

Stenographic Transcript
Before the

Subcommittee on Seapower

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO RECEIVE TESTIMONY ON MARINE CORPS
GROUND MODERNIZATION IN REVIEW OF THE DEFENSE
AUTHORIZATION REQUEST FOR FISCAL YEAR 2019 AND THE
FUTURE YEARS DEFENSE PROGRAM

Tuesday, March 20, 2018

Washington, D.C.

ALDERSON COURT REPORTING
1155 CONNECTICUT AVENUE, N.W.
SUITE 200
WASHINGTON, D.C. 20036
(202) 289-2260
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7
8 U.S. Senate
9 Subcommittee on Seapower
10 Committee on Armed Services
11 Washington, D.C.
12

13 The subcommittee met, pursuant to notice, at 2:33 p.m.
14 in Room SR-232A, Russell Senate Office Building, Hon. Roger
15 F. Wicker, chairman of the subcommittee, presiding.

16 Members Present: Senators Wicker [presiding], Rounds,
17 Sullivan, Hirono, Kaine, and King.
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1 OPENING STATEMENT OF HON. ROGER F. WICKER, U.S.
2 SENATOR FROM MISSISSIPPI

3 Senator Wicker: Good afternoon. The Senate Armed
4 Services Subcommittee on Seapower convenes this afternoon to
5 examine Marine Corps ground modernization initiatives.

6 This afternoon, our subcommittee welcomes two
7 distinguished witnesses: Mr. Jimmy Smith, Deputy Assistant
8 Secretary of the Navy for Expeditionary Programs and
9 Logistics Management, and Lieutenant General Robert Walsh,
10 Deputy Commandant for Combat Development and Integration.

11 Gentlemen, thank you very much for your attendance
12 today, and for your decades of service.

13 Mr. Smith, I understand you are testifying before this
14 subcommittee for the first time. Is that correct?

15 Mr. Smith: That is absolutely correct, Senator.

16 Senator Wicker: Well, we welcome you all the more, and
17 we are eager to hear what you have to say.

18 As the military's force in readiness, the Marine Corps
19 has unique crisis response roles and missions. According to
20 the new National Defense Strategy, globally deployed marine
21 units will continue to serve as front-line forces postured
22 against potential adversaries. Although the NDS sets new
23 priorities, it does not change the Marine Corps' role as the
24 military's tip of the spear. Today, this subcommittee will
25 learn about the state of marine ground forces and the

1 efforts underway to restore readiness and modernize these
2 forces. I look forward to hearing how the National Defense
3 Strategy is shaping the Marine Corps' perspective on
4 readiness, operations, and modernization for ground forces.

5 Since the NDS release, Marine Corps leadership has
6 discussed the current and future challenges faced by
7 amphibious forces. Sophisticated sensor arrays, space and
8 cyber weapons, drones, electronic warfare, mines, and highly
9 capable air and missile threats all greatly complicate
10 amphibious operations and power projection from the sea.
11 The Marine Operating Concept 2025 offers warfighting
12 concepts such as sea control, littoral operations on a
13 contested -- in a contested environment, and expeditionary
14 advanced base operations to help the marines meet many of
15 these challenges.

16 I hope our witnesses will explain how the fiscal year
17 2019 budget request translates strategic direction and
18 operational concepts into the rapid development and
19 acquisition of capabilities.

20 Many Marine Corps modernization programs have suffered
21 from a drawn-out -- from drawn-out development timelines,
22 shifting and unrealistic requirements, and cost overruns.
23 These factors have frequently conspired to prevent the
24 fielding of replacements for aging systems, leaving our
25 marines short of critical capabilities. Years of budget

1 instability have increased the damage, and that's on us,
2 sitting around this table. However, the recently passed 2-
3 year budget agreement provides a window of stability and
4 operation for the Marine Corps. This subcommittee is
5 confident that the Marine Corps can develop and field more
6 lethal and agile ground forces to prevail in the high-end
7 fight.

8 This afternoon, our subcommittee will examine five key
9 areas relating to Marine Corps ground programs:

10 First, long-range precision fires. The subcommittee is
11 eager to hear about efforts to field longer-range rocket
12 artillery and missile systems and -- that can do a better
13 job of targeting adversary combat formations and supporting
14 naval maneuvers. In support of this effort, the Marine
15 Corps will activate a second High Mobility Artillery Rocket
16 System, HIMARS, Battalion at Camp Lejeune, North Carolina,
17 this year. The Army faces similar lethality and range gaps.
18 And we've got some Army people in the room today, and we
19 appreciate their service also. We expect both services to
20 work collaboratively to address shortfalls in their tube and
21 rocket artillery and surface-to-surface missile systems.

22 Secondly, mobile short-range air defense. U.S. ground
23 forces have not experienced enemy attacks since the Korean
24 War. However, I am concerned that manned and unmanned
25 aircraft, rockets, artillery, and missiles pose an

1 increasing danger to marine units and installations
2 worldwide. The Marine Corps has not updated its air defense
3 capability since the early '90s. Our witnesses should
4 explain ongoing efforts to rectify this shortfall. I
5 understand that the Army also faces many of the same
6 challenges.

7 As with long-range precision fires, this subcommittee
8 believes that the two services should work together to meet
9 similar requirements. Although the Army and Marines seem to
10 be collaborating on short-range systems, fielding a medium-
11 range system is a more challenging issue. So, we might want
12 to ask why that is. The subcommittee would like a better
13 understanding of the Marine Corps' requirements and plans to
14 deploy longer-range air defense capabilities.

15 Next, close combat lethality. Secretary Mattis
16 recently established a Pentagonwide task force to improve
17 the lethality, survivability, and resiliency of close combat
18 formations. I've heard concerns that the Marine Corps may
19 have prioritized readiness recovery efforts on aviation
20 units, to the relative detriment of close-combat units. So,
21 we'll ask about that.

22 The subcommittee believes that the Marine Corps must
23 make a balanced readiness and modernization effort across
24 aviation and ground programs. We look forward to hearing
25 from today's witnesses about Marine investments in its core

1 infantry formations.

2 And next, very shallow water mine countermeasures.
3 Historically, mines have created serious difficulties for
4 maritime forces, particularly amphibious units. Potential
5 adversaries, such as North Korea and Iran, may employ large
6 numbers of mines to deny access to strategic waterways and
7 approaches. The Navy's littoral combat ship and several
8 airborne platforms have countermine capabilities, but they
9 are focused on operations in deeper water, away from shore.
10 The Marine Corps needs to counter -- needs countermine
11 capability from ship to shore, including in very shallow
12 water and on the shore. Given that the Navy and Marine
13 Corps recently agreed to produce joint countermine doctrine,
14 our witnesses should address how the Marines will deal with
15 mine threats on shore and in regions with very shallow
16 water.

17 And finally, combat vehicle obsolescence. Our
18 subcommittee would like to discuss the state of major Marine
19 Corps ground combat vehicles. The light armored vehicle
20 first entered service in the mid-1980s; the amphibious
21 assault vehicle, in the late '70s; and the Abrams tank
22 entered service in the early '90s. The Marines clearly need
23 more modern combat vehicles.

24 The subcommittee is interested in the Marine Corps'
25 plan to modernize, replace, and upgrade its legacy ground

1 platforms. The recently released National Defense Strategy
2 requires all of the services to adjust to revised security
3 priorities. The Marine Corps is no exception. The new
4 guidance will require the Marines to make difficult
5 decision, especially concerning ground programs.

6 The emerging security environment presents significant
7 challenges to the ways in which the Marine Corps has
8 traditionally operated. It is imperative that the
9 subcommittee and the Marine Corps continue to work closely
10 together to ensure the success of its ground program
11 modernization initiatives.

