to a budget agreement. Certainly, our collective national defense is at risk if we don't do that and do it on time. But, you know, as we all know here, it takes three to tango in the budget process, not just the White House, but the Senate and the House. And so all of us need to get together as soon as possible and come up with a top-line number, not just for this budget year, but I would hope for the next budget year, and then we can try to separate this appropriations process from the political world out there and that we can do the right thing and pass these bills on time. And I am sure we can all agree that that would be a great goal to have.

VENEZUELA

Since all of you are here today, I thought I would ask a topical question about our own hemisphere and the resources we have—obviously, the Southern Command is not something we put a lot of resources in, but it is—all of a sudden, it seems to be more important with what is going on in Venezuela. Maybe you can give us a report on the latest in Venezuela as of this morning.

General DUNFORD. Thank you, Ranking Member Calvert. You know, we are obviously watching the situation very closely in Venezuela. The President's made it clear that all options are on the table. To date, most of our actions have been diplomatic and economic. We certainly were prepared to support the life and safety of civilians, American citizens, when they were there. They were safely withdrawn some weeks ago.

The situation's a little bit unclear today, from our perspective, between Maduro and Guaido, Guaido being the legitimate member of the government. We are doing what we can now to collect—to collect intelligence, to make sure we have good visibility on what is happening down in Venezuela, and also be prepared to support the President should he require more from the U.S. military.

SRI LANKA

Mr. CALVERT. Thank you. General, in our hearings, we have been talking obviously a lot about Russia and China for obvious reasons. However, what happened in Sri Lanka last week, which killed 290 people and injured at least 500 who were at churches, hotels, shows that we can't let our guard down when it comes to violent extremists.

To that extent, can you tell us in this setting more about the attack, how sophisticated was it, and how was it funded?

General DUNFORD. Ranking Member Calvert, we are still working with the Sri Lankans to get the exact details. I don't want to make news in front of the Sri Lankans in terms of what they know. My assessment was it was very sophisticated in terms of the simultaneity of the attack and the techniques that were used by the Sri Lankans.

I think it exposes exactly what you talked about, which is the fight against ISIS is not over, and the underlying conditions that feed violent extremism still exist, and it highlights the need for us, even in the context of great power competition, to make sure that we have a politically, fiscally, and militarily sustainable approach to violent extremism. Because some people have called it a generational problem, and I wouldn't take issue with that characterization of how long we will be dealing with this.

Mr. CALVERT. Okay. Thank you.

Thank you, Mr. Chairman.

Mr. VISCLOSKEY. Mrs. Lowey.

#### DENUCLEARIZATION OF NORTH KOREA

Mrs. LOWEY. President Trump met with Kim Jong-un in June 2018 and February 2019, to discuss the denuclearization and sanctions relief. However, intelligence suggests that North Korea has started rebuilding key missile test facilities, although there is no sign of an immediate launch. On April 25th, Kim Jong-un met with Vladimir Putin in hopes of securing Putin's support for the North Korean regime, sanctions relief, and a gradual, not quick, disarmament plan.

Mr. Secretary, have there been any discussions or negotiations between the United States and North Korean officials since the latest summit between President Trump and Kim Jong-un?

Mr. SHANAHAN. The denuclearization of North Korea remains the primary objective. Diplomacy is the primary track. What I can tell you militarily is we have not changed our position, our operations, or our strength, and are continuing to conduct readiness exercises in the event diplomacy fails.

Mrs. LOWEY. To your knowledge, have the North Koreans resumed any nuclear enrichment activities or missile testing since the Vietnam summit?

Mr. SHANAHAN. I am not aware of any.

Mrs. LOWEY. And can you share with us any information you may have on the recent Kim-Putin summit? And were there any agreements made that will impact life on the peninsula?

Mr. SHANAHAN. What I would share is that the sanctions that we continue to impose will stay in place, and we will be vigilant in maintaining those sanctions.

Mrs. LOWEY. And following up on that, could you describe the relationship between North and South Korea? Has anything changed after the latest summit did not achieve any agreements?

Mr. SHANAHAN. The relationship continues to evolve. There are ongoing activities in terms of coordination. I even asked General Dunford to talk about some of the recent exercises that we have had between North Korea and South Korea and ourselves.

General DUNFORD. Chairwoman, in terms of North and South Korea, the basic question is, has the relationship changed, and I don't assess that it has. South Korea has not done any—taken any material steps different than the previous agreements with North Korea. What the Secretary's alluding to is our exercises. And what I can assure you is, working with the South Koreans, we are continuing to conduct exercises that maintain an appropriate level of readiness, not only for our forces on the peninsula, but for the com-

bined forces command, which is both South Korea and the United States.

Mrs. LOWEY. Thank you.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Thank you.

Ms. Granger.

#### ELECTRONIC HEALTH RECORDS

Ms. GRANGER. Mr. Secretary, I don't ever recall being more outraged about an issue than I am about the electronic health records program. The hearing we had with the Defense health managers a few weeks ago was terrible. I can't believe that these program managers think that it is acceptable to wait another 4 years for a program to be implemented, when we have spent billions of dollars and worked on it for over a decade.

There seems to be no sense of urgency, and our servicemembers and veterans are the ones who are suffering while they are waiting for the DOD and VA to get their act together.

I recently heard a story from a Vietnam veteran about the problems he had with his medical records. He is dying today. He is dying. And they could never confirm or find his medical records for his treatment.

I hope you realize how absolutely incensed and infuriated most of us are about this. We can't wait any later, and I want to know how you make it a priority and how you get it done.

Mr. SHANAHAN. Well, first of all, I apologize for any lack of performance or the inability of the people that testified before you to characterize the work of the Department in this very vital area. I personally have spent quite a bit of time on the new DHA plan on how do we merge together our medical treatment facilities, how do we deploy the electronic health records.

In particular, in the Northwest was the first deployment of the electronic health record. One at Madigan Army hospital, Bremerton Naval Base, Whidbey Island Naval Air Station, and then Fairchild Air Force Base. That rollout and implementation was successful this past fall. There has been a considerable amount of learning that has occurred from that.

The next implementation of the—major implementation of the system—and this system is what is going to drive the benefits of the DHS—is scheduled for this coming September in California.

I can give you the commitment that the corrective action and the lessons learned from the first implementation will be carried forward into that implementation in California. It is—it is training, it is processes, it is not just the electronic health records.

We recognize that we owe it to our servicemen and -women to take care of them. I mean, you have that commitment from me. This implementation is vital to getting the benefits of delivering higher level care, and the deputy and I will deliver on the commitment we have made to you and to our men and women.

Ms. GRANGER. I certainly hope so. We got a feeling of, well, that we have made a change of direction and now it is going to take 4 more years, and that seemed to be fine with everyone on the panel. It was not fine with all of us.

Mr. SHANAHAN. It is not fine here, and we will come back and brief you to make sure that what they communicated was truly accurate. Because we have been holding people's feet to the fire to get these MTFs integrated. But we owe you a better answer, and 4 years is unacceptable.

#### SPACE FORCE

Ms. GRANGER. Thank you.

On another issue—can I do another—still have some time?—has to do with the—we talked earlier about space and the Space Force. I had a briefing recently that was astonishing to me, because I said, we don't really know enough of what we are doing. The case was made that it is a very, very important program. But I think it would be very helpful for us to have more information about it on the way forward so we can be supportive. I would hate to lose a program like that just because we don't really understand what is going on.

Mr. SHANAHAN. We are thinking about organizing a space day up here on the Hill so we can brief members and their staff in a, I will say, less DOD-like vernacular, and really being succinct and clear on what the benefits and the resources required to implement the space agenda.

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

#### MEDICAL HEALTH RECORDS

Mr. VISCLOSKY. I thank the gentlelady.

And before I recognize Ms. McCollum, I would simply associate myself and my concerns with her question about medical records. But I think I speak for everyone, Mrs. Lowey, Mr. Rogers, Ms. Granger have been particularly active, and for some of us who have been on the committee for a period of time, we have basically had this same conversation with different iterations for 17 years. And we are concerned that people move this ahead.

Ms. McCollum.

#### CLIMATE CHANGE

Ms. MCCOLLUM. Thank you, Mr. Chair.

General Dunford, I wish you all the best in your next mission, which will be retirement of some form, so all the best.

Mr. Shanahan, thank you for the opportunity to visit with you and share some of the issues that concern both of us in the Department of Defense, which covers many, many aspects. But I am going to focus on what I consider—what I like to bring to the table on that is focusing on the health of our servicemen and women, as well as making sure that they have the equipment and protection to complete their mission and come back home to their families.

So one of the areas in which I kind of feel like I have a little bit of dual capacity is climate change and dealing with public health issues of air and water. When it comes to climate change, we had a discussion about what is going on. We are an arctic Nation, we need to pay more attention to the fact that we are an arctic Nation, and I look forward to working with you and the chair for this committee to receive more briefings on how we can prepare our posture

for up there, work with our allies on the issue, and also address some of the infrastructure needs that we are going to have and equipment in there.

The other issue that we had an opportunity to talk about is, you know, an environmental issue. So I am going to ask you not only ahead to work with the chair, as you had said that you were planning on doing on briefings on the Arctic, but also to prepare for us as a committee the effects of climate change. It is a national security issue in other countries, we get that. The reports are out there, but it is also a national security issue from what it is going to cost taxpayers to build resiliency into our infrastructure here or infrastructure that we are going to have to move.

And we are going to have to start, I think, really addressing that and holding that out in the budgets with what is going on. As the chair pointed out, it wasn't a foreign entity that caused the damage that Hurricane Michael and Florence did last year, and we are still struggling with getting those bases up and running. So I would look forward to working with you on those issues.

#### PFAS

I am going to ask you, we had this discussion a little bit, to allow you to clarify something on the record with what is going on with the EPA, what is going on with the Department of Defense, and some chemicals that are referred to as PFAS. And I hold up, and we talked about in the office, a New York Times article, and I quote from it: After pressure from the Defense Department, the Environmental Protection Agency significantly weakened the proposed standard for cleaning up groundwater pollution caused by toxic chemicals, contaminated drinking water consumed by millions of Americans, that have been commonly used also at military bases.

So you had an explanation for what the Department of Defense is working on. So I would like you to, on the record, tell us what the Department of Defense is doing, what you see as an appropriate cleanup level, whether or not the Pentagon, in fact, is pushing for weaker standards, and what is your commitment to the health and well-being of the servicemen and -women that get up and go to work every single day.

Thank you, Mr. Chair.

Mr. SHANAHAN. Absolutely, and thank you for the question. The health and well-being of our servicemembers is, besides national security, our number one priority. Just maybe to keep all the items on the record, no one is drinking contaminated water at the over 400 sites in question. In terms of the use of these chemicals, we no longer train with them, we no longer test with them. The only use of them is in the event of a fire.

The real work here is on remediation, which is, I think, the line of questioning. And what has played out in the media is the DOD advocating for a lesser standard than the EPA. And what I would say is we have agreed with the EPA on a common standard, and it was their standard. I think if we—if we pulled apart where the discussions were occurring, it was on the processes to be used to implement the EPA standard. And we have been working to a set of super fund processes.

Where we are right now in the harmonization of using the EPA standards is out for public comment, but I think in working with you and others, do we have the right standards is really now the question before us.

Ms. MCCOLLUM. Thank you, Mr. Chair. And I appreciate the question that you put before us, do we have the right standards. We will continue to work on that. Thank you.

Thank you, Mr. Chair.

Mr. VISCLOSKY. Mr. Rogers.

#### MEDICAL HEALTH RECORDS

Mr. ROGERS. Thank you, Mr. Chair.

Gentlemen, welcome.

General Dunford, congratulations on a brilliant career. We wish you the best in the next chapter.

It has been 10 years at least since we have heard the same assurances before this subcommittee, and other committees of Congress, about the medical health records. It is incredible that we can't get this fixed. In the meantime, we have got young veterans die, going blind, suffering interminable illness because of bureaucratic crap. Each agency, Veterans and DOD, have had their own systems, refusing to build a link between the two, in order to give VA the medical information that it needs to help a veteran wounded during the fighting.

My colleagues have heard me tell this story a thousand times. A young man from my district who was injured in Iraq from a bomb. One eye was destroyed, the other severely damaged. They brought him to Germany and operated to try to save this one eye, successfully. Not fully, but fairly well. Well, this eye then, as he becomes a veteran, becomes infected. So he goes to the Lexington VA Hospital. They can't get access to his records from Germany. There is no way to get it. They knew he had been operated on, but they could not operate because they didn't know what had been done before and they were afraid they would kill him. So they turned him away, and of course he went blind. That is inexcusable.