12 I, once again, thank you for your service to the
13 country and for appearing today.

14 And I'm delighted to recognize my teammate and Ranking
15 Member, Senator Hirono.

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1 STATEMENT OF HON. MAZIE K. HIRONO, U.S. SENATOR FROM
2 HAWAII

3 Senator Hirono: Thank you, Mr. Chairman.

4 I join you in welcoming General Walsh and Mr. Smith to
5 testify today on the FY19 budget request for Marine Corps
6 ground modernization programs. And we thank you for your
7 testimony and for your service to our country.

8 The 2018 National Defense Strategy, NDS, states that
9 the primary challenge facing our Nation is the reemergence
10 of long-term strategic competition with Russia and China,
11 near-peer competitors. The men and women who serve in
12 Marine Corps Base Hawaii and marines serving throughout the
13 PACOM area of responsibility are vital to protecting our
14 strategic interests in the Asia-Pacific regions and --
15 region -- and our national defense. Our marines support
16 military operations around the globe, and we must ensure
17 that they remain ready and capable to address contingencies
18 at a moment's notice.

19 A vital part of supporting readiness capability is
20 ensuring that our marines have access to combat equipment
21 that will support them in this mission. To achieve this
22 goal, the FY19 budget request makes targeted investments in
23 the ground combat and tactical vehicle portfolio of the
24 Marine Corps. It includes a total of 2.9 billion for Marine
25 Corps procurement and 850 million for research, development,

1 test, and evaluation.

2 One of the most important Marine Corps ground
3 modernization programs is the amphibious combat vehicle,
4 ACV. The ACV program will replace the assault amphibious
5 vehicle, AAV, which has been in operation for over 40 years.
6 As the Chairman has noted, we need to modernize your combat
7 vehicles.

8 As part of the ACV acquisition strategy, the Marine
9 Corps has awarded contracts to two vendors, each tasked with
10 building prototypes for testing and evaluation. This
11 summer, the Marine Corps will select one of these vendors to
12 be the prime contractor for the program. The FY19 budget
13 request includes 167 million for the prime contractor to
14 build 30 vehicles for the ACV 1.1 program. In addition, the
15 Marine Corps will begin designing and developing the ACV 1.2
16 variant. Unlike the ACV 1.1 program, which has limited
17 amphibious capability, the ACV 1.2 will be a fully
18 amphibious vehicle. The FY19 budget request includes 55.8
19 million in research, development, test, and evaluation
20 funding for the new ACV 1.2 program. I welcome an update
21 from our witnesses on the status of the ACV program.

22 As the ACV program moves forward, the Marine Corps
23 continues to upgrade assault amphibious vehicles, AAV. The
24 Marine Corps first fielded the AAV more than four decades
25 ago, and marines will continue to rely on these vehicles

1 until they are replaced by new ACV vehicles. In order to
2 protect our men and women who rely on the AAV, the Marine
3 Corps is modernizing a portion of AAVs with survivability
4 upgrades.

5 The final Marine Corps vehicle program I want to
6 highlight is the joint light tactical vehicle, JLTV. JLTV
7 is a joint Army and Marine Corps program that will replace
8 the high mobility multi-wheeled vehicle, better known as the
9 Humvee. The FY19 budget includes 607 million to procure
10 1,642 JLTV vehicles. Over the course of the program, the
11 Marines intend to replace roughly one-third of their legacy
12 Humvee fleet.

13 In addition to the major vehicle modernization
14 programs, the Marine Corps has prioritized two other
15 programs in the FY19 budget to support our marine forces:

16 The first is the ground-air task-oriented radar, or
17 GATOR. The GATOR is an expeditionary radar system that will
18 replace legacy radar systems currently fielded by the Marine
19 Air-Ground Task Force. The Marine Corps plans to procure
20 six systems in FY19.

21 The second program is the high-mobility artillery
22 rocket system. Like the Army, the Marine Corps has
23 capability gaps in long-range artillery and rocket systems.
24 To address these shortfalls, the budget request includes 134
25 million to acquire new high-mobility artillery rocket

1 systems for the 5th battalion 10th marines, which is being
2 reactivated.

3 Again, thank you, Mr. Chairman, for holding this
4 hearing. And I look forward to hearing from our witnesses.

5 Senator Wicker: Thank you very much, Senator Hirono.

6 Gentlemen, you submitted a joint written statement.

7 Who would like to summarize that, in about 5 minutes?

8 General Walsh: I think I can do it in less than that,
9 Senator Wicker.

10 Senator Wicker: We're delighted to have you --

11 General Walsh: I'll take that.

12 Senator Wicker: -- General Walsh.

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1 STATEMENT OF LIEUTENANT GENERAL ROBERT S. WALSH, USMC,
2 DEPUTY COMMANDANT FOR COMBAT DEVELOPMENT AND INTEGRATION;
3 COMMANDING GENERAL, MARINE CORPS COMBAT DEVELOPMENT COMMAND;
4 AND COMMANDER, UNITED STATES MARINE FORCES STRATEGIC
5 COMMAND; AND JIMMY D. SMITH, DEPUTY ASSISTANT SECRETARY OF
6 THE NAVY FOR EXPEDITIONARY PROGRAMS AND LOGISTICS MANAGEMENT

7 General Walsh: Thank you, Chairman Wicker, Ranking
8 Member Hirono, and Senator King and Kaine. Thank you for
9 the opportunity to testify.

10 The Marine Corps ability to serve as our Nation's
11 crisis response force is largely due to this committee's
12 support, and we thank you for that strong support, on behalf
13 of all our marines. A fully resourced defense budget, in
14 conjunction with the long-term budget stability that we're
15 getting through the Bipartisan Budget Act, will send a
16 strong signal to our allies, partners, and all potential
17 adversaries, that the U.S. is fully committed to preserving
18 a free and open world.

19 As the Commanding General of the Marine Corps Combat
20 Development Command, I have the tremendous honor of leading
21 over 18,000 marines, sailors, and civilians spread over
22 commands across the country. We are the Marine Air-Ground
23 Task Force's capability developers and integrators, which
24 means our job comes down to one sentence, getting the right
25 capabilities at the right time to the warfighter as the best

1 that the Nation can provide.

2 I'm honored to serve daily with these men and women.
3 Over the last year, the Marine Corps has been focused around
4 the globe, providing combined armed teams to crises or
5 places where crises may occur to meet the Congress's
6 mandate to be ready to suppress or contain international
7 disturbances, short of war. You mentioned the National
8 Defense Strategy. We believe that we're key players in the
9 contact, blunt, and surge forces. So, out of the four
10 layers that are in that, we see ourselves as players in
11 that.

12 But, as you said earlier, as we look at today's
13 situation, the threats that are out there, looking to
14 compete strategically, as we look at our marines that are
15 out there, and sailors operating every day as -- in part of
16 those contact-and-blunt forces, those forces must be a
17 lethal combat-credible force oriented on warfighting to be
18 able to provide that credible deterrence.

19 During the last several budget cycles, we've been
20 focused heavily on improving readiness of the force. The
21 increase in defense spending and improved budget stability
22 provided by Congress today allows us to place greater
23 emphasis on modernization. Specifically, within our total
24 obligated authority, we've increased, in '19, by 7 percent.
25 To show you that -- the step that we're making towards

1 modernization with that 7-percent increase, we're increasing
2 our modernization accounts by 32 percent. This increased
3 signal in modernization shows our sense of urgency and the
4 threats that we face via the National Defense Strategy.

5 The Marine Corps FY 2019 budget aligns five budget
6 priorities of information warfare, long-range precision
7 fires, air defense, command and control in a degraded
8 environment, protected mobility, and enhanced maneuver with
9 the Secretary of Defense's direction to increase lethality,
10 resilience, agility, and build a flexible and dynamic force.