And, Mr. Secretary, I have heard your predecessor say, hey, we got it on the way, it is going to be here, the fix is in. Well, that has been 10 years, and we have poured billions of dollars into this seemingly simple problem. Why can't we have the computers marry? Can you help me out here? Don't promise something you can't deliver. But deliver.

Mr. SHANAHAN. Well, I am not going to promise you something I can't deliver, but I can maybe explain in part the difference between why these two computers can't talk to one another. There is a degree of interoperability. It has to do with, you know, information like, what is General Dunford's, you know, date of birth or where is his home address. The real issue has been on the passing of the actual records. I don't know—I can't explain to you the technical complexity of that, but that has been the crux of the problem.

I owe it to you and this committee to deliver on capability. I promise, you know, to do my best. You know, I would love to be able to sit here today and say, let's draw a line in the sand, I can deliver this capability. We delivered on the first instantiation there in the Northwest.

Mr. ROGERS. We have had your staff people before the subcommittee on this question numerous times. It has been a constant barrage of questions from members of this subcommittee to you and your predecessors and your staffs. So you have known how strongly we all feel about this, and yet we are told it is going to take another 4 or 5 years. In the meantime, we are going to lose a lot of young soldiers who sacrificed their health in the defense of this country. I can't believe that we have not already solved this problem.

General Dunford, do you have any thoughts about this?

General DUNFORD. Congressman, the last time I touched it was in a previous assignment, so I don't have anything to update you on. In my current assignment, I don't touch this specific issue every day, so I don't have any details on where we are.

Mr. ROGERS. Well, we sit here waiting. And, Mr. Secretary, we are going to hold your feet to the fire on this. Get it done. It is time. It is past time. And you heard the chairman of this subcommittee and his strong feelings about this subject as well and what is more important than mine. But we are going to stay with this, again. And it is not going to take another 10 years, or another 4 years. Get it done now. Stop the suffering.

Thank you.

Mr. VISCLOSKY. Mr. Kilmer.

#### CHINA AND RUSSIA

Mr. KILMER. Thank you, Mr. Chair, and thanks to each of you for being with us and for your service.

I used to work in economic development in Tacoma, Washington. We had a sign in my office that said, we are competing with everyone, everywhere, every day, forever, which I always found somewhat intimidating, but was a pretty good ethic, not just for folks who work in economic development, it is a pretty good ethic when we look at our national security challenges as well.

I know part of the strategy is to focus on some of our near-peer competitors, the great power competition with Russia and China, and was hoping you could speak to that issue. Obviously, Russia and China have been modernizing while we have dealt with CRs and sequestration, which I think has certainly hindered your ability to engage to the level we need to.

You have made clear that your top priorities are modernizing our Armed Forces to face these future threats. I was hoping you would just take a minute or two, because I want to touch on another subject as well, and talk about how your budget reflects that focus, and where your top priorities are in terms of our capacity to stay ahead of Russia and China.

Mr. SHANAHAN. Well, let me just follow on with the electronic health record here in setting up this comment. The priority in the budget is China and Russia, in terms of the capability we have to address. We don't have a lower priority. And, sir, we are going to fix the electronic health record. We can walk and chew gum at the same time, but you have our commitment to—and I am sure you have been told this many times, but we are spinning a lot in place, but we won't drop the ball on our veterans and servicemembers.

But in terms of the prioritizations and where are our investments, much of it is in modernization. We haven't modernized in 30 years. And there are—you know, if we went to the Army, you would see six different programs, but I would just say that at a top level, the emphasis is on space, cyber, and new missiles, like hypersonics.

And what you would find in the budget, even though we have built it up with OCO for base, the way we constructed the budget last year is the same way we constructed it this year, and we are continuing to put greater and greater investment into modernization. I spoke to the fact that this is the biggest research and development budget in 70 years. Cyber is a significant investment because it is kind of, of all the threats that we face today, that is probably the fastest evolving one. It is also the one that is easiest for people to develop on their own.

#### SUICIDE

Mr. KILMER. The other issue—and this, to some degree, is germane to the concerns around healthcare. I think all of us are concerned about the rise of suicide among Active Duty servicemembers over the last few years. I worry that community stability has somehow become frayed. I know that that is a priority for each of you at that table, and I am hoping you can speak to some of the work that the Department is doing on this front to address issues around suicide, to hopefully rebuild the sense of community and relationships that hold servicemembers and their families together, and ensure that the Department is there for those who are serving when they most need our support.

General DUNFORD. Congressman, I will start and express the same concern that you did about the rise in suicides. This is an issue that, in several assignments, I have been decisively engaged in it and looked hard at it. Probably the most promising thing I have seen is the multidisciplinary approach to healthcare. You can see that here in Washington, D.C., in the national capital area, at the National Intrepid Center of Excellence, and we have satellite National Intrepid Center of Excellence sites around at our military bases and installations, not—we don't have them everywhere, but we have them in those areas where there is the highest incident and the highest need, particularly for those returning from deployment.

As you know, one of the perplexing challenges is that there is no common trend in terms of suicides amongst our Active Duty population. We can clearly see a correlation between deployment history and veterans. There is not a similar correlation between deployment history in the Active Duty population.

But I guess to answer your question succinctly, I think it is the comprehensive approach to mental healthcare that includes leadership, the chaplain, the medical professionals, all in one place, having a common visibility about a soldier, sailor, airman, and marine, and make sure we are dealing with the whole individual and not a compartmentalized approach to their care.

Mr. KILMER. Thank you.

Thank you, Mr. Chair. I yield back.

Mr. VISCLOSKEY. Mr. Cole.



## BUDGET CAPS

Mr. COLE. Thank you very much, Mr. Chairman.

Mr. Secretary, good to see you.

General Dunford, let me just join everybody here, we are all very much in your debt and very appreciative for the service you have rendered our country.

I am going to use this occasion, Mr. Secretary, to talk about something that you can't do much directly about, but maybe you can talk to a couple of people that can. And I am going to take the same opportunity to talk to the chairman of the full committee and my boss, the ranking member of the full committee.

And I was asked earlier by another member, what are your top three priorities in the defense budget. And I said to avoid a shut-down, to avoid sequester, and to avoid a CR. Didn't have anything to do with the programs. I just wanted to do that. Because the budget looks pretty good to me, broadly speaking.

But to do that, we have to have the President of the United States talk to the Speaker of the House, talk to the minority and majority—or the minority leader in the House and obviously the majority leader in the Senate and minority leader in the Senate, and get us a set of numbers. I mean, right now, we are going to mark up a bill at some point, and we are going to do it to notional numbers. They are not real numbers because we don't have an agreement. And until we get that agreement, everything we do is at risk.

## INFRASTRUCTURE TALKS

Now, I pick up this morning's paper, and I read that the President and the Speaker and the minority leader in the Senate were all talking about an infrastructure bill yesterday. Wonderful, great, \$2 trillion. How about we focus on what matters, which is our, really, day-to-day budget. Let's get that deal first before we worry about the next one. Because we will stumble along this summer, and if we are not careful, we are going to put you guys right back where we have put you until last year for the first time in 10 years where we actually got you a budget on time, and you have had a year to implement it, and believe me, things are better. I see it in the facilities in my district at Ft. Sill. I see it at Tinker Air Force Base. Things are better because they had a budget, they could plan. They are moving well on their respective missions.

## BUDGET DEAL

So I just say that, you know, go back to the White House and ask them to sit down with the appropriate people and get a budget. They are the people responsible for running the country. You can't run it without a budget.

And I also want to associate myself very much with our subcommittee chairman and committee of the full thing. This OCO thing is a gimmick, we all know it is a gimmick. I know you have to do—look, I know who you work for, and I know that OMB, you know, sets these things up. And I have been in enough budget negotiations to know that that is all a budget is, the opening round of a negotiation, and people try to position—but this is more unre-

alistic than most initial positions to negotiate from. You know, that is—it is not going to stand. And when each side starts off with, I am going to get everything I want and you are going to get nothing that you want, nobody's going to get anything. And to wait to the last minute, which I suspect is where we are headed, is a mistake and a disservice to you and the men and women that you lead.

We are better, we should be better in governing than that. This is our problem, not yours. But it is an administration problem as well. They have to participate in this. And it is a leadership level, not at this committee. This committee, if you leave the appropriators to it, they will get you a deal. I always said, if I can put Nita Lowey and Kay Granger in the same room, I can solve the problem in about an hour. And they will come out, and they will put us all to work with our respective numbers and what we are supposed to do. And I would just suggest that the leadership of the Congress and the leadership of the administration needs to be as capable as our chairman and our ranking member are. We will get this done.

Again, not your fault, but I hope you carry the message back. Because everything else we are doing here is futile until we have that deal, we have a number, you guys can plan, we can work with you to get to where we need to go. I do have a question real quickly if I may, and, Mr. Chairman, thank you for indulging me in my rant.

#### 80 PERCENT READINESS TARGET

But, Secretary Shanahan, you described an 80 percent readiness target for mission critical aviation platforms that you would like to achieve. I have Tinker Air Force Base in my district. They do wonderful work, great work there, big fan of General Kirkland, big fan of General Levy before him. But we ain't anywhere near 80 percent mission ready in the platforms they are dealing with, or anybody else that I know is dealing with.

So, again, I am not—I want to achieve this goal. What do you need to achieve this goal, and where are we at in reaching that goal?

Mr. SHANAHAN. The 80 percent target was for F-35s, F-22s, F-16s, and F-18s. The real emphasis was on F-35 and the F-18. So when we think about, you know, B-52s and B-1s, it is an unrealistic goal, so we didn't target those platforms. The F-35 as being brand-new aircraft, that should be the baseline where we start. So the Navy has made significant progress with the F-18s. I think they are on track to meet the goal in September. I can give you the number, but it is somewhere like they have recovered, you know, 50 to 60 more aircraft in the past 6 months. It has been a tremendous amount of progress.

The F-35 will come home. We are going to drive that home, but we wouldn't set that bar across the—all the platforms. The F-22 has struggled, and I think the F-16 is a bit of a high bar, but, you know, it is a lot of iron to, you know, keep on the ground. And given all the training missions and the productivity we can generate, I think holding that standard is smart for now.

Mr. COLE. Well, I applaud you for the standard, and we will certainly do everything we can to work with you. Because we have got a lot of money invested in these platforms and we have got a lot

of flyers that aren't getting the air time they need in terms of readiness as well. So, again, I just want you to know that is a very high priority for me. I am sure it is for everybody on the committee.

Thank you, Mr. Chairman. I yield back.

Mr. VISCLOSKY. Thank you.

Mr. Aguilar.

#### TROOPS AT BORDER

Mr. AGUILAR. Thank you, Mr. Chairman.

Thank you, Mr. Acting Secretary, and, General, and Mr. Norquist.

Mr. Acting Secretary, the DOD revealed that not only will the Pentagon be sending 320 more troops to the U.S.-Mexico border, bringing the total number to 3,200, but it has also been disclosed that the rules will also be loosened so that some troops can interact with migrants. This represents a significant amount of resources going toward a mission that has no end in sight.

How will this perpetual deployment affect troop readiness? And describe how making such a deployment will not interfere with the multitude of missions that the Armed Forces are already engaged in.

Mr. SHANAHAN. Thank you for that question. And this is an issue that General Dunford and I work on quite a bit, because the question that he and I really are trying to answer is how long will we be at the border. And so, you know, to date, if you go back in time, we received our first request a little over a year ago, in April. And it was—I think, you know, we have really been on this kind of a la carte approach where we have been asked to support DHS, we have. It is, you know, traditional that the Department supports civil authorities, whether it is, you know, hurricanes or what have you.

Mr. SHANAHAN. We are now in a position where we need to ask the question, how long will we be there. And when we have gone through and looked at the conditions of the border and borders and CBP's ability to actually perform their duty, they are thousands of people short.

And so we have initiated a set of actions to really understand kind of how many people are they short, because we need to get that into a sustained environment. We are driving buses, we are serving food, we are doing medical support, we are doing logistics support. For now, we haven't degraded any readiness, but we really need to get back to our, you know, primary missions and continue to generate readiness.

#### SECURE BORDER

Mr. AGUILAR. Yeah. Because the Department also presented this committee a list of unfunded requirements totaling \$8.3 billion, and the Department's estimated \$9 billion in hurricane and storm damage that impacts troop readiness and morale as well. Yet the Department's overestimation for fiscal year 2019 end strength resulted in \$1 billion. And so you have these two buckets of unfunded requirements and potential disasters to be mitigated, and yet we choose to send \$1 billion to a priority that has not been funded.

So why, with all of this going on, do we need to send \$1 billion in military personnel funding for the President's border wall?

Mr. SHANAHAN. Well, we need to secure the border. I mean, this is a—

Mr. AGUILAR. I understand that. All of us agree with that.

Mr. SHANAHAN. Right. Right.

Mr. AGUILAR. So why is it your responsibility? Why isn't this not a DHS priority to be worked out with Congress?

Mr. SHANAHAN. The simple version is I have a legal standing order from the Commander in Chief to deploy resources to support a national emergency.

Mr. AGUILAR. Do you feel that you also have a constitutional authority to follow the will of Congress?

Mr. SHANAHAN. I have a legal standing order from the Chief—Commander in Chief.

Mr. AGUILAR. So does the Department intend to continue to ignore our responsibility for the power of the purse?

Mr. SHANAHAN. We won't ignore—

Mr. AGUILAR. But you did.

Mr. SHANAHAN. No. We are following the law. It is within the law for us to be able to utilize these funds. It is within the law. I wouldn't break the law.

#### SUPPLEMENTAL

Mr. AGUILAR. Okay. Can we expect anything else within the supplemental related to personnel, judges, lawyers, drivers, transport, that \$377 billion supplemental that the chairman mentioned? What will be contained within that?

Mr. SHANAHAN. Did you say billion or million?

Mr. AGUILAR. I am sorry. Million. I am sorry.

Mr. SHANAHAN. Yeah, yeah. No, no, no. I think it is the—

Mr. AGUILAR. I don't want to make news there.

Mr. SHANAHAN. Yeah. No, no. Yeah. Just to be clear, I believe—and I will let—ask David to clarify, but that is our estimate for this year.

David.

Mr. NORQUIST. Correct. That is the estimate for the year, but many of the functions that you talked about are those that are ones that we are performing in support of CBP, the bus driving, the food, the others. But the 377, I believe, or just under 400, is the cost associated with the support for the year.

#### CYBER SCHOLARSHIPS

Mr. AGUILAR. Yeah. I guess I am still struggling with the policy, Mr. Acting Secretary, on at what level you feel you need to continue to backfill CBP operations. But I will move on quickly.

Could you give us an update on—there is a program of interest to me and a lot of us, the Information Assurance Scholarship Program that performs DOD cyber scholarships. How is it performing currently? Do you see—where do you see this going in the future? And how important is it to prepare future cyber warriors within the Department?

Mr. SHANAHAN. Right. Well, the scholarship and the recruitment and the retainment of cyber professionals is probably the greatest

skills challenge that we have in the Department. You know, there aren't enough software engineers in the world, and there probably never will be. The skills that we have developed inside the Department are world class, and the ability to recruit and retain is the—you know, within Cyber Command, within each of the services, within the NSA, is probably our biggest threat.

The scholarship program, I don't know the particulars of its effectiveness. I know that every place where we have put a program in place, it has worked, and we should be doing more.

Mr. AGUILAR. This program is housed within the Chief Information Officer Budget within your office, but it is something that Congress has funded the past few years, and we look forward to working with you on that.

Mr. SHANAHAN. Thank you for that. Yeah.

Mr. AGUILAR. Appreciate it.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Womack.

#### ELECTRONIC HEALTH RECORDS

Mr. WOMACK. Thank you very much, Mr. Secretary, Mr. Norquist.

General Dunford, thanks again for your service. I join my colleagues up here in congratulating you on a remarkable career.

At the risk of beating a dead horse on her, but I join my colleague from Texas and my colleague from Kentucky in voicing some concerns about it. But to be fair, it is a shared responsibility. I mean, if you are going to marry platforms from two different Cabinet agencies, it is a shared responsibility.

So can you enlighten me on what your conversations with Secretary Wilkie have been like in the marriage between these two systems? It seems to take such a long time at such extraordinary expense.

Mr. SHANAHAN. The—before undertaking these duties and responsibilities, I spent quite a bit of time with Secretary Shulkin and then with Secretary Wilkie on putting a governance process in place, but more importantly, making sure that there was enough cross talk on the requirements in terms of the interfaces and how these—this data interchange would play.

I haven't talked to Secretary Wilkie this year, given these responsibilities. I will accept responsibility of the fact we have to go deliver on these systems. I mean, it is—I own it. I own it now. But I don't have any other updates other than the ones in the previous where we put—the actions that—with David Shulkin and with Secretary Wilkie, we identified the critical deficiencies. That is where we spend our time, what are the critical efficiencies and when will they be corrected.

#### JEDI CLOUD PROGRAM

Mr. WOMACK. Well, I don't know a lot about the IT community, but I do know this, former Secretary Shulkin made a decision. At least he was able to make a decision on an acceptable platform. And why we are now this far down the road without any action, as I said, I share the concerns of my colleagues.

But I want to talk about another information technology issue, and that is—and with a simple question, why does your department continue with what I believe to be an ill-conceived strategy on a single-vendor JEDI Cloud program?

There has been a down select to two organizations that, in my strong opinion, continues a disturbing pattern of limiting competition on a program that is potentially extremely expensive. We don't know just how expensive it is going to be, but—and I have strong concerns about how the approach by the Department of Defense in this arena seems to be geared toward, you know, producing a desired outcome with a specific vendor. So I will leave it there, but I am concerned about JEDI.

Mr. SHANAHAN. Okay. Well, digital modernization is probably one of the most important undertakings the Department has. Of course, to be successful in cyber, we have to be able to protect ourselves, so the cloud is one element of infrastructure that we are modernizing.

The fundamental premise on our approach to the JEDI implementation was to have competition. And this is an important underpinning of that competition, preclude vendor lock, okay. So we want to be locked into one supplier, just like in the situation we have with electronic health record, have flexibility if things aren't working out.

Across the Department, there is a proliferation in terms of implementing clouds. Everyone was moving to their cloud. The JEDI competition is about creating a pathway so that we can move as a department on a small scale. This isn't wholesale. It sometimes gets advertised as this is winner take all. This is winner take all for a very small subset of the amount of cloud infrastructure we are going to have to build out over time.

Besides creating competition, we are creating the standard processes so that the Department can migrate so that we don't have each and every department trying to figure out how to move to a cloud.

Mr. WOMACK. What conversations did you have with the intelligence community? I mean, they have gone—they have the same issue, correct?

Mr. SHANAHAN. Correct.

Mr. WOMACK. And they have developed a strategy, correct?

Mr. SHANAHAN. Uh-huh, yep.

Mr. WOMACK. From single vendor now to multivendor. So was there not a—was there not an informed pathway established by the IC that has been working in this arena that is going in a totally separate direction than what the Pentagon is going?

Mr. SHANAHAN. Actually, we worked very closely with the agency, and then the person who led that effort has come over to lead the effort in the Department, so that we could take what they—you know, the conversations we had with them was, if you could go back in time, what would you do differently? And so we are taking what they learned from their experience and translating it into what we are doing.

Mr. WOMACK. Well, all I will say, and I will leave the subject, is that it is clear that multivendor cloud environments are widely used, widely used by large organizations, for a simple reason: They

increase competition, they improve security and capability, and they provide cost savings. And in an environment like we are in right now, I would assume that that would be a key issue for our Department of Defense.

Mr. Chairman, I will yield back.

Mr. VISCLOSKY. Thank you.

Mrs. Bustos.

#### INDUSTRIAL BASE

Mrs. BUSTOS. Thank you, Mr. Chairman.

Before I get to a couple questions, first of all, thanks to the three of you for being here. And I did want to offer an invitation to visit the Rock Island Arsenal. It is literally on an island in the middle of the Mississippi River. And we would love for you to come, especially to see our new Center for Excellence in Advanced and Additive Manufacturing. But—so I just wanted to extend that if that would fit into your schedules.

So just a couple questions. I am going to start with looking at the make-or-buy guidance. And it was in September of 2018 that the Department released a report that is called “Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency.” Just rolls off your tongue.

Mr. SHANAHAH. Right.

Mrs. BUSTOS. So the broad takeaway in that is that the report highlights the need to sustain our organic industrial base elements like depots, the ammo plants, arsenals, in a way to address the supply chain vulnerability and maintain some level of workforce that is needed to address the industrial base needs.

So one of the great challenges is the predictability of the workload to maintain and sustain the workforce and make sure that we keep up capabilities. In the Army, this make-or-buy guidance, it is supposed to inform the procurement officers on their decision to use the private sector or some combination of the private sector and the arsenals.

I have some concern about how that is working. And so what I would ask of you is, can you discuss how the Department is working with each of the services to ensure that their respective make or buy or equivalent guidance or regulations are addressing the needs and the challenges identified in the report from last September?

Mr. SHANAHAH. Now, the report from last September talks about the investments we need in order to bring work back or to invest in critical capabilities, right?

Mrs. BUSTOS. Correct.

Mr. SHANAHAH. Yeah. So the—you know, the specifics of, you know, each service and the, you know, business case, if you will, I can't speak to, you know, case by case. I mean, I would be happy to make available the people that kind of talk through, you know, how that decision—how those decisions are made.

#### ROCK ISLAND ARSENAL

Mrs. BUSTOS. Okay.

Mr. SHANAHAH. I think in terms of the Rock Island Arsenal and arsenals in general, we kind of think about the National Defense

Strategy and modernization there—and this report. There are, you know, two big opportunities right now. One is, if we are going to bring work back, and there are certain capabilities that are in China, so that would be like at the top of my list—

Mrs. BUSTOS. Okay.

Mr. SHANAHAN [continuing]. Why don't we make them, you know, organic, right. So, I mean, that is one.

And then the second piece really is, as the, you know, Army in particular starts to modernize, we know the surge in industrial support to a lot of these suppliers is going to be quite high, back to this, you know, predictability. That is another opportunity.

And I would just offer, we would be happy to work with Rock Island Arsenal to pursue what I think there are, you know, real opportunities in the future where we are not moving work from one place to another. It is really new work.

Mrs. BUSTOS. All right. I don't know, Mr. Norquist, or, General, if you have anything to add, I would appreciate your thoughts on this as well.

Mr. NORQUIST. Well, I just—I know that the Army is paying particular attention to this as it affects the Rock Island Arsenal with the up-armor of the heavy equipment, transporter, and other items. But you raise a good point, which is, part of what drives the cost of each one of these organizations is what level do I staff to. What is the level of workload that is coming through my organization?

When I visited a number of depots, one of the questions I would ask them is I would say, look, we have these maintenance backlog issues. You know, what are you—are you hiring up? Are you addressing them? And part of their concern is, well, what is my funding going to look like next year? When am I going to receive it?

And so when we talk about the point that Congressman Calvert raised about the budget on time, the CR, and so forth, those consequences are not just at our level. They are down at each of those organizations who is trying to plan a level of workload that minimizes the cost.

And so I think the Army is working very carefully, particularly with Rock Island, to be able to address that. But as a department, the stability of that information for those organizations allows them to operate at a much more efficient level and at a better cost, and that helps protect the Department and the country.

Mrs. BUSTOS. All right. General, anything to add?

General DUNFORD. I don't have anything to add on that issue. Thanks, Congresswoman.

#### CYBER THREATS

Mrs. BUSTOS. All right. Great. Thank you.

Just one other question. Obviously, it has been well established at this point that foreign entities willfully engaged in and meddled in our elections during both the 2016 and the 2018 elections. This is a clear threat to free and fair elections, a big concern, I think, to probably everybody sitting in front of you and certainly a big concern in our Nation. Regardless of party or political creed, this should be a basic position that we can all agree on that we need to make sure our elections are free and fair.



It is my understanding that the U.S. Cyber Command has already established a track record of working to protect our elections, including disrupting internet access for Russian troll factories during the 2018 midterms. This budget requests \$9.6 billion to support increased cyber warfare capacity, both offensive and defensive, to ensure we are protecting our country.

Here is my question. Could you outline for our committee how this funding will grow capacity at the Department to protect our country from further cyber threats and hacks from foreign adversaries? And do you foresee this funding helping provide resources or capacity that could specifically help ensure free and fair elections?

And maybe, General, if we start with you and then maybe to the Secretary.

General DUNFORD. Congresswoman, I think what is a really important point is that probably prior to 2017, we viewed United States Cyber Command as a tool that was used for what we called an away game. A major policy shift that we made in 2017 was to bring the full weight of the United States CYBERCOM to bear in defending the most important thing to our Nation, which is our democratic process.