11 Additionally, I want to emphasize our close
12 coordination with the Army. You mentioned that earlier.
13 And I think we've got close coordination in full alignment,
14 in many case. In fact, the Commandant's direction to me is
15 to align them in every single case that we can. And I think
16 you'll see, over today's hearing, that we're trying our best
17 to do that.

18 My prepared statement contains greater detail on each
19 of these five priorities, but I thank you for the
20 opportunity, and with -- along with my partner, Mr. Smith,
21 to testify before you today.

22 Thank you.

23 [The prepared joint statement of General Walsh and Mr.
24 Smith follows:]

25

1 Senator Wicker: Thank you, General.

2 Mr. Smith, do you wish to make an opening statement?

3 Mr. Smith: Yes, Senator. I'll make a brief opening
4 statement.

5 Senator Wicker: Wonderful. You're recognized.

6 Mr. Smith: Senators, I appreciate the opportunity to
7 be here before the Senate Armed Services Committee on
8 Seapower and U.S. Marine Corps ground programs.

9 I've been in the role as the Deputy Assistant Secretary
10 of the Navy for Expeditionary Programs and Logistics
11 Management for just about a year now, and I can tell you, I
12 am very impressed with the capability that I see coming
13 forward through the Marine Corps with our industry partners
14 until -- and research and development efforts paying off in
15 the future. I look forward to your questions and hopefully
16 returning next year to promote more transparency and show
17 what we're doing in support of this Nation's National
18 Defense Strategy.

19 Thank you, Senator.

20 Senator Wicker: Thank you very, very much.

21 Okay, well, let's start off, then, with a few things
22 that you touched on, General Walsh, but I'll let you
23 elaborate.

24 With regard to the increasing danger and the need for
25 updated air defense capability, I assume you agree with my

1 statement that it's been since the early '90s when -- since
2 we really took a look at changing this capability. You
3 said, in your oral statement, that you're working with the
4 Army. My statement said that the two services should work
5 together, and that it seemed that short-range systems
6 collaboration was a matter where there was a little more
7 progress than medium-range systems. So, if you could
8 comment on that, and help us understand.

9 General Walsh: I think close coordination with this --
10 you know, as we moved out of Iraq and Afghanistan, a lot of
11 our focus had been on the ground side, but we started to
12 look at this counter-UAS threat. And so, I think we've been
13 focused on the counter-UAS threat, and now, as we get the
14 new defense strategy, we're starting to see -- looking at
15 aircraft and going against cruise missiles.

16 So, the program that we've really got is our ground-
17 based air-defense future weapon system. And, in that,
18 that's based around a JLTV concept. We've got several
19 vehicles with a radar, which is the radar that the Army
20 uses, integrating that same radar that you're using with
21 Maneuver SHORAD, their short-range air defense, using a
22 Stinger missile that we currently have in our LAAD
23 battalions, integrating that Stinger missile with the radar.
24 We're also putting on a EW capability onto that vehicle,
25 along with the kinetic kill capability.

1 Senator Wicker: For those people listening in, what
2 does that mean?

3 General Walsh: Electronic warfare. I'm sorry.
4 Electronic warfare. So, it's a capability --

5 Senator Wicker: Senator Hirono and I fully understand
6 --

7 General Walsh: Right, I'm sorry. I'm sorry.

8 So, electronic warfare. And we're also trying to
9 integrate -- we've got a developmental program on a laser,
10 to be able to put a laser on that. And we're currently
11 testing that with the opportunity to rapidly deploy that and
12 demonstrate that capability.

13 So, those are, kind of, the things that we've got in
14 there in this program. And I see the way that, this all
15 moving very quickly, that we would continue to bring on, in
16 an incremental fashion, more capabilities into that ground-
17 based air defense, which is more in that maneuverable,
18 shorter-range capability.

19 In the near term, though, we see that the -- the
20 shortness we've got, or the area of significant lack of
21 capability in -- more against going to cruise missile
22 capability. So, what we're looking at right now is research
23 and development, working with the Army in that area to be
24 able to get a capability integrated onto our systems much
25 quicker, demonstrate a capability -- it could be a

1 commercial off-the-shelf capability -- try to integrate that
2 in while we continue to work the -- with the Army on the
3 long-range -- excuse me -- the IFPC2 program, which is the
4 Army's long-range program that we're integrated with them
5 with research and develop into that, into the midterm year.

6 So, I think, between the short-range program that we've
7 got, the near term to do some demonstration here in the very
8 quick term -- near-term year to two, on a ground-based air
9 defense, along with the IFPC Block 2 program that we're
10 working in '21 and '22 with the research-and-develop money
11 with the Army, I see us coming together long term on that
12 IFPC air defense program with the Army.

13 Senator Wicker: When do you think you might be making
14 an announcement about your decision there?

15 General Walsh: On the near-term piece or the long-term
16 --

17 Senator Wicker: Well, how about both?

18 General Walsh: On the long-term, we've got the money
19 into the research and development with the Army on the IFPC
20 program. So, that part, we're long-term with them. On the
21 near-term capability, we're looking at, right now, besides
22 the capability that we've got in that GBAD, how we could get
23 a program quicker. And so, we're looking at --

24 Senator Wicker: And so, you're looking at --

25 General Walsh: -- that right now.

1 Senator Wicker: -- at possibly off-the-shelf.

2 General Walsh: We're looking at --

3 Senator Wicker: And so, when would you let us know
4 that?

5 General Walsh: We're looking at it right now, and, in
6 the -- I would say, in the next year, as we look at what's
7 out other, to be able to try to see how we can demonstrate
8 something quickly. One of the significant things is, is
9 trying to move the community that really has doing -- been
10 doing security force operations for many years, that have
11 just been using shoulder-held surface-to-air missiles. We
12 used to have Hawk batteries that had this longer-range
13 missile capability that we don't have. So, getting
14 something now, early, and demonstrating that, would get the
15 community of air defense moving towards that higher-end
16 capability quicker.

17 Senator Wicker: Thank you, General.

18 Senator Hirono.

19 Senator Hirono: Thank you, Mr. Chairman.

20 Over the course of the past several months, our
21 committee has heard testimony and received briefings
22 detailing the increasing lethality gaps between the U.S.
23 military and our near-peer competitors. In fact, the
24 recently released National Defense Strategy highlights this
25 disparity and makes addressing the lethality of our forces a

1 priority.

2 Can you identify or detail the investments that the
3 Marine Corps made in the fiscal year 2019 budget request
4 that will allow the Corps to address the gaps in lethality
5 and allow us to compete with a near-peer competitor?

6 General Walsh: I think the -- you know, the areas for
7 lethality crosses a lot of areas across the Marine Air-
8 Ground Task Force. I think, you know, probably starting
9 with things like the F-35 and bringing that aircraft online
10 that's currently deployed in the western Pacific. Our
11 HIMARs are our long-range rocket systems that we've got with
12 the Army, putting research and development money into that,
13 along with the Army, to be able to increase the long -- to
14 get the longer ranges that we need, along to -- along with
15 trying to hit targets -- moving targets. We've also
16 developed programs and fielded programs with airborne
17 loitering munitions, and continuing to put money in, working
18 with the Army, on research and development for a naval
19 strike missile, which would allow our marines to be able to
20 contribute more effectively with the Navy and the sea
21 control mission, according to the National Defense Strategy.

22 And then continuing to work with the Army on their
23 long-range precision fires capability. So, we're partnered
24 with them on LR- -- their LRPF program, which would increase
25 their capability beyond what we have with the TACMS program

1 that the Army currently has. And then also R&D efforts with
2 the Army on the high-velocity projectile program.

3 Senator Hirono: So, General, there's no question that
4 China, for example, is very much modernizing their military
5 assets as well as -- just by sheer numbers. So, by the
6 listing that you gave, are you doing enough to address the
7 lethality gap?

8 General Walsh: I think, Senator, as we've talked to
9 you be -- in the past, you know, 16 years of combat in Iraq
10 and Afghanistan, we kind of had our heads down against this
11 kind of threat. So, what we're looking at is, as we start
12 to look at the new National Security Strategy and the
13 National Defense Strategy, is looking at that strategic
14 competition, which, really, competing in that strategic area
15 will hopefully be the deterrent effect that we need. But,
16 as we look at that -- you know, we're well behind in a lot
17 of areas, as the threat has watched us very closely over the
18 last few years, what our advantages are and where our
19 weaknesses are. They've invested in areas, like long-range
20 precision fires, that we have not. So, as we come out of
21 that, the first thing, I think, that we're looking to do is,
22 How can we repurpose the current capabilities that we have?
23 How can we make them more effective? Like the HIMARS
24 rockets, how can we get them longer-range while we work
25 together closely with the Army to develop a developmental

1 program, a longer-range program, like the long-range
2 precision fires program that we're working with the Army?
3 So, near-term --

4 Senator Wicker: What's their range now?

5 General Walsh: What's that?

6 Senator Wicker: What's their range?

7 General Walsh: The HIMARS capability we've got is
8 about 70 kilometers. We'd like to get that well out, way
9 past that range, probably triple, four times that range.

10 In fact, the goal with the LRPF program is really 499
11 kilometers, which is really based on treaty that allows us,
12 on land-based, to only stay below 500 kilometers.

13 Senator Hirono: General, as you noted that you spent
14 almost 17 years doing the counterterrorism fight, so do you
15 still see a need for us to keep those kinds of warfighting
16 skills up to date? So, as you turn toward the -- addressing
17 the near-peer competition that we now face, how will you
18 ensure that the counterinsurgency warfighting skills that
19 you have honed during the nearly 17 years do not atrophy as
20 our strategy shifts to a high-end fight with near-peer
21 competitors?

22 General Walsh: The marines that are out there today --
23 I mean, they're combat veterans. Our young marines, NCOs,
24 and young officers, they've had a lot of combat time. So,
25 as you said, How do we keep those capabilities and those

1 skills? So, they're combat vets, they're very good at what
2 they do. So, I think that the thought we have is to keep
3 our eye on that, but we've developed very great, good
4 capabilities across for that skillset. What we believe is,
5 is the higher end, though, that we don't have --

6 Senator Hirono: Yes.

7 General Walsh: -- that we've got to develop that. And
8 we think a lot of those capabilities that we developed for
9 the higher end can also be applied to the lower end. But, I
10 think we're out of balance right now, because, over the
11 years, we've focused on the lower end. Very good at that.
12 Now we've got to shift to the higher end. And we think, in
13 a lot of those cases, they can be very applicable to the
14 lower end. But, the lower end was not applicable to the
15 high end.

16 Senator Hirono: Okay.

17 General Walsh: In most cases.

18 Senator Hirono: Thank you.

19 Thank you, Mr. Chairman.

20 Senator Wicker: Thank you, Senator Hirono.

21 Senator Sullivan.

22 Senator Sullivan: Thank you, Mr. Chair.

23 And, gentlemen, thank you. Good to see you. Thanks
24 for testifying today.

25 General, I wanted to just talk a little bit -- you

1 know, we -- you talk a lot about the focus, in the last
2 several years, in Iraq, in Afghanistan. Also, you know, we
3 did cut defense spending, unfortunately, I think, pretty
4 dramatically. As you know, in the Army, in the Marine
5 Corps, I think a lot of the members of the infantry are
6 still handed the book "This Kind of War" by T.R. Fehrenbach,
7 and talks about Task Force Smith and other units in the U.S.
8 military that were decimated during the Korean War because
9 we did not have a military that was ready.

10 Are we ready for some kind of, you know, fight like
11 that, where it would be high intensity as -- we're talking
12 about -- it's a pretty sobering look at a -- an army that --
13 in a, you know, military that, in 1945, was the most
14 fearsome one in the history of the world, and, 5 years
15 later, couldn't stop a Third-World peasant army. What's
16 your sense on that, General?

17 General Walsh: Senator, I think that if you look
18 across our portfolios -- you know, one of the things the
19 Commandant wants us to do is to develop a next-generation
20 Marine Corps. As we look at what is that next-generation,
21 we've come across our portfolios. There are certain areas
22 that we've invested very well in that we think, you know,
23 are -- would operate in that environment very well -- F-35,
24 our GATOR radars, some of our signals intelligence
25 capabilities. There's areas there where, if you look --

1 like a scenario, like, say, if you take Ukraine, and how
2 would marines today operate in that environment today, I
3 think there's areas where we've got the weakness where I've
4 -- weakness areas where I've talked about as we need to
5 engage more in information warfare. We talked about long-
6 range precision fires, air defense, which we've not had,
7 really, to deal with in many, many years, communications and
8 command and control in a degraded environment. As you take
9 a look at what the Russians and what the Chinese have
10 invested on when it comes to cyber warfare, electronic
11 warfare, those areas. And along with protected mobility.
12 Our ground vehicles are something we've not invested in, in
13 a long time, along with some of our heavy-lift aircraft,
14 like the CH-53K program. So, I think that focus -- if you
15 took us right now in that environment, there's a lot of
16 areas I would say we're behind in.

17 Senator Sullivan: Okay.

18 General Walsh: But, the money that the Congress has
19 given us, I think we're investing to be able to move very
20 quickly in that direction to be able to be a -- more of a
21 competitive force and deter aggression.

22 Senator Sullivan: What about just the issue -- you
23 know, again, in that book, it was also a lack of training, a
24 lack of hard training, a lack of difficult training. Are
25 there concerns right now that we're not meeting -- you know,

1 I think all of us want what's best for our forces, but, to
2 be realistic, we need to make sure they have the hardest,
3 most difficult, most challenging training in the world. Are
4 you confident that that's what our Marines and Army are
5 getting now?

6 General Walsh: Senator, I think we're in a big shift
7 to move in that direction. As Ranking Member Hirono looked
8 at that piece on -- as we look at that, as we shift towards
9 this higher end -- we're a very good combat-proven force at
10 the lower end. So, when it comes to the training, not only
11 is it part of getting the right equipment as you're hitting
12 on the training, when we look at our training and readiness
13 syllabuses, what we train a unit to, what we train
14 individuals to, a lot of these areas, we haven't focused on
15 in a long time.

16 Senator Sullivan: Yeah.

17 General Walsh: A key focus area is out at 29 Palms for
18 MAGTF Training Center, where all our units go through to get
19 certified before we deploy. Out there, Major General
20 Mullen, who's out there, is upping the game, really, against
21 what the Red Force does and what our Blue Forces are
22 encountered in. We start looking at electronic warfare,
23 long-range precision fires, counter-air. We have not done
24 that in many years. So, the focus is moving in that area.
25 It's going to take a long time, just like it did back in the

1 --

2 Senator Sullivan: You mentioned --

3 General Walsh: -- Korean War.

4 Senator Sullivan: -- 29 Palms. Let me ask another --
5 you know, when you talk about the high-end fight and the
6 National Defense Strategy and the focus on China and Russia
7 and North Korea, near peers, a lot of those places have in
8 common difficult terrain, mountainous terrain, cold-weather
9 terrain, large-scale ops, not just kind of small, you know,
10 squad-size or company-size. I notice that there's a good
11 number of marines right now up at Arctic Edge, in a State
12 that I happen to care a lot about -- that's Alaska -- that
13 also has probably -- well, certainly some of the best
14 training -- cold weather, mountain. JPARC is the biggest
15 training area in the country, by far, probably the best
16 training in the world.