And so you can't separate what CYBERCOM does in protecting our elections. In other words, in 2018, that was absolutely General Nakasone and the team's number one priority in the fall of 2018, and as you have suggested even in this venue, we can say that they had some significant success. And the capabilities that they will continue to develop will be brought to bear in 2020 and beyond, just like there were in 2018, in support certainly of the primary organizations, domestic organizations responsible for elections.

But I can assure you that under the Secretary's leadership and his predecessor, our approach was, what is the most important thing right now to our country? Defending our elections. What is United States CYBERCOM's number one priority? Defending our elections.

Mrs. BUSTOS. All right. Mr. Secretary.

Mr. SHANAHAN. Now, what—and I certainly echo what the chairman has said. If we like decompose the incremental \$9.6 billion in the budget and we were in a classified setting, I would walk you through program by program where that money is going.

Last summer, a host of us met with General Nakasone. And over the course of 4 months, we went through and said, what are the future investments that need to be made to stay ahead of the threat, what are the capabilities so that we can get after new threats, and then where do we need more capacity so that we can grow this and address, you know, other areas in the Department? So that is the level of detail that is within the budget.

But for a while, they were being not starved, but I think some of the attention being placed in recovering readiness had limited the growth. That is why this year, we have over ten—it is an over 10 percent increase in their funding.

Mrs. BUSTOS. All right. Thank you, Mr. Chairman. I yield back.  
Mr. VISCLOSKY. Mr. Aderholt.

## BCA IMPACTS

Mr. ADERHOLT. Thank you, Mr. Chairman.

Let me—we have discussed a little bit—and I will pose this to anyone who wants to answer it at the table. But as you are well aware, there is a significant difference between the fiscal year 2020 defense requested funding and the BCA caps if a new deal is not reached.

And can you just discuss a little bit about how you see this would impact the Department overall, and if there are any contingencies that you currently have in place to date would address the funding discrepancy that we would see at such a magnitude?

Mr. NORQUIST. So I think the core of your question is what is the effect of a return to sequestration to the Department of Defense.

Mr. ADERHOLT. Right.

Mr. NORQUIST. And I think the clear point is it would be catastrophic. When you—first thing you would have is you would have undone a significant amount of the readiness gain that this Congress and this administration has spent so long investing in.

When you realize that you would hire about 270,000 military personnel a year, reducing their training, that is a group that needs to go through, needs to get the same level at both advanced—the basic and the advanced training, when that is disrupted, there are consequences.

We have seen improvement, you know, in the number of Army brigade combat teams that are ready going from 18 to 28, you would end up going backwards. Then you would also have the very point that the Congresswoman over here raised, which is the disruption to every depot, every installation, every organization that provides a service that counts on that level of stability to run Abram tanks or other things through maintenance, now all of a sudden getting a dramatically reduced order that they are still trying to manage with a workforce that was designed for a higher level.

So I think it would be disruptive to readiness, it would be a major step back for our security, and it would introduce costs into the system that are unnecessary. And I leave it at that, unless the chairman or the Secretary want to add in.

Mr. SHANAHAN. I would just make the point that it is a 25 percent cut, and so it is, you know, not something you just do some belt-tightening exercise on. And, you know, at a macro level, you would either decide to invest in modernization and furlough quite a few people and take a lot of risk in terms of security, or maintain current force structure and then forego investment in modernization. But it would be a really, in essence, undoing of the National Defense Strategy.

General DUNFORD. Congressman, as we have the debate, I think probably in simple terms we ought to look at it really in three categories. One is, it is about the support we provide for our men and women in harm's way. That is going to be impacted. Two is, it is our ability to deter potential adversaries. That is where we are going to see the impact. And three, it is our ability to respond if deterrence fails.

So this is fundamental to our strategy. In other words, appropriate levels of resourcing in this budget, in the last two budgets have been directly and inextricably linked to our ability to execute the National Defense Strategy and sustain that competitive advantage I alluded to in my opening remarks.

And I don't have any doubt that our competitive advantage will continue to erode and put at risk our ability to project power when and where necessary to advance our national interests in the future were we to go back to the BCA. There is absolutely no question in my mind about that.

#### BOOSTERS

Mr. ADERHOLT. Thank you.

Let me just shift gears just a second. It seems that after our meeting last December, each of the service branch now has its own hypersonic offensive weapons program, but we are waiting for new boosters to be developed. We have boosters already in production of a 50-inch size, my understanding.

If there is a study that claims that these boosters are too expensive, could our office get some detailed information on that particular issue? And I think it—if possible, it would be best to field a limited number of weapons using what we have now. And my office has been in discussion with Dr. Mike Griffin with your office, and, of course, just encourage you to reach out to him because I think he has some real insight on that.

Mr. SHANAHAN. We would be happy to do that. And as you know, Dr. Griffin is leading the effort to make sure that we leverage as much commonality between the three services in terms of bodies, boosters, energetics, you know, as many things as we can to be able to accelerate our deployment of hypersonics. But we would be happy to coordinate with your office.

Mr. ADERHOLT. All right. Thank you. I yield back.

Mr. VISCLOSKY. Ms. Kaptur.

#### HYPERSONICS

Ms. KAPTUR. Thank you, Mr. Chairman.

Welcome, Mr. Secretary and Mr. Norquist.

And, General Dunford, thank you for your lifetime of service to the Marine Corps and to our country and to your fealty to the oath that you have taken. We respect your service very much.

Secretary Shanahan, thank you so very much for your openness to meeting with members of this committee. On the issue of hypersonics, could you please provide to us the future year defense plan for hypersonic test chamber funding and the sites associated with future testing; the factors that were weighed in the selection of the three test tunnels. And also, I understand that the Department is willing to consider other sites that would be less expensive that are fully equipped and prior to making final decisions. Is that my understanding?

Mr. SHANAHAN. I believe so. Let me—I have done some homework since you and I have met, and the—you know, the basic selection criteria in determining where to do the hypersonic testing looks at, you know, existing capability, whether it is mothballed or not. Just what it is—you know, it would be like the size of a wind

tunnel or, you know, basic performance. Then there is existing infrastructure and then realism of being able to, you know, have a representation of what a, you know, flight environment would look like.

I know that our team is going to take a visit to Plum Brook, and I—maybe it is serendipity, but it was actually this week. So I know there has been some selections this year and then there is ongoing studies in 2020. The exact funding, I would have to get back to you with.

Ms. KAPTUR. All right. I just thank you for the dialogue and your interest. Thank you so much.

Mr. SHANAHAN. You are welcome.

#### UKRAINE

Ms. KAPTUR. I wanted to ask, General Dunford, or any of the panelists, what more can the United States and our free-world allies do to gird Ukraine for the upcoming winter season against the possibility of Russia turning off the gas?

General DUNFORD. Congresswoman, I can talk to what we are doing to help Ukraine defend itself, and I think you know we are providing defensive weapons and capability. We are also providing them cyber expertise. I don't have any details on exactly what we are doing or what we might do to help them with their fuel problem in the wintertime. We can take that for the record and get back to you.

#### FISHER FOUNDATION

Ms. KAPTUR. I would be very grateful for that. I would like to know if there is thinking anywhere along the lines regarding that.

I also—General, in the budget that has been submitted, you specifically referred to the Intrepid Center, which I am so impressed with. My question is, are there additional funds in this budget to replicate that in other places in the country? And, again, I have to speak for my region where we don't have big bases. We have Guard and Reserve who also come home who are wounded warriors, including on the behavioral side. Is there any funding? How does one replicate some of the superb work that is being done at the Intrepid Center in other places in the country?

General DUNFORD. I will take the first crack at it, Congresswoman. First, thanks to some help, those were privately funded by the Fisher Foundation. So the actual infrastructure was provided to the Department of Defense. What you will see in the budget, of course, is the funding for the medical support that goes into those facilities, and so we are always in a competition.

The Secretary spoke earlier about human capital for cyber. We are in a fight for human capital for some of the medical specialties that are necessary to field these multidisciplinary medical facilities as well.

And so in the budget, and we can get you the exact details, where you see requests for medical support, a piece of that will be to support not only—I used NICoE, but that is not the only multidisciplinary approach. Each of the services has been moving in that direction in a comprehensive way over the last couple of years, and that is part of the budget.

## SHORTAGE OF PSYCHIATRISTS AND BEHAVIORAL SPECIALISTS

Ms. KAPTUR. I would just point out that nationwide we have a severe shortage of psychiatrists, over 100,000. And in the behavioral arena among advanced practice nurses and behavioral specialists, probably five times that much. Our Chaplain Corps is burned out, in my opinion.

And when we had the heads of West Point, Annapolis, Air Force Academy before our subcommittee, I was quite disappointed when I asked them the question, when you recruit for young people to come into the officer corps, do you have a level of physicians, the individuals who might be interested in medical careers. And I asked them how many each of them had graduated, and the number was generally five or under.

I was actually shocked at their lack of connectivity on this particular issue, but also the responsibility that they might—you know, they might assist with as we try to help the military. So I just make you aware of that conversation.

## BORDER

And finally, though none of my colleagues may agree with me on this, I just wanted to express an opinion about our border. I live way at the northern border. But in terms of the southern border, I think that what we are facing is a series of failed States and people who are fleeing for reasons that the United States is not responsible for.

After World War II, we, through the military—and I am very uncomfortable with U.S. military deploying to our southern border, very, very—that is a slippery slope. But there is some experience in the military with displaced persons camps. And if one looks at resettlement and the proper care of individuals, the military really does have some remarkable history on that in Europe.

And I think that the United Nations, through their resettlement programs—we need a diplomatic solution here, not just a policing solution. And I don't see that developing. And I think we could really do something remarkable working with our Canadian allies, with our Australian, Costa Rican, you name it. We could help people find safety.

And I don't see that happening. I see a lot of political argument and all the rest. And the human side of this is getting lost. But maybe the military, based on its experience with large numbers of people who were displaced for reasons dealing with war, the world was transformed by that moment. And I think there is some history there that needs to be relearned.

So I just wanted to state that, and I thank you for your testimony this morning.

Mr. VISCLOSKY. Judge Carter.

## FUTURES COMMAND

Mr. CARTER. Thank you, Mr. Chairman.

And, gentlemen, thank you very much for being here today. We appreciate the wisdom you bring to us and the information we are able to gather from you.

General Dunford, it has truly been a pleasure and an honor to work with you, and wish you great success in the future.

I would like to talk about the Futures Command, which just has been stood up in Austin, Texas, to the south of my district last August. It is designed to reorganize the Army's—the Army and address procurement requirements and warfighting concepts. Eight cross-functional teams are focusing on the Army's top priorities of long-range precision fires, next-generation combat vehicle, future vertical lift, networks, air and missile defense, and social lethality.

These Army modernization efforts are the service's largest reorganization in 30 years and focus on both the unit structure and the equipment required to address both great power and nonstate actor threats.

Now, as we put this together, we have got a lot of questions that we need to—at least I think need to be raised. And let me state from the outset, I am very excited about the Futures Command, and I think the modernization is long overdue in the procurement area, if no other place.

But as you look at what we have done so far and what they are dealing with—I know they are having a—they are working extremely hard to stand up as quickly as possible their command down there, are you concerned that the Army may be moving too quickly? Are they putting speed ahead of thoughtful planning? Who in the Department is overseeing the Army's requirements process as well as their procurement activities?

The Army is proposing to eliminate, delay, or cancel 186 existing programs to shift funding to future modernization. What happens if Congress doesn't approve the plan? How do these decisions affect the overall Defense Industrial Base, particularly small businesses?

The Army has a recent history of large and costly acquisition failures. Future Combat Systems, \$21.4 billion invested from 2000 to 2009 and then canceled. The Comanche helicopter, \$110 billion invested from 1988 to 2004 and then canceled. The Army is embarking on another round of heavy investment into future technology. What do you perceive to be the difference this time?

Mr. SHANAHAN. I am assuming that is a question for me or many questions. First of all, and I have had a number of conversations with Chairman Visclosky on this subject, so maybe I will talk about kind of the three big challenges as I see them. Let's maybe start with giving—I will give the Army credit for the fact that they have a modernization plan. Let's just say—

#### ARMY MODERNIZATION

Mr. CARTER. I do.

Mr. SHANAHAN [continuing]. That those six elements that you have identified are the right ones. And then I have a lot of confidence in General Murray and the team that he has been putting in place around him.

The—there is—you know, when I just broadly look at what they are undertaking, it is more right now about execution than it is about strategy. And if I was going to—there is a thousand tasks that we have to undertake, but if there were three major tasks that I would undertake, the first one is how are they setting their requirements.

So let's use long-range precision fires as an example. You know, when they determined both range and cost, you know, against, you know, the Russians or the Chinese, you know, are they making sure that we have got the right range and enough growth.

And if we go all the way down through, you know, vertical lift, networks, whatever they choose as those requirements, they have to win. So if we get that part wrong on the front end, and that is where we have been putting in a lot of support around General Murray, because if you just go through the Army, no one is there that has done any development. It has been 30 years.

So your—and you left the Crusader out, but there is this whole list, a litany of these failed programs, and so that is why I worry about the execution piece. The programmatics is going to be the bread and butter, but if we get the requirements wrong, you know, it is, you know, game over.

The part where we have spent time with Chairman Visclosky is if you are going to develop all this new capability, how do you transition out of the current industrial base, all the programs. That is the real work that has to be done now because you are making bets.

If you take too much schedule risk, then you don't achieve that, and we have already told employees that we are going to, you know, change the industrial base, I mean, that is unfair to them. I mean, there is a whole bunch of, you know, complexities here. I think that is where the Army is right now.

I have spent a lot of time with Dr. Esper, General Milley. But, I mean, this is—collectively, this is, you know, as big a program as you are going to find. This is where we all have to really help—we have to help the Army. I know we can shine a spotlight on things that they need to do, but we really need to help them because it is such a large undertaking. But that is how I have been, you know, really working with especially General Murray in the Army.

MR. CARTER. And it is my understanding, and correct me if I am wrong, that you—part of the—part of what you plan to do is utilize knowledge both from industry and from academia as it relates to certain areas of the Futures Command.

I agree absolutely General Murray is the right person in the right place. He is quite an effective man. And so I am very proud of him, and I think he is going to do a fantastic job. But it is—you have got to have big shoulders to bear this thing up because it is going to be a new concept.

I am very hopeful, because if you look at industry versus government, industry is all about a bottom line and it all has to do with profit and loss, and so therefore, they are looking in detail about everything. And I think as we relook at how we procure things, and I know that we have been discussing this for a long time, I think we might actually become a more effective purchaser and a more effective warfighter by doing it.

But it is a big job, and whatever resources that we can put to help, we need to know about those resources. And I know you have put a lot already into it, but I hope we will continue to inform this committee as to what resources you need so this can be a success. We don't want this to be a gigantic failure. We want it to be a gi-

gantic success. So I love the great out-of-the-box thinking, and I hope it rewards us very well.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Thank you. I appreciate the gentleman raising the issue.

And, Mr. Secretary, I do appreciate your comments. It is much easier to go down that new road, very exciting road, as programs get adjusted and dissipate. Those are very difficult problems to address, and I appreciate your serious approach to it and bringing that up today. I really do.

Mr. Ruppertsberger.

#### THREATS

Mr. RUPPERSBERGER. Okay. Thank you, Mr. Chairman.

General Dunford, again, one of the key war heroes we have in this present time. These are some of the most dangerous times, and your leadership has been fantastic, and I just want to acknowledge that.

Acting Secretary, I appreciate your candor, your direct answers to questions, and your reaching out to all of us. And, you know, I just hope that the theme, when it comes to national security, it is USA first. And if we could just live by that, you know, we will have our issues, but that is extremely important.

And now, what I want to get into, over the last few years, our committee has discussed old and new threats facing our Nation, including nuclear weapons. In my opinion, if Russia, China, or the United States get into a nuclear war, the Earth is over as we know it. We can still, in my opinion, deal with what I know—deal with Iran and North Korea.

Now, whether it is due to the development of lower-yield nuclear weapons, arms control treaties being broken, nuclear proliferation, or questioning what does and does not warrant nuclear response, I don't think there is any doubt that this threat, again, is severe.

I also do not think the solution is for the United States to unilaterally disarm or not to develop certain type of weapons. If you look at world history, if you are weak, you can be taken and might be taken over. So I believe since World War II, we have not had a world war, and I just think we need to go in the course we are, and that is why this committee is trying to do what we can to help.

#### SEQUESTRATION

And I do want to raise the issue too of sequestration. I have tried to answer the question of sequestration with every admiral and general. And each and every one, including you all today, has said sequestration is probably one of the most severe problems that we have had. It has made our military weaker. It has hurt us in many, many ways.

Hypersonics, we are behind the eight ball in these areas to Russia and China because of sequestration. And shame on all of us, Republicans and Democrats, if we continue to allow that ever to kick in again. So that is just a good message and I am glad you are there.

Now, the United States, again, must maintain that nuclear deterrent. However, what concerns me is the degraded ability of the



United States and countries such as Russia and China or even North Korea to deescalate conflict before it leads to nuclear exchange.

Now, while our military has effectively deconflicted situations in Syria with the Russian military, I worry that our civilian military leaders do not have the same level of communication and understanding with their counterparts. Misunderstood or unintended signals can have consequences, and there is no argument that our relations with certain countries, especially Russia, have frayed in recent years.

#### COMMUNICATE WITH COUNTERPARTS

Now my questions. Can—Mr. Secretary or General, can you gauge your ability to effectively communicate with your Russian, Chinese, or even North Korean, or Iranian counterparts? Tensions have increased with these countries over the last few years. Has this reduced our ability to effectively communicate with our counterparts? And are there additional resources or authorities you need from Congress to ensure you can effectively communicate with your counterparts to deescalate a—in case a situation should arise?

Mr. SHANAHAN. Maybe we will do a two-part answer. The formal channels to do communication with the Russians have been in place for quite sometime, and they are really on a military-to-military basis. With the Chinese, we don't have that capability. And in a second, I will ask Chairman Dunford to speak to some of his recent activities and trips to China on how we are building that foundation.

As to the North Koreans, it is through, you know, U.N. diplomatic channels that the communications take place.

But maybe, Chairman, you can talk about your most recent visit to China.

General DUNFORD. Congressman, maybe just compare and contrast. So since I have been in my assignment, I have met with my Russian counterpart four times on a full range of issues. We communicate very routinely, despite the difficulty in our political relationship. We have maintained our communication out of the political spotlight. And I am confident we have the ability to mitigate the risk of miscalculation and manage a crisis with Russia.

With China, for more than a decade, we attempted to create a formal framework to do the same, with lessons learned from our Russian experience. When I went to China last year, they agreed to a Joint Staff mechanism where we would have direct communication between the Chinese and the United States. I am not confident that that is where it needs to be right now. It is a priority for us. We need to improve that.

With some initial progress we had last fall, things have slowed down a little bit and we have reached back out to the Chinese to try to get—in fact, I wanted my Chinese counterpart to come to visit the United States this spring. It is their turn, if you will, to come and visit.

So I think that is an area that we need to particularly work on. In the meantime, we would have to rely on diplomatic channels. We don't mirror image in terms of organizational construct or com-

munications the Chinese, and we have to work our way through that as well.

CHINA

Mr. RUPPERSBERGER. A lot of it has to do with kinetic. But one of the areas with China—and we know how much they—aggressive they are in cyber. And have you looked or worked with maybe someone from NSA who might have a relationship in that regard also?

General DUNFORD. Well, we have, Congressman, had conversations with them at every level. And, again, I think we are probably better than we were 2 or 3 years ago in terms of communications, but it moves very slowly. There is a lot of suspicion on both sides, and frankly, the Chinese system does not move as fast as maybe we would like.

Mr. RUPPERSBERGER. Thank you. I yield back.

Mr. VISCLOSKEY. Mr. Diaz-Balart.

F-15

Mr. DIAZ-BALART. Thank you very much, Mr. Chairman.

Secretary and Deputy Secretary and General, privileged to be able to participate with you.

And, General, again, I just want to add my words to what you have heard from my colleagues, words of just great admiration and gratitude. And I hope—because you know I represent Florida. It is a great place to spend time, so I am hoping that you are looking seriously at particularly certain parts of south Florida, which—

Mr. CALVERT. California is better.

Mr. RUPPERSBERGER. Florida in the winter.

Mr. DIAZ-BALART. All right. We have a disagreement among the committee members.

Let me—the ranking member already mentioned the Space Force was just something that also—and I have spoken to the deputy about that and deputy secretary. Let me bring up the issue—another issue that concerns me, and that is for the first time since 2001, the Department has really pushed back—pushed the Air Force what I believe is a step backwards to invest in this new fourth generation aircraft.

The problems that—when I have looked at the numbers, they don't seem to add up. The aircraft will likely, from what I have seen, cost the same or more than the much more advanced F-35. It doesn't align with the National Defense Strategy, and it clearly doesn't align with congressional intent to, again, recapitalize the Air Force's fighter fleet with fifth generation aircraft.

And, in fact, I think it looks like this proposed shift in force structure has, again, I think, huge ramifications for the future. And so as I have said before, the numbers don't add up.

From what I can see, Lockheed Martin has the capacity to produce 42 additional airplanes by the time that the first two F-15s are in testing. The—by 2024, which is when the F-15 is supposed to be delivered, the cost per flying hours, from what I can see, is projected to be, frankly, less for the F-35.

So in every measurement that I have been able to do apples to apples, cost, delivery, everything, not dimension, obviously, which to me is the overriding issue, survivability, there is no comparison.

And so here is what I would like, if possible, Mr. Secretary, is—and, you know, not to do it today, but I would like somebody to kind of sit down with us and to really do a apples to apples—I know it is not an easy thing to do necessarily, but an apples-to-apples comparison on, obviously—you know, the first question is, look, I said this to the deputy secretary, I have a 13-year-old son. My God, imagine the privilege if when he gets older, he would decide to do what, you know, these amazing human beings, which sacrifice and they join the U.S. military, right.

If he was a pilot, do I want him to be in a fourth generation airplane or a fifth generation airplane? That is a no brainer. But on top of that, even disregarding that, the numbers seem to be much better for the F-35 than this new fourth generation plane.

And so that is just point number one that I hope that somebody can get back to me. And so I don't need a comment now, I just do need someone to get back to me because, I mean, and I don't know if anybody does have a comment.

Mr. NORQUIST. Absolutely, Congressman. We will get back to you with the information and walk you through at the detailed level.

#### LIGHT ATTACK AIRCRAFT

Mr. DIAZ-BALART. On the flip side, the light-attack aircraft, and so, you know, I have had some meetings—not the meeting that I had with the deputy secretary, who I think was highly productive, by the way, so thank you, sir, but I have had some meetings before, I won't mention with who, to try to get some answers as to what happened there.

And since I have been in Congress, this is probably one of the—again, not the meeting that I have had with the gentleman here, but others—probably the worst meetings I have ever had. I am still waiting for some answers. I have not gotten answers on what happened there, the decision-making that took place there to, in essence, kind of pull back on what seemed to be something moving forward.

And so I have expressed those concerns privately. I just wanted to, again, hopefully ask if I could get a response, a detailed response that we can look at it responsibly to figure out what happened there and what—how that decision was taking place.

Mr. NORQUIST. Absolutely. We look forward to getting together with you.

Mr. DIAZ-BALART. And I appreciate that.

I will go back to, again, the—I have some issues about some comments about the Space Force, but I don't want to abuse of my time, so I do look forward to getting some real answers.

And, again, I will end this round by, again, General, thanking you for your service. Just our gratitude, as you can hear from all of us, is sincere, so thank you. Thank you, gentlemen.

Thank you, Mr. Chairman. I yield back.

Mr. VISCLOSKEY. Mr. Ryan.

Mr. RYAN. Thank you, Mr. Chairman. Thank you, gentlemen.

A couple questions. One, I want to kind of follow up on Mr. Ruppertsberger's question with regard to China. Just following the belt-road initiative, following everything you are doing, and I think the defense strategy really captured the, you know, great power competition that we are all talking about now.

One of the questions I want to talk about and ask is the proliferation of the 5G services. In March, Italy agreed to 29 deals worth \$2.8 billion related to the belt-road initiative. Just last weekend, the U.K. reportedly agreed to permit Huawei to build noncore parts of Britain's 5G network.

Secretary Pompeo has been blunt that America may not be able to operate in certain environments if there is Huawei technology adjacent to it. General Dunford, in an article in Roll Call, cites you as saying that if London decides to proceed with Huawei's equipment, intelligence cooperation between the two countries could be undermined.

Can you elaborate on those comments, specifically on the threat to U.S. national security by the expansion of Huawei building 5G networks at home or with our allies, and also if you can touch upon your comments with regard to the U.K.

General DUNFORD. Sure. Congressman, you know, we start with, as you saw in our National Defense Strategy, we view allies and partners as a source of strength. It is critical to us. And I think we all agree on that.