17 I've talked to the Commandant a lot about this. Forces
18 that are in Alaska, already forward-deployed, they're, you
19 know, ready to go in -- to Korea or any other place. Can
20 you tell me a little bit about what the Marines' future is
21 with regard to, not just Arctic Edge, but looking at Alaska
22 as a place where you can get very realistic training -- cold
23 weather, mountain -- forward-deployed to go in the fight
24 tonight if you had to, and combined arms capability -- you
25 know, the JPARC, the airspace there is bigger than Florida.

1 And with the fifth-gen aircraft, that's going to be needed.
2 Can you talk a little bit about that, and future focus
3 there?

4 General Walsh: Senator, like you said, we have not
5 focused on that area for a long time. We used to train to
6 cold weather all the time, in the cold war days. The
7 Commandant has set -- sent up teams up to Alaska to look at
8 the training areas up there. They're phenomenal. They're
9 great size, both air and ground integration. As we know, on
10 the air side, we've been training up there an awful lot
11 with, you know, our F-35 and with the Air Force, and
12 certainly our F-18 aircraft. But, what we're also seeing
13 is, on the ground side, as we now refocus down on the
14 ground, and this cold-weather area that we haven't trained.
15 We're buying a lot more equipment, but the training piece is
16 key. And, like you said, there's a lot of places we can go
17 and train at the company level. This is an area we can go
18 and train at a much higher level.

19 Senator Sullivan: Thank you.

20 Thank you, Mr. Chairman.

21 Senator Wicker: Thank you, Senator Sullivan.

22 Senator Sullivan, I wonder, when you were in basic
23 training, if there some gray-headed guy sitting around a
24 conference table asking if training was hard enough.

25 [Laughter.]

1 Senator Sullivan: I believe in hard training --

2 Senator Wicker: Well, I'm sure you --

3 Senator Sullivan: -- Mr. Chairman.

4 Senator Wicker: And I appreciate --

5 Senator Sullivan: Go to the Marines --

6 Senator Wicker: I appreciate your service.

7 Senator Sullivan: -- and the Army. I think so. But,

8 if you haven't read the book "This Kind of War," I'll make

9 sure you get a copy.

10 Senator Wicker: Yeah, we've got -- well, I would be

11 glad to do it.

12 Senator King.

13 Senator King: And what State were those big training

14 areas in again? I didn't catch that.

15 [Laughter.]

16 Senator Sullivan: Those would be in the biggest State

17 in the Union.

18 [Laughter.]

19 Senator King: General, a much more general question.

20 Are amphibious assaults feasible in today's combat

21 environment, or do we need to think in a whole new way about

22 storming a beach?

23 General Walsh: That's a great question. And, you

24 know, when you look at this contested environment, new

25 weapons, new threats, new capabilities that we've not had to

1 look at in a long time, I think you're right, we have to
2 look at it in a completely different way. In fact, really
3 over the last year, I think, really, with Mr. Smith's team,
4 we've worked a lot of, What is the problem statement? How
5 are we going to operate in a different way? One thing I
6 would say is, the Marines are focused -- first, as the
7 Commandant says, we're going to have to fight to get to the
8 fight. How can we support, work with the Navy when it comes
9 to that sea control mission to be able to get to the point
10 where we get to power --

11 Senator King: Particularly if it's a peer adversary.
12 They're going to have missiles that can hit you 100 miles at
13 sea.

14 General Walsh: Right. So, we're working a lot of -- a
15 lot of concepts, a lot of our exercises, a lot of our war
16 games are focused exactly on this problem.

17 But, one thing we really did last year, we did an
18 advanced naval technology experiment. It was a weeklong
19 experiment out of Camp Pendleton that really led up, over a
20 year's time period, working with industry, academia, our
21 warfare centers, on, How are we going to conduct operations
22 in the future? Just as you say, it's not going to be
23 storming the beach, just as you see a -- pictures of Iwo
24 Jima or Inchon. What we saw when we got done of taking all
25 that industry work together, we demonstrated over 100

1 different types of technologies. And I think the thing that
2 amazed me was, when we looked out at that amphibious assault
3 as we were conducting, really, probably the first 15 minutes
4 of it or so was completely unmanned. We had unmanned
5 surface vehicles -- surface vehicles that were unmanned, in
6 the air, sensing, trying to figure out where the enemy may
7 be, where the enemy is not, deception capability. And,
8 through that, we took a lot of these capabilities and moved
9 them forward into demonstrations into fleet exercises on
10 both the East and West Coasts, and put it in the hands of
11 our sailors and marines. We learned a lot through that, and
12 we're continuing to work with that, with the Navy in
13 littoral operations in the contested environment. And we're
14 seeing it's not going to look like it does in the past, it's
15 going to look completely different. And a lot of technology
16 in the unmanned systems allow us to do that.

17 And I don't know if Mr. Smith has anything to add to
18 that.

19 Senator King: Your thoughts, sir.

20 Mr. Smith: Actually, I was there at the exercise that
21 General Walsh spoke about, where we're -- have unmanned
22 vehicles coming ashore. And I'm actually standing on the
23 cliff at Camp Pendleton, standing next to the Commandant,
24 and I'm watching this assault force come in from the ocean.
25 And I looked at the Commandant, and I said, "Are we really

1 going to do this again? Is this, like, a flashback to
2 1940?" But, to my surprise, those were unmanned vehicles
3 coming ashore. An unmanned vehicle actually popped out a
4 UAV, established a network so that the computers, sensors,
5 and all things can tie into it. And I had to take a step
6 back, because that wasn't the old fight. This was using
7 capability we have today, augmenting it so that we can get
8 down and get at the next fight.

9 So, making best use of what we have today, the Marines
10 are experts at that. And tailoring it with our industry
11 partners and warfare centers to get extra capability from
12 what we're accustomed to having just brings a different
13 fight to this capability.

14 Senator King: Well, that's exactly the answer I was
15 hoping for, and I appreciate that.

16 I know you're talking about replacing the light-armored
17 vehicle and are looking at alternatives. Mr. Smith, I hope
18 you're starting with off-the-shelf alternatives, like the
19 Stryker or other weapon systems around the world, and not
20 designing a new system from the ground up.

21 Mr. Smith: That's absolutely correct, Senator. We're
22 starting with off-the-shelf technology. But, the U.S.
23 Marine Corps has its specific needs, and we need to make
24 sure that our requirements are going to be met. We have a
25 couple of industry partners going through a competition

1 right now to give us capability we need. They're meeting
2 their key performance parameters. Testing is going well.
3 And schedules are intact. So, I think we can provide that
4 --

5 Senator King: But, you --

6 Mr. Smith: -- foot forward.

7 Senator King: -- know the history, for example, in the
8 Army, of the Future Combat System. I mean, I'd rather see
9 an 80-percent solution that was timely, cost-effective, and
10 effective, rather than a 100-percent solution that failed,
11 in the end. And I hope that's the attitude, because we've
12 gotten in trouble designing things from the ground up and
13 imposing more and more requirements. For example, I
14 understand, in the new ARV, we're talking about unmanned
15 vehicles, sensors, renaissance network. Again, we want to
16 get the 80-percent solution. And I -- you're nodding,
17 General. I hope you agree.