And one of the things that underlies an alliance is the ability to share information. And when we share information with allies and partners, we have to have common standards and information assurance. We have to be sure that our secrets are protected, whether it be intelligence or a technology transfer, those things have to be.

And so in this venue, what I would say is that as we look forward, whatever decisions we make individually, whatever countries decide to do, it has to be informed by where we want to be on the backside of the new network. And if that network—if we are not mutually assured that that network is secure and we can exchange information, it is going to impede our ability to be allies and to share information as freely as we have in the past.

Mr. RYAN. I mean, that seems devastating with the U.K. if we can't have the deepest level of cooperation.

General DUNFORD. Well, this is the argument that the Secretary has been quite vocal about in doing that. And, again, I just outline that this is less about an IT issue—

Mr. RYAN. Right.

General DUNFORD [continuing]. Than it is about the very connectivity between allies.

Mr. RYAN. Yes. Mr. Secretary.

Mr. SHANAHAN. Maybe just a comment here about the nature of competition with China. You know, what you see with Huawei is dumping, right. I mean, the integration of civil and military and the state-owned enterprises in China allow them to have price advantage in the marketplace, and so economic supersedes security,

and that is what you are seeing in, you know, many of these countries as they make their decisions. The telecommunications industry has more influence in policymaking.

And in our country as we start to look at, you know, and this is going to show up in rural infrastructure—

Mr. RYAN. Yes.

Mr. SHANAHAN [continuing]. How do we protect ourselves, because the—you know, the way I think about this is can you trust the network. There is a lot of technical, you know, language that goes along with Huawei and others and—but it is really can you trust the network.

And if we are going to exchange information, you can see how much more. With 5G, we are going to have billions of devices connected to the internet, and if you can't trust what is on the network, and cyber is so important, we are really disadvantaging ourselves.

It is easy to say what we are against. We have to put together a solution for our own country. In the past, we would, you know, with 4G we dominated because we could put together the ecosystem. I think that is what we need to be doing holistically.

We have got some programs going within the Department of Defense. I have had conversations with Chairman Pai of the FCC. But, you know, really collectively, we as a country need to have a whole-of-government effort here, and it plays into 6G. I mean, this just really is part of our future, but it is critical.

#### ADVANCED TECHNOLOGIES

Mr. RYAN. That is my concern. I am sure it is, just from reading the defense strategy, the whole-of-government approach that China does. Now, when I started in Congress, and it still happens, they dump steel.

Mr. SHANAHAN. Right.

Mr. RYAN. You know, oil country, tubular products are coming in, and they are dumping it and putting our steel workers out of business. Now they are doing the same thing with the advanced technologies. And we have got to figure out how to use the whole-of-government approach, including our private sector, to start dealing with this. So we want to be partners with you as we walk down this road together.

#### SUICIDE

Just a couple other questions. One, with regard to suicide prevention, we continue to see what is happening with our veterans. We have seen suicides 2 weeks ago, three veterans killed themselves at VA facilities, and just this weekend we had another vet in Ohio.

And you are kind of the last sometimes—because most of these vets don't go to the VA, so you are kind of the last stop for them with any kind of connectivity. What are you doing to ensure these servicemembers receive the support they need for the mental health issues that many of them are dealing with?

General DUNFORD. I could start, Congressman. And frankly, with your help and the interest of others, as you know, we have increased the access to mental healthcare significantly over the last

few years, and you have been tracking this probably 8 or 9 years now, reduced the stigma. And I really do believe that that particular issue is largely behind us, certainly much more so than it has been in the past where people are willing to—

What I spoke about earlier was, you know, breaking down the barriers. And I am convinced each of the services is working towards doing this. But one of the things that I have seen in my own experience is that not everybody has a complete psych picture of an individual.

So if they are seeing the chaplain for help or they are seeing a leader for help or they are going to seek mental healthcare, there isn't a way to see all elements of that individual's life. And that is one of the areas that I think the services have made significant progress is breaking down those barriers so we can see the indicators of mental health challenges and then intervene when those things are there.

And I think the other significant area that we made progress in is alerting—you know, these individuals are never alone, and there is always somebody that knows something, and alerting peers to intervene as well and to alert leadership.

And for the examples that you—the sad examples you raised, the suicides, I could give you many—many examples of where young marines, soldiers, sailors, or airmen have actually seen a change in the behavior of one of their buddies and never actually raised that to leadership and done what we call a save, and they have identified somebody who was suicidal and brought it to our attention.

So despite all that progress, we are not satisfied with the overall outcome. But I would tell you, you know, I am closer to the end than the beginning, as has been alluded to here, when I look at where we were when I was assistant commandant of the Marine Corps in 2010 and where we are today in the Department in terms of dealing with mental health, our awareness of mental health, our efforts to try to improve the process, and more importantly, to elevate the issues so that people are comfortable talking about it and seeking help, I think we have made a lot of progress.

I am by no means complacent or satisfied with where we are, but the trajectory that we have been on is, I think, the right trajectory. And with your continued help in resourcing these programs that we spoke about, we will continue to make progress.

#### EAST COAST MISSILE DEFENSE SITE

Mr. RYAN. Great. Thank you. We have got a lot of work to do.

Mr. Secretary, one last quick question, parochial issue. The Missile Defense Review that was released January 2019, at that time no decision was made on the third ground-based Continental U.S. Interceptor. We—Camp Garfield in my district is one of the top three choices for the East Coast missile defense site, and the site would create 2,300 jobs where we desperately need them in north-east Ohio.

The environmental impact study was completed, and, as I understand it, there is no other impediments to making a decision on the third site. Has a decision been made on this at all, or can you update me?

Mr. SHANAHAN. Yeah. No, I believe a decision has been made, and before I say what the decision is made, let me just check that I am current.

Mr. RYAN. Let's break news right now.

Mr. SHANAHAN. Yeah. No, I have done that before. It doesn't always go my way, so—but I will get you an answer today. How about that?

Mr. RYAN. Okay. Terrific. Thank you.

Mr. SHANAHAN. Yeah.

Mr. VISCLOSKEY. I would simply want to support the gentleman's conversation about buy America, not exclusive to the issue of steel but products, and especially when you think about technology and our dependence, I do think it is an important issue.

Mr. Cuellar.

#### BORDER—CARRIZO CANE

Mr. CUELLAR. Thank you, Mr. Chairman.

Again, I want to thank all three of you all for your service.

I want to talk about the border. I live at the border, and I appreciate folks like you all that come and visit us once in a while, but I want to make sure you don't take a 5-minute or a couple-hour visit and tend to know better than some of us who live on the border, and I say that very respectfully.

Putting concertina wire on some of our international bridges, let's say Laredo, largest inland port, 16,000 trailers a day, safer, about three or four times safer than Washington, D.C., is a little insulting to us.

But doing some of the work that I had spoke to the deputy secretary yesterday that would be very helpful that the military can help is addressing the carrizo cane—and I didn't bring any pictures, but I showed it to the deputy—that would be very helpful. That is an evasive plant that grows along the river in Texas on both sides, and I wish the Mexicans would do their part also.

But that would be one area that you all can go and clear up whatever, 50 yards, whatever, you know, the CBP feels that we need to have, because otherwise, cameras, sensors, drones, aircraft, helicopters, whatever, they won't be able to penetrate because it is very thick and it grows very, very fast. So I would ask you to consider doing that. That would be extremely helpful for the line of sight for CBP. I would ask you to take a look at that.

#### LATIN AMERICA

Mr. CUELLAR. Changing subjects to Latin America, you know, I get concerned that in places like Mexico and Chile and other countries, when they poll, China and other countries are doing better than we are for various reasons. So we need to have a better presence there. I know last year, we did the Indo-Pacific initiative, and one of the things I also spoke to Deputy Norquist yesterday is for y'all to consider whatever we want to call it, Plan Latin America, where we also do training and education, not militarize the border—I mean, Latin America, because there is a lot of sensitivities there, but there is a lot of things that we can do.

And I believe I gave some information to the Secretary—to the Deputy Secretary, and I would ask you to take a look at that. We

are working with the—you know, with the armed services, the NDAA, to look at that, but I would ask you to take a look at it.

SOLE SOURCE

And, finally, my last question, and ask you to respond to all three of them, the Department of Defense Inspector General just found out that there is—DOD continues paying excessive profits on parts purchased from sole-source manufacturers and providers. And, again, I don't have a problem vendors making money, I am for that. But I do have a problem when, you know, 46 out of 47 parts that they looked at had excessive profits, where they went from 17 to 4,451 percent, according to the IG, and I would ask you to take a look at it.

I am a big supporter of what you all do, but when you have vendors losing parts, when you have all this excessive profits are made—and I am a capitalist—I just feel that the taxpayers are being taken advantage of.

So, Mr. Chairman, I know, you know, this is my last series of questions, but I would ask you to look at those three items that I just mentioned. Border would be something that y'all, if you go to do that, clear the line of sight for it, and you can put a lot of technology in those areas and probably do a lot more.

Mr. SHANAHAN. I am happy—

Mr. CUELLAR. One at a time.

Mr. SHANAHAN. Yeah, okay, all right. No, no. Clearly, on, you know, making simple improvements to visibility is something we need to work with CBP with. You know, our role in concertina wire has been to support their requests. Obviously, we can provide input to them as to these are other things that can and should be done.

Mr. CUELLAR. Yes, the carrizo cane elimination in the river routes to provide access would be, in my opinion, in talking to the men and women there on a—literally on a weekly basis, because I live there, would be tremendous. So, I mean, I will be happy to follow up with Secretary Norquist and go into more details.

Mr. SHANAHAN. Then in terms of South America, you know, the chairman and I spend a lot of time with Admiral Faller there in SOUTHCOM. And he looks at that region through a lot of different lenses, but one of the forums that we have now included him into is our China forum. Because, like you said, the Chinese are everywhere. I mean, they are practicing their predatory economics where—you know, they promise great things with infrastructure, and all of a sudden you can't pay for them, and they have done all the work and, you know, your debt levels are very high.

Most of the investment in their countries is direct foreign investment by private companies. So as a country, we don't get, you know, the same kind of credit the Chinese do.

Admiral Faller, as part of our National Defense Strategy, is working with allies and partners. So in working with the Colombians and the Brazilians, we can go down the list, how is it that we want to collaborate with them so that we can address some of these—you know, they really are threats. And then how do we counter the narrative where we are really a value-based society, and the type of—the way the Chinese, you know, the practices they bring are very much different than what we have to offer.



And we would be happy to work with you on some of the language that you have been developing. The military to military and some of the other kind of programs we have established is invaluable in terms of how we, you know, strengthen those relationships.

And then lastly, on the, you know, paying over market, wish it was a criminal offense, because we shouldn't. And I feel just as passionately about it as you do. We should pay fairly. People should make a profit because they earn it.

Mr. CUELLAR. Right.

Mr. SHANAHAN. And we shouldn't be overcharged.

Mr. CUELLAR. Thank you.

My time is up, but I want to thank all three of you all. And, General Dunford, thank you for your time. But all of you all, thank you. I want to be very supportive of what you all do and your men and women do. Thank you.

Mr. VISCLOSKY. Mr. Crist.

#### VENEZUELA

Mr. CRIST. Thank you, Mr. Chairman, and I thank the panel for being here. Appreciate your presence.

Secretary Shanahan, I, along with a lot of people, have been following the recent developments in Venezuela, and I am concerned with how the situation has deteriorated and wondered if you could speak to your views as Acting Secretary what the situation is and what else we may know.

Mr. SHANAHAN. We—you know, as you are tracking, it is extraordinarily fluid, and it is, you know, almost day to day. What I would tell you is that later today, Chairman Dunford and I will be over with Ambassador Bolton, Secretary Pompeo. We—and Secretary Mnuchin's traveling. But we are working this as a whole of government, and when people say there are—you know, all options are on the table, they literally are. But we work it as much diplomatically and economically to impose pressure.

You know, we have got the Cubans there, we have got the Russians, the Chinese, so many dimensions, and not all of them are visible through the media and other channels. We are really turning up the gate. This is not a timetable we control. And to the degree we can respond and alter our tactics and take advantage of the situation, we have been.

I don't know, Chairman, if you want to add a comment or two. We are—we have done exhaustive planning, so there is not a situation or a scenario that we don't have a contingency for.

I would also offer that we are in close partnership with Colombia and Brazil. We are taking a regional approach. This isn't just, you know, the United States showing up, but—

Mr. CRIST. Yes, sir.

Mr. SHANAHAN [continuing]. Taking the security situation very seriously.

Mr. CRIST. Well, as I understand it, I think there is 50 nations that are supporting Guaido?

Mr. SHANAHAN. Fifty-four, yes.

Mr. CRIST. Fifty-four, Guaido.

Mr. SHANAHAN. Yes, sir.

Mr. CRIST. General, did you have anything to add?

General DUNFORD. The only point I was going to make, Congressman, the Secretary got at at the end, is that the one thing that Admiral Faller—and I am now speaking to the military dimension of the problem, as the Secretary said—

Mr. CRIST. Yes, sir.

General DUNFORD [continuing]. It has been primarily diplomatic and economic with planning militarily. And then, as you know, we moved humanitarian assistance down there, and obviously we have intelligence capabilities.

But the one thing that Admiral Faller has really led, I think, well in this regard is a multilateral approach. And so our communications with others in the region—I think it really is very, very important that we work with others in the region to solve this problem.

Someone before you mentioned U.S. influence in the region. And what I have seen, in unclassified surveys that have been done lately, is actually U.S. influence in the region and the perception of U.S.—United States in the region is actually moving in the right direction. The trends are in the right direction. And I think as we manage the crisis in Venezuela, we need to manage it in a way that continues that trend as well. And that is, I think, what we have done to date and certainly what the direction and the guidance from the President has been to us.

Mr. CRIST. Well, thank you very much.

Mr. CALVERT. Will the gentleman yield just for—follow on that.

Mr. CRIST. Of course, of course, certainly.

#### MEXICO AND SUPPORT MADURO

Mr. CALVERT. Has Mexico changed their position yet as far as their continued support of Maduro?

Mr. SHANAHAN. I don't believe so.

Mr. CALVERT. That is disappointing.

Thank you. Thank you.

Mr. CRIST. Thank you very much. I appreciate your service to the country and being on top of the situation.

Thank you, Mr. Chairman.

#### SEXUAL ASSAULT

Mr. VISCLOSKY. Secretary, I have three items I would like to touch on, and then for the members who are here, to give them a second opportunity.

The Department will be releasing its annual report on sexual assault at some point in time in the near future. But I would note that sexual assault reports have spiked to an all-time high in 2017, and only 3 percent resulted in convictions. Not knowing about any one of those instances, 3 percent may be exactly right, but it makes me wonder.

In 2015, the Pentagon survey indicated 40 percent of the victims reported that their command encouraged them to drop their complaint. With a report to do soon—and I appreciate that you gentlemen are committed to dealing with this issue that is societal, but it is a problem at the Department—could you just very briefly touch on that? And are there any additional efforts or conversations that are taking place to deal with this issue?

Mr. SHANAHAN. I would be happy to address, and then my counterparts can, you know, weigh in.

So, first of all, any sexual assault is one too many, no matter what the, you know, the number is. The only number that matters is zero. And in this world where we are in a competition for talent, if that is the kind of treatment you get, it makes it really hard to compete for talent. So the numbers aren't in a place that is acceptable.

The two areas of focus for us are, one, the system itself. Is it—is it—you know, think of it as due process. Is there sufficient resources? Is there accountability? Is the threat of retaliation mitigated? There is a number of these things. And I think what you will find shortly—and Mr. Ryan's gone, but this would be news-breaking. We are going to criminalize certain activities in this next year to, you know, reflect the seriousness that we are going to take on certain behaviors.

So there is an element of how do we make the system that we have—and our system is broad, because, you know, we do—you know, we are responsible for every dimension of our servicemen and -women's behavior.

The third piece, which is really, when you break down the numbers, you do—whether you want to do a heat map or the detailed analytics, is the behavior of certain populations. And we know—and when you see the sexual assault report, you will see that there is a targeted—there is an opportunity to really work the behavior, and that comes from leadership teaching certain age groups what is acceptable and what is not. And I think that is a real opportunity for us.

#### DAYCARE—NAVY AND MARINE CORPS

Mr. VISCLOSKEY. I appreciate—I mean, that would satisfy—I appreciate the initiative, because I am very concerned about the issue of retaliation. I think everybody on the committee is.

The second item, and it is not really a question, but it just literally was a topic of conversation when the Navy testified yesterday. Between the United States Navy and the Marine Corps, there is a waiting list for daycare of over 8,000 sailors and marines. And what was distressing is that the Department of the Navy would increase spending by \$7 million this year but ask for no new capacity.

The Marine Corps, in their budget, would be spending less than they did 2 years ago on the issue with no new capacity. We are going to be marking up in 2 weeks from today, in subcommittee—and simply indicated to the Secretary Chief—and I don't have the Air Force and Army figures in front of me—that—there is no way of telling if I am going to be on this planet tomorrow morning, let alone next year when we have a hearing. And just want, in fiscal year 2020, for the sake of these people who are desperate for daycare, to somehow work with your department and get something done, despite what the pending budget request is.

## SPACE FORCE

The third item I have, and it is a very serious concern to me, is budget justifications. And I would just give a couple of examples and ask for a response.

Obviously, we have a new proposal from the Department for the Space Force that is about \$72.4 million; Space Development Agency, \$149.8 million; and the Space Command, \$83.8 million. The Space Force gives an estimate for the cost over the next 5 years. But of the three, it is the only one that gives us that extended estimate. It is \$2 billion.

The details for the actual implementation of the Space Force are yet to be developed, as I understand it, as evidenced by the request for transfer authority for funding for a 5-year period, with an additional 2-year option as part of a legislative proposal. And again, it is easy to spend money this year, and then we are stuck.

## REORGANIZATION OF MILITARY HEALTH PERSONNEL

We have the issue of a \$250 million request for the implementations for the reorganization of military health personnel. Details are to be submitted later this summer. Our bill is going to be done on May 15, and, of course, then we have the process ahead of us.

## BUDGET DETAIL

I would indicate that during our hearing in March for one of the agencies, there was a one-page justification for an expenditure of some significant sum of money. And when I asked the witness when the supporting documentation for the one page of justification would be presented to the committee, we were told mid-April, which was a completely unsatisfactory answer.

I have in front of me a paragraph that is a request for a new program for \$242 million. I have another paragraph for a program for \$250 million. And I appreciate that there are changes, and I appreciate that there is a sense of urgency at the Department that I have not seen in my tenure here. But we have a responsibility, from a budget standpoint, to see details.

And whether, Secretary or Mr. Norquist, I am not happy. Some departments, agencies have been very fulsome, very cooperative, but it is uneven and, from my perspective, incomplete.

And looking ahead, we are where we are today in 2020. What should I expect for 2021? To put it as my good friend and former Chairman Frelinghuysen would say, I think it has been lacking.

Mr. NORQUIST. So if you are unhappy, then, on the budget justification, Chairman, then clearly I will be unhappy with the level that you have been receiving. I invite you to the summer meeting, but to those who aren't, my answer is let me know and I will follow up.

Our concern is always that you need to have the same level of information to do the oversight that the OSD would over the services over the others: What is it for, what is the needs, what are the requirements, what are the alternatives, those types of things.

We tend to produce, you know, 116 volumes worth of budget data. It fills entire bookshelves. Much of that is routine. But there are certain areas that become a particular focus. And making sure

that you have the adequate level and the appropriate level of justification for those is essential.

I appreciate your point about the balancing with the speed, but even with speed, we still need to get you the data. So we look forward to working with you on any of the examples you brought up to be able to make sure that we can address those questions. But that is an essential function that both of our organizations have to be able to adequately address, so you can have confidence in where your assigning taxpayers' money and you can have confidence in what you are investing in and what the long-term implications of that are.

Mr. VISCLOSKY. Again, in some instances, it has been very good. In others, it has been very lacking. And I would point out, for the record, that we were on time. This was the first year in some time we were on time.

And, in fact, not anyone's fault in this room, there was a delay in another 5 weeks for this mission of the budget. So there was plenty of time this year. There was predictability. So that is why I, again, find it particularly upsetting in some instances.

Mr. Calvert.

#### SPACE FORCE

Mr. CALVERT. Mr. Chairman, I will just have one line of questioning about the—you brought up the Space Force. And I recognize we have had these discussions. I talked to Mike Griffin this morning about the space development portion of it. And it is true that this new dimension is something that we need to move on as quickly as possible.

I really don't have a real problem, other than how this Space Force is put together and how we pay for it, as far as the Space Force part of it. And the combatant commander is necessary, and I understand that portion of it. I am following very closely—I had a very good discussion with Mike this morning, the space development part of it and that that is done properly and that we have transparency on how we do that. That improved today, and I—and I appreciate that. So we will be keeping track of that.

As the chairman pointed out, I thought it was a secret we were marking up on May 15. It is not a secret anymore, Mr. Chairman, right?

Mr. VISCLOSKY. Oh, forget I said anything.

#### GOOGLE

Mr. CALVERT. But we have a very short timeline, so any information that we need to have, we need to get as soon as possible where we can put that together.

The other issue I would like just to bring up is Google—I am hearing a lot about that being from California—assisting China but not wanting to assist the United States military, which I find troubling. And I suspect that you find it troubling also.

But to have a U.S. corporation that would, in effect, contribute to the erosion of U.S. military superiority is troubling. And I would hope that the military would have a memory of that. So that is just a point I want to bring up, Mr. Chairman.

Mr. VISCLOSKY. Mr. Calvert is an example of what I wish would go on in all committees in Congress, and of course, it also refers to our former chair of this subcommittee, as someone to keep me in line, correct me when I am wrong, and draw my attention to detail. I would point out, however, Mr. Calvert asked that we be as transparent as possible.

Mr. CALVERT. That is true. Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Crist.

Mr. CRIST. Thank you, Mr. Chairman.

#### SOUTH KOREA JOINT EXERCISES

I wanted to explore North Korea a little bit. In early March, it was first reported that the military would end major U.S.-South Korea joint exercises, joint military exercises. I was curious who made the decision to end these exercises, and what is the military doing instead to maintain readiness against an adversary that remains one of our most dangerous threats.

General DUNFORD. Congressman, I am glad you asked the question. For clarity, we didn't end exercises. We rescoped the exercises. And the one thing I will start by saying is that I am absolutely confident that we have mission-essential tasks for our U.S. forces and then our combined forces, and that the exercise construct that we have in place right now will allow them to continue to do what they say they need to do, and that is to fight tonight. I am confident of that.

What exercises have traditionally been on the peninsula really were twofold. One was for deterrence, and so we advertised them quite a bit. And they were large and they were visible and they were designed to send a message. And then, of course, inside of those exercises was also the need to develop combat readiness.

We have not compromised on the latter. We have adjusted on the former as we have supported the military—the diplomatic effort against North Korea.

So we have worked very closely. The Secretary's provided oversight with General Abrams, Admiral Davis in the Pacific, and our Korean counterparts, which we speak with—speak to routinely, to make sure that the exercises that we have in place right now will allow us to get after that readiness issue that I spoke about, even as the profile of the exercises meets the diplomatic environment and contributes to the path that the President and Secretary are on.

Mr. CRIST. Thank you. I am pleased to hear that.

Thank you very much. I yield back, Mr. Chair.

Mr. VISCLOSKY. Ms. Granger.

#### WORKING WITH COMMITTEE

Ms. GRANGER. Thank you. I just have an observation and a brief question.

Congress doesn't enjoy a great deal of admiration from the public, and I think one of the reasons is—has to do with issues like we discussed today, the JEDI situation and the medical records lack of success.

An observation, there is a complete lack of urgency from the panel that appeared before us. Instead, there was really an amaz-

ing complacency. I think we all walked away very angry—not just disappointed, but very angry with that panel that appeared before us for the medical records.

I would suggest to you, Mr. Secretary, that it is going to be very difficult to do what we are asking you to do with the persons who appeared on that panel. There was no urgency whatsoever.

Next to you is Mr. Norquist. I don't know if you know this, Mr. Norquist, but I quote you very often, because when I chaired Defense, we had a problem. We made the problem. We put together a great bill, great funding, very specific. Secretary Mattis worked very carefully, closely with us, to say what we need.

When it was over, we gave that secretary 5 months to spend the money that we just passed. I went to Mr. Norquist and said, this is our fault, we did it. Is there an answer to this? And he gave an answer. He says, yes, there is some things you can do with flexibility.

And we need to look for answers and ways to be—particularly with something as urgent as our defense, we need to do the very best job. We need to have an urgency and an understanding of how important this really is.

Mr. Norquist, I know that we talked about, because we gave that little bit of time, you can either make mistakes or you can lose the money. We are still getting money that is returned to the Treasury. Can you tell us where that comes from and what are the—like the three major problems that cause that?

MR. NORQUIST. Sure. So there is a couple of things. When Congress appropriate funds, in order to maintain the power of the purse, there are certain controls around them that generally extend to how long we are able to put that money under contract. So operation and maintenance funding is available for a year.