18 General Walsh: I agree, Senator, but I'll just -- I
19 guess I look at it this perspective is -- there are certain
20 areas where we look at a problem and go, Is the technology
21 that we have there today going to fulfill the need? So,
22 when it comes to reconnaissance -- and we're studying this
23 real hard -- what is reconnaissance today, and counter-
24 reconnaissance? It's hugely different than what it's been
25 over history. I would argue, over history, our Army's

1 calvary or our LAR, light-armored reconnaissance, battalions
2 have operated many, many ways the same way calvary or
3 reconnaissance have operated over, you know, not centuries,
4 but over the last 100 years. The technologies that we're
5 seeing, though, is -- we're trying to figure out, What is
6 reconnaissance? What Mr. Smith talked about is, What is
7 reconnaissance going from ship to shore? And we see that,
8 really, a wide-open area. So, when we took a look at, What
9 is out there today in industry that can give us a vehicle
10 that would give us the 80-percent solution with the
11 technology on it? We really aren't seeing that from
12 industry today. I see it on the aviation side. When I go
13 to look at Skunk Works and Phantom Works and stuff like that
14 on the aviation side, there's a lot of industry R&D that's
15 going into those programs, and we see what they're doing to
16 be able to move in that direction. I'm not seeing the same
17 thing on the ground side.

18 So, what we've really done is, we've partnered with the
19 Office of Naval Research, we really had a -- to work with
20 them on, What type of -- looking at that problem statement
21 again -- What is reconnaissance in the future, and what
22 technologies are going to be available in the future? So,
23 ONR, working with our warfare centers, research labs, and
24 industry. What type of capabilities would be able to go
25 onto a vehicle -- the truck, the platform -- that would be

1 able to do this? But, we certainly see a vehicle today --
2 we've got squads of marines launching their own hand-held
3 UAVs. Why wouldn't we be able to launch that same type of
4 thing off of a vehicle, you know, into the future?

5 So, I think it's kind of both ways, that we have to go
6 slow, but we -- we would rather have the 80-percent solution
7 that's available today, but, in a lot of -- in some cases,
8 it's not.

9 Senator King: And I'm out of time, but one way to deal
10 with that issue is modularization so that you can easily
11 upgrade on the platform. You don't have to start all over
12 again with new, just because your -- a new technology is
13 developed.

14 Thank you very much, gentlemen, I appreciate it.

15 Senator Wicker: Thank you, Senator King.

16 Senator Rounds.

17 Senator Rounds: Thank you, Mr. Chairman.

18 First of all, gentlemen, thank you for your service to
19 our country.

20 I'd like to follow up in a little bit different format,
21 but along the same lines as Senator King has started with.

22 General Walsh, on February 8th, Secretary Mattis sent a
23 memorandum establishing a Close Combat Lethality Task Force
24 to senior leaders across DOD, the joint force, and the
25 military departments. The stated goal of this task force is

1 to improve the preparedness, lethality, survivability, and
2 the resiliency of our close combat ground forces, which have
3 historically received about 90 percent of our casualties.
4 What are your thoughts on the changes in personnel policies,
5 training methods, and equipping strategies that you believe
6 that this task force should be looking at? And I think it
7 goes along similar lines as what Senator King was talking
8 about. But, I'd like to have you expand on that a little
9 bit, please.

10 General Walsh: Thank you, Senator Rounds.

11 One thing I would say that we've been involved in is
12 our Sea Dragon experiments over the last, really, year and a
13 half. We took 3rd Battalion 5th Marines, an infantry
14 battalion, and we took that organization and reorganized
15 them completely different. They're three line companies,
16 organized them completely in a different -- each one
17 differently, gave them completely different equipment, gave
18 them unmanned systems -- unmanned ground, unmanned air --
19 trying to do exactly what the task force really is after.
20 How do we up that game?

21 We looked at a lot of cases as what our special
22 operators do, and we've learned a lot from Marine Corps
23 Special Operations Commands, and we've gotten much more
24 developed in that area, on, How do we raise the game up to a
25 higher level?

1 And I think you're exactly right, the casualties that
2 our close combat forces take. So, that program took about a
3 year and a half. We took that back to the Commandant, and I
4 think, out of probably the 40 different recommendations they
5 made, we've probably already now programmed probably 20 of
6 those recommendations. In fact, we met with the Commandant
7 this morning for about 2 hours to go over a lot of them.

8 How does that tie in to the task force? All of those
9 members that are down at the Marine Corps Warfighting Lab
10 have been involved with the Close Combat Strategic Portfolio
11 Review done by Secretary of Defense that's now turned into
12 this Close Combat Task Force. In fact, our experiment lead
13 who was leading our experiment division, we gave up to go
14 work for the Secretary of Defense on this, to help continue
15 to move our things forward.

16 But, a lot of those things that you -- you know, you're
17 exactly talking about, that we put into that area of, you
18 know, improving their fires, improving their communications,
19 improving their protection, lots of different systems -- UAS
20 -- out of the experiment, we've now fielded over half of the
21 squads in the Marine Corps with unmanned aerial systems.
22 Unheard of before that we would give a unmanned aerial
23 system to a squad. Now, in a matter of 4 or 5 months, every
24 squad in the Marine Corps will have that. So, that's just
25 an example.

1 You're exactly right, that's where we need to put the
2 focus. The Commandant's an infantryman. That's where he's
3 got the focus. And I think we're completely aligned with
4 where the Secretary of Defense has taken us.

5 Senator Rounds: Well, let's take one more step, then,
6 and let's talk a little bit about -- Major General Reynolds
7 reported that, as of January 2018, and ahead of the 30th of
8 September mandate, all 13 U.S. Marine Corps Cyber Mission
9 Force Teams reached full operational capability. Were there
10 lessons learned? And, if so, how would the Marine Corps
11 Combat Development Command learn from this effort? And how
12 will the Marine Corps incorporate these lessons learned into
13 the training and doctrine?

14 The reason why I ask is, the Army's been placing
15 offensive and defensive cyber capabilities down to the
16 Brigade Combat Team level. What's the Marine Corps' view on
17 the proper echelons to deploy offensive and defensive cyber
18 capabilities? And does the current force structure
19 accommodate this view? And it sounds like you're moving in
20 that direction. You've done a little bit of it. Can you
21 talk a little bit about where you see that at and where the
22 cyber component should be incorporated, as well?

23 General Walsh: If I could, Senator Rounds, in -- look
24 at it just a little bit outside of just cyber, but what we
25 call information warfare. So, expand outside of that to

1 signals intelligence, our sensor capabilities that we've got
2 in the air and on the ground. What we really looked at
3 through -- we started with our operating concept, and then
4 moved into Marine Corps Force 2025, which is our way to
5 experiment and figure out what we really need.

6 The big thing that we saw was, this whole area was the
7 area that we were behind the threat in. So, what we decided
8 to do after the experimentation that we did was to move
9 structure first. So, we moved structure and manpower into
10 our MEFs, which are our large warfighting headquarters, and
11 we stood up what we call our MEF Information Warfare Groups,
12 or MIGs. One is in each MEF headquarters we've got now.
13 The structure, we moved all in there, and now we're moving
14 in the capabilities, which are unmanned systems,
15 intelligence systems, signals intelligence. Electronic
16 warfare is a big area in there, along with the cyber. So,
17 what we're doing is bringing that all into the MEF
18 Information Groups, and then we're pushing those teams down,
19 structure down, all the way down into the company level. So,
20 well down below -- you know, down division, but all the way
21 down, regiment, battalion, into the company level. We kind
22 of view it as the way we've got -- we've done a very good
23 job over the years with our air-ground integration, where
24 we've got air officers that are planners and executors that
25 are down at the company level, that can plan, reach back for

1 support, and bring capabilities down, and help that infantry
2 commander plan down at that lower level. We're now bringing
3 that entire information warfare area down to the lowest
4 level. One of the things the Commandant also did is, he
5 stood up a Deputy Commandant for Information just to focus
6 on this problem set.

7 Senator Rounds: Thank you. Thank you. My time is
8 expired, but I most certainly appreciate the comments that
9 you've made here today.

10 Senator Wicker: Thank you, Senator --

11 Senator Rounds: Thank you, Mr. Chairman.

12 Senator Wicker: -- Rounds.

13 Senator Kaine.

14 Senator Kaine: Thank you, Mr. Chair.

15 And thanks, to our witnesses.

16 Three questions about, sort of, future -- looking
17 ahead. The Chair and I and others have really focused on
18 the 355-ship Navy requested by the Navy. It became part of
19 the NDA last year, but, given that the Marines are an
20 expeditionary force that are often shipbound, as we're
21 trying to decide what the 3- -- with the right mix of the
22 355 is -- surface and sub and, you know, manned and unmanned
23 -- it has effects on marine personnel organization, too.
24 So, how close are you having that discussion with the Navy
25 as they're doing their planning about 355, because it

1 affects the ground side of the Marine operation, as well?

2 Mr. Smith: Well, as you know, Senator, the auxiliary
3 fleet, the amphibious fleet that the Navy has, the Marine
4 Corps basically needs a ride to the fight. And 38 ships
5 would be optimum, and we have, I believe, 31, 32 in the --
6 32 in the budget. We're going to make best use of that
7 capability. And getting to the fight, we're working
8 together.

9 I'm actually a Navy employee, as the DASN to the Marine
10 Corps, so I'm closely tied to big Navy, and I'm working on
11 the green side to make sure the capability comes forward to
12 unify both forces together. Because we are one Navy, one
13 force -- one naval force.

14 Thank you, sir.

15 Senator Kaine: Please, General.

16 General Walsh: If I could, your -- over the last few
17 years, I think we've focused really on readiness,
18 maintenance -- is really that focus. The Navy fleets have
19 been run really hard. OPTEMPO has been high. There hasn't
20 --

21 Senator Kaine: Yeah.

22 General Walsh: -- been a lot of stability and
23 predictability, so we've focused on maintenance and
24 readiness.

25 The next piece, I think, that we've been focused on is

1 capacity. And I think right now, with the shipbuilding
2 plan, we're moving in the right direction. Obviously, the
3 CNO's got to plan if we could increase that. You know,
4 we've got -- know what the yards can do, the availabilities,
5 how we can increase that. So, that's part of that surge
6 force, if we can increase that capacity.

7 The one thing I will say, though, is, what we really
8 are looking at, too, is readiness, capacity, but the
9 capability of the ships. When you go back to operate
10 against this high-end threat, do the ships have the right
11 capabilities? So, not only the -- you know, the ships that
12 are out there as part of the carrier strike groups, but also
13 our cruisers, destroyers. When you start putting F-35s out
14 on amphibious ships, that's a tremendous capability to the
15 battle force. And how do we use that capability? What the
16 sensors and weapons capabilities on the amphib ships to be
17 able to contribute to that littoral ops in a contested
18 environment?

19 Senator Kaine: Another sort of future issue that my
20 staff brought to my attention is, there is a Marine Corps
21 Times article last month about thinking about the size of
22 the marine rifle squads. So, traditionally, it's been 13.
23 Could it be 11? Could it be 12? Could it be 14? And then
24 that has downstream consequences, too. You know, the size
25 of a helo that you use to take a squad from here to there

1 would change if it were 14 over 13. So, talk a little bit
2 about that thought process and what's the status of it right
3 now. And is it factoring in to, sort of, acquisitions
4 thought, as well?

5 General Walsh: It is. It's -- you know, so it's one
6 of those things is -- we experiment. Things go fast.
7 Things change quickly. So, we did a lot of experimentation
8 with the ground force and what should be the right size of
9 that squad. So, the Commandant right now -- in fact, we
10 spent this morning -- I was kind of smiling because we spent
11 this morning with him for about 2 hours on this, in an area
12 that he's an expert on, and really drilling in that. I
13 think the part that changes is, when you bring in all this
14 technology, in the experiments that we've been using, in
15 some ways it puts almost an increased burden on the squad,
16 because now they have more capabilities. So, I'm trying to
17 get it to where you can integrate these capabilities, like
18 you do, say, in an F-35, and you're using the sensors --

19 Senator Kaine: Right.

20 General Walsh: -- it's making it easier for the pilot.
21 How are we, you know, able do that on the ground side? So,
22 as we're changing looking at the different squad sizes, it
23 does affect when you get into longer-term programs, like
24 your amphibious combat vehicle. So, I think one of those
25 things that's going to be ever changing. I think we have to

1 be flexible with this. We can't lock ourselves down that,
2 you know, if you have a larger-size squad or a smaller-size
3 squad, you're going to have to kind of go and adapt with
4 whatever capability you're already procuring.

5 Senator Kaine: One other future capability issue
6 that's an exciting one is -- there's been a lot of stories
7 recently about expected advances in battery technology, so
8 batteries are really pushing ahead, and then that would
9 give, you know, opportunities for a forward-deployed, you
10 know, platoon or battalion to, maybe, stay out longer, less
11 backing and forthing, you know, bringing energy to a
12 forward-deployed unit. Talk a little bit about how you guys
13 are using advances in battery technology to potentially
14 augment your capability.

15 General Walsh: Yeah. Last year, we focused our whole
16 experimentation effort in Sea Dragon, which is our
17 experimentation effort on the infantry. This entire year,
18 we're focused on the logistics combat element. So, a major
19 part of that is reducing the load for the infantry, but it's
20 how -- what are we doing with hybrid electric capability,
21 our ability to forage for power and use dirty power in
22 different ways. So, a lot of effort is going on into that,
23 and we're seeing the benefits of a lot of the capabilities
24 that we're out there testing experimental. We think that
25 we're going to be able to reduce a lot of the battery

1 requirements in the future by significant amounts --

2 Senator Kaine: Yeah.

3 General Walsh: -- by the technology that's out there,
4 which is going to allow us to be much more maneuverable.

5 Senator Kaine: Great. Thank you.

6 Thanks, Mr. Chair.

7 Senator Wicker: Thank you, Senator Kaine.

8 We're going to take another round. And I'll go last.
9 So, Senator Hirono, you're next.

10 Senator Hirono: Thank you.

11 In November 2015, the Marine Corps awarded two
12 contracts for the manufacture and test of 32 prototype ACV
13 vehicles. And, since that time, the vendors have each built
14 16 vehicles for testing, and the Marine Corps is on track to
15 select a single vendor in June 2018. And, given that the
16 program remains on track for a vendor award, what lessons,
17 if any, can the Marine Corps apply to future acquisition
18 programs, based on the ACV acquisitions strategy?

19 Mr. Smith: I'll take that one --

20 Senator Hirono: Mr. Smith.

21 Mr. Smith: -- Senator.

22 From an acquisition perspective -- I'm the acquisition
23 guy on the team -- to get a good deal from our industry
24 partners is key and foremost. Keeping the taxpayers'
25 dollars down to minimum, but provide --

1 Senator Hirono: We're all for that.

2 Mr. Smith: -- capability is what we strive for. And
3 getting the good deal is my main objective. Providing the
4 capability folks need in order to fight missions and do the
5 things that the Marine Corps does, that's what we're here
6 for. So, lessons learned, going forward: competition
7 works. Competition drives industry partners to compete to
8 -- with one another, provide the capability we need. And
9 we're seeing and reaping great benefits from that
10 competition alone.