Usually at the end of the year, most organizations have obligated 99, 99-1/2 percent. We don't want necessarily to get to 100 percent. We want people to recognize there are certain things where you are better off not putting the money on a contract if it is not valuable enough.

Once they have put it on contract, then you can either have the service comes in at less than you thought or you could have other items that—you decide to cancel the service because you are unhappy with the contract performance. Those funds are deobligated. So that is when you see reports that say the Department didn't use a certain amount of money; it stayed in the Treasury. Because at the end of the day, the Department generally did something right in terms of didn't spend it, held a contractor accountable.

There are certain places in the budget where we have issues that come up. For example, General Accounting Office has ruled that when we do PCS moves, the time we obligate the money isn't when the PCS occurs or the contract is signed, it is when we notify the family. So now you are 6 months away from having any idea of what the actual bill is.

Those types of things create places where the uncertainty level is much higher. And so one of the things we look for is, working with the committee as well as with internal controls, how do we get better controls around those use of the funds to be able to be better in predicting.

So those are the types of the things we look at. We work with the committee in terms of ways of adjusting that, but it is both—I don't want to say it is just the committee. Internally to the Department, there are things we do to try and track the predictions around how much funding is required for an item. So we leave as—we use it for the highest priority items and ensure it gets properly executed.

Ms. GRANGER. Thank you. On the billions that we have spent in the last, what we determined 17 years—17 years on this program, we can't get that back. And it doesn't go to Treasury. It is just gone. Let's stop that. And Mr. Norquist could be a great help.

Thank you.

Mr. VISCLOSKY. In a way, I would like to follow up with Ms. Granger's line of questioning. And that is the issue of unspent funds, and we will hear from Mr. Norquist. In 2018, the Department undertook a root cause analysis and essentially determined that there were about \$17 billion almost, approximating the State of Indiana's budget, of expired or canceled funds at the end of fiscal year 2017. My understanding is it had to be a cumulative figure.

In the budget submission, there is several requests for additional flexibility on behalf of the Department. One is a provision that would extend the use of funds to cover contingent liabilities on three programs that are brought forward. Could you walk me through that \$17 billion in the sense you talked to Ms. Granger about it—

Mr. NORQUIST. Sure.

#### CONTROL OVER FUNDS

Mr. VISCLOSKY [continuing]. And somewhat addressed that?

You also mentioned in your answer better control, which I am more interested in, to be very frank with you, than more flexibility right now. Could you address that?

Mr. NORQUIST. Certainly. So let me explain the \$17 billion. So we take the life of the money, 1 year for O&M and so forth, and then there is 5 years after which the contract has been awarded but till it is paid out.

So when you get to the end of all of that, the question is how much of the money did you receive was actually paid out from the Treasury to a soldier in salary or to a vendor for a service. The answer is about 98 percent. So you—at the end of a year, you may have obligated 99½. But by 5 or 6 years later, when you got to final payments, you are at 98 percent.

Now, with the Defense Department's size, 2 percent is about \$17 billion. That is a missed opportunity, but it is not in and of itself a bad thing. Many of those reasons those money aren't being spent is when somebody stops a contract, you got delivery for less, people did a good job on negotiations. So I don't want to imply—you know, taxpayer money not being spent is not a problem, right? That is often a good and virtuous thing.

What we did in the analysis—

Mr. VISCLOSKY. It is always a virtuous thing.

Mr. NORQUIST. What?

Mr. VISCLOSKY. That is always a virtuous thing.

Mr. NORQUIST. Always a virtuous thing.



The issue that we looked at is why, right? Is there reasons that we are putting money on things that don't end up paying out that are not related to holding a contractor accountable?

One of the ones you talked about were those three contracts. And what happens is, when we put money on a contract, we have to set aside funds for contingent liability. What if the contract is terminated? This is part of our full funding requirement. Should the program end, do we have the money to close it? That money is only, again, available for the 5 years. So if the program lasts long enough, when we go to close the contract, the money that was set aside to close that contract is no longer available for the very purpose we originally set it up for.

So some of these programs are getting to that point, and the question is how do we avoid needing to use current-year money to pay a bill for which we did, in fact, set aside the right amount of money in the past but it is reaching the end of its life.

There are other ways of dealing with contingent liability. I would be happy to talk to the committee about those. But the idea is, you don't want to have to pay—I don't want to say pay twice. The money doesn't actually—it just stays in the Treasury. But the Congress gave us money for that, and then we had to later come back and either reprogram or ask again for the very same thing again, because we have exceeded that 5-year period.

You asked about what we look at internally. So one of the side effects of the work we have been doing on the audit and others is to be able to produce extensive data on transaction-level activity. And we would find places where people were concerned that money was being ordered, put on contract, and then deobligated later.

Well, now we can run analyses that determines where exactly were those. And if they occurred very short periods across from each other, right, one occurred right before the end of the fiscal year and soon thereafter, then you get to dive in and look at why that is happening.

The Army found, for example, that in some cases, units that had deployed canceled the orders for the supplies that they needed. And then a unit came in, and the next unit who needed to fall in on that equipment then replaced the order. For the units, that didn't seem to be an issue. But for the Department, we had crossed fiscal years. So the contracts that had been placed were then canceled, those funds deobligated, and new funds had to be used.

Now, in that case, you can often fix it with a process change up front. But what we are trying to do in general is make sure that when Congress gives us money for a purpose, we soundly use it for that purpose; we don't leave it to be unobligated. The Congress didn't give us extra money with the idea we are not going to use it. They gave us money with the expectation that we would use it for readiness. And building these controls and working with the committee on areas where there is a legislative potential fix is very important. And some of these create secondary effects, and we want to make sure we work through those with the committee so that there are solutions, not a new round of challenges.

Mr. VISCLOSKEY. I appreciate it, and do want to work through with you, because as you point out, it could be the payment of a

new person who has enlisted in the military, or did not, and you have not expended those moneys, or a very sophisticated contract.

Also, do appreciate—it is not wrong—in fact, a virtue—if you have set aside moneys to make sure you can meet that contract and you come in under that and have saved people’s money. That is not bad.

Mr. NORQUIST. Okay.

#### FUNDING DECISIONS

Mr. VISCLOSKY. I would tell you that the question in my mind is relative to the national debt. I am not going to have a conversation about that today.

But if we borrow money, I make one set of decisions if I spend \$1; I make another decision if I spend \$1.10. I just—I have a different timeframe.

On this annualized basis, as far as prioritization of programs, if in the recesses of somebody’s mind they know we can take moneys from the past, and, if you would, enhance the budget we have asked for, those prospective requests could potentially be different than they would if we know there is a fixed amount of money and we can’t go back in the past and recapture those funds, if you follow my—

Mr. NORQUIST. So I think, if I understand you, Mr. Chairman, is there is a risk, if one does this incorrectly, that somebody will bet on being able to receive the past money and therefore not act for the correct amount. That is a problem. That is what you do not—

Mr. VISCLOSKY. Or assume we have—

Mr. NORQUIST. Or assume they have it, right. So what we would be looking for are solutions where funds were made available for the service.

So you think about, you open up ships to do maintenance and repair on the ships. Some of those ships have fewer problems inside than you thought, and therefore the cost of doing maintenance is much lower. Others, the costs are higher. You would not want to—you would want to be able to rationalize across that. What you didn’t want to do is set up an incentive where people intentionally underestimated the requirement under the theory that they were going to get covered for something else.

So I understand your—the point you are bringing is there are some risks of secondary effects, and I think we always have to be intensive into the budget rules to creating the right set of incentives that people use money wisely and don’t either feel the need to hit a high obligation rate or feel the belief that somebody will always come and rescue them if they don’t have enough. And that is a tight challenge.

Mr. VISCLOSKY. I understand you have those two requests. I would not express an opinion on them one way or the other, but do, again, harken back to your conversation with Ms. Granger where you talked about controls. I think that is the place to start.

Since you mentioned shipbuilding, I will simply conclude by understanding—I understand there is a change in the Truman that would have an immediate impact on 2020, in the great scheme of the budget, not significant, but \$17 million and then the outyears.

Obviously, that is a new item and would enter into discussions with you relative to that.

Mr. CALVERT. Oh, I am sorry. Mr. Diaz-Balart. I apologize.

#### VENEZUELA

Mr. DIAZ-BALART. Thank you, Mr. Chairman.

I realize that it is getting late, so I will be brief. Just two questions. First, about Venezuela. The reality of the Maduro's dictatorship is that you have, you know, Cuban intel and military folks there; you have got Russian presence; you have got Chinese presence; you have got Iranian presence; you have got terrorist organizations like Hezbollah and the like.

I have been saying that, to me, that is a national security threat to the United States. Am I wrong?

General DUNFORD. I think what you said is exactly consistent with what the President has said, Congressman.

#### F-35 AND TURKEY

Mr. DIAZ-BALART. By the way, I would also say that that is, in essence, the same situation as Cuba. But speaking about Venezuela, I just wanted to get that for the record, because I think this is a potential serious national security threat right here in this hemisphere.

And second question is going back to the F-35 and the issue about Turkey. Do the Turks understand that if, in fact, they go ahead—and I fear that they probably will—but go ahead with these, you know, Russian missiles, that it is impossible for them to receive the F-35? Has that message been sent clear enough or are they still—is there any possibility that they haven't understood the message?

Mr. SHANAHAN. I think there is very little possibility that they have a misunderstanding.

Mr. DIAZ-BALART. And there is—I don't have that misunderstanding. And it is one or the other. They cannot have the F-35 in the same—

Mr. SHANAHAN. Yes, there is no confusion on our part.

Mr. DIAZ-BALART. Right. I just wanted to make sure.

Thank you, gentlemen.

Thank you, Mr. Chairman. I yield back.

Mr. VISCLOSKY. Gentlemen, thank you very much.

We are adjourned. Thanks.

[CLERK'S NOTE.—Questions submitted by Mr. Crist and the answers thereto follow:]

#### BANKS ON MILITARY INSTALLATIONS

*Question.* Secretary Shanahan, during consideration of the House's version of the FY 19 NDAA, an amendment was adopted that would have allowed banks to operate on military installations, utilizing non-excess property, free of charge. Or, in the case of banks already operating on military installations, the amendment would allow those banks to renegotiate lease terms. While the amendment was ultimately stripped from the final bill, I believe this amendment would have dangerous consequences in a time where defense budgets are stretched thin, particularly in terms of installation operating accounts. An amendment like this would open the floodgate for current for-profit businesses that already operate on bases like restaurants and various retail outlets to push for a similar status, resulting in untold millions in lost

revenue DoD-wide. During debate on the amendment, certain House Armed Services Committee Members stated that DoD opposed a policy to allow banks to operate on military installations free of charge. Can you please clarify that this is indeed the position of the Department of Defense and why? Further, do individual installations currently have the ability to enter into lease agreements where such individual installation may cover all fees, services and utility costs assessed with regard to the leased property?

Answer. a) During debate on the amendment, certain House Armed Services Committee Members stated that DoD opposed a policy to allow banks to operate on military installations free of charge. Can you please clarify that this is indeed the position of the Department of Defense and why? The Department opposes a policy to allow banks to operate on military installations free of charge because 10 U.S.C. §2667 requires the Department to receive fair market value (FMV) for leased space. Therefore, the Department opposes any effort to undermine the requirement that commercial entities pay FMV for DoD property leased pursuant to the authority of 10 U.S.C. §2667, as doing so would amount to a federal subsidy of the commercial enterprise. Unlike local schools, for which 10 U.S.C. §2667(k) provides an exception to the requirement to pay FMV, private banks are commercial entities seeking to locate on military installations for corporate profit motives—a circumstance where a federal subsidy would be inappropriate. In addition to being an inappropriate practice, it would cost DoD the use of needed appropriated funds to directly subsidize a private entity by providing “services and utilities” without charging for them. DoD charges other commercial entities located on the installation for services and utilities. Eliminating these charges would be a direct drain on DoD’s appropriated funds at the expense of mission readiness. b) Further, do individual installations currently have the ability to enter into lease agreements where such individual installation may cover all fees, services and utility costs assessed with regard to the leased property? Current law requires the Department to seek FMV for lease agreements unless excepted elsewhere in the law. In receiving payment of FMV in consideration of the lease agreement, individual installation lease agreements may accept appropriate goods and services received by the Department, when properly valued, as in-kind consideration in lieu of cash lease payments not to exceed the total value of the lease.

[CLERK’S NOTE.—End of questions submitted by Mr. Crist.]

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