11 Senator Hirono: So --

12 Mr. Smith: And things are on track.

13 Senator Hirono: I assume that the two vendors that are
14 in competition, though, while -- as they develop their
15 prototype vehicles, I mean, do we pay them for that --

16 Mr. Smith: Absolutely.

17 Senator Hirono: -- development so that -- they're not
18 out of pocket, are they? So --

19 Mr. Smith: Absolutely. The --

20 Senator Hirono: -- what you want to do is encourage
21 this participation, their best efforts, and then they get
22 the contract --

23 Mr. Smith: Correct.

24 Senator Hirono: -- if they come up with a good
25 vehicle. So, this is a -- would you be following this kind

1 of procurement method, going forward?

2 Mr. Smith: Absolutely. This is how we should do
3 business, going forward. Sole-source contracts -- and I
4 think we've proven, from the EFV vehicle that was before,
5 they -- they're very hard to control an industry partner
6 with costs when they're a sole source. But, competition
7 works, flying off to meet requirements are achieving the
8 results that we're here to receive.

9 Senator Hirono: On the other hand, do you think that
10 this kind of competition is -- it's very expensive. If we
11 were to apply it to submarines or -- you know, that gets a
12 little trickier, doesn't it?

13 Mr. Smith: Absolutely. Having grown up in the
14 submarine acquisition world, 2 and a half billion, 3 billion
15 a copy to pay for that twice, to --

16 Senator Hirono: Yes.

17 Mr. Smith: -- run off 16 vehicles wouldn't be --

18 Senator Hirono: Yeah. So, this kind of competition
19 for the -- is good in certain --

20 Mr. Smith: For -- from a unit-cost standpoint --

21 Senator Hirono: Yeah.

22 Mr. Smith: -- I think it makes a great deal of sense
23 for how we're operating the business. Absolutely.

24 Senator Hirono: So, is that -- if that works for the
25 Marines, I hope that the other services are also learning

1 from you guys to use that process.

2 General, I was very curious. You used the term
3 "information warfare" just now. How do you define that
4 term?

5 General Walsh: It's -- we've kind of brought it in, in
6 really all the different domains that had -- have to do with
7 information. So, when it could be psyops, psychological
8 operations, getting information out there in that
9 environment, electronic warfare, where we're sensing what's
10 out in front of us. So, in some of the experiments, we put
11 capabilities in the hands of our marines that we haven't
12 used really since the '80s, early '90s, where they could
13 sense who was on a radio out in front of them, who is
14 operating on what channel. If we located where they were
15 at, we could jam them or attack them. Cyber warfare is in
16 that area. So, all the intelligence we've grouped into that
17 MEF information group, all those areas that have to do with
18 that information, electronic warfare, signals intelligence,
19 radio-frequency-type capabilities is what we've put into
20 that area.

21 Senator Hirono: So, are you saying that -- for
22 example, it is very clear that Russians engaged in
23 information warfare in interfering with our elections. So,
24 are you saying that the Marines are developing a capability
25 to counter information warfare from near-peer competitors

1 such as Russia and China?

2 General Walsh: From the -- you know, we've always had
3 information capability. If you look at some of the things
4 that we've done in Iraq and Afghanistan, some of it's
5 winning the hearts and minds, getting information out there,
6 leaflet drops, those sort of things, that's all been part of
7 it. But, now, taking it to that higher level -- I go back
8 to the next-generation capability. We've got capabilities
9 that we can put out that'll push information out -- radio,
10 television, broadcasting -- but it's going to go a lot
11 higher-level capabilities that we've got, that we'd have to
12 talk in a different forum. But, those exactly are the type
13 of things that we'd be talking a lot -- which kind of ties
14 in also some of our cyber capabilities we're developing.

15 Senator Hirono: So, the -- so, you're developing, or
16 you always had that capability in the kind of situation
17 where -- during World War II, for example. But, what
18 happens in a civilian context, in a -- in an election-year
19 environment? Who's responsible for countering information
20 warfare from Russia?

21 General Walsh: I -- that's probably an area outside of
22 my expertise, Senator. I probably would have to turn that
23 over -- you know, on -- you know, in the combat environment
24 -- in fact, it's one of the areas that we're starting to
25 have to deal with. You know, when you talk about long-range

1 precision fires, some of those long-range precision fires
2 are coming from the cyber area. And, as you know, we're
3 trying to work into those areas. What is considered the
4 battle space? And how do we define that?

5 Senator Hirono: Yes.

6 General Walsh: You know, when you've got capabilities
7 that are back in the continental United States, that we have
8 reachback capability. You know, before, it was looking at
9 UAS video feeds that we could look at back in continental
10 United States and help offensive capability forward. We're
11 seeing the same thing in some of these areas, where signals
12 intelligence, information operations, or cyber, that we're
13 having to kind of understand, in the future, how we're going
14 to be able to use this.

15 Senator Hirono: Yeah, I think you -- you point out one
16 of the reasons that I don't think we have a very cohesive
17 strategy for countering the ongoing Russian efforts to
18 interfere with our elections and our democracy.

19 Thank you, Mr. Chairman.

20 Senator Wicker: Thank you, Senator Hirono.

21 Senator Sullivan.

22 Senator Sullivan: Thank you, Mr. Chairman.

23 And, since you mentioned it, I thought I would go back
24 to this issue of training, hard training. General, I was --

25 Senator Wicker: You said it.

1 Senator Sullivan: -- I heard, recently, that the
2 standard -- and I don't know when this was dropped, but, as
3 you know, the Marine Corps infantry battalions used to go
4 through an annual training exercise, where one of the
5 elements of what they had to complete was a 26-mile hump,
6 force march. And, you know, when you think back to, again,
7 some of the high-end conflicts that our country's been in,
8 and how we're starting to focus on that world again, are we
9 going to start looking at -- back at those kind of training
10 standards that are, you know, long foot maneuvers that we
11 used to do a lot of and now I guess we're not doing those at
12 all?

13 General Walsh: Senator, I'd probably have to take that
14 -- let me take that for the record, exactly what are in our
15 Marine Corps combat readiness evaluations, which are our
16 certification exercises before units deploy forward.

17 [The information referred to follows:]

18 [SUBCOMMITTEE INSERT]

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1 Senator Sullivan: Right.

2 General Walsh: As I think about this, a lot of the
3 things that we were doing, in Afghanistan especially, was
4 marines humping a long distance with heavy gear, carrying
5 that. So, a lot of our standards were focused on hikes in
6 what were in our training and readiness standards for hikes.
7 So, I'll have to take that back and see -- now, as we're now
8 trying to look at higher-end conflict, how are our training
9 and readiness and our certification exercises changing
10 specifically in that hike area.

11 Senator Sullivan: Okay.

12 General Walsh: Back to your earlier piece, what I do
13 know, though, we're doing is looking at our units where --
14 is anybody emitting on frequency? Are they all silent? Are
15 they able to operate in a mission control? What are they
16 doing against air threats? We've got capabilities now,
17 where we're using multiple UASs out there against the force.
18 So, we're trying to up the game in that area. When it comes
19 to the hike standard, I'll have to get back to you on that,
20 specifically.

21 Senator Sullivan: Okay, thank you.

22 I also wanted to talk -- just kind of broadening the
23 aperture much further now. You know, I know the Commandant
24 and the leadership of the Marine Corps has been looking at
25 the issue with some of the other services, particularly the

1 Air Force, on the force posture in the Asia-Pacific. And if
2 you look at, you know, where the Marine Corps is really
3 postured, a lot of it -- and the Army -- a lot of it is
4 actually, kind of, you know, if you take a snapshot at the
5 end of World War II, and a snapshot at the end of the Korean
6 War -- and there hasn't been a lot of, kind of, redeployment
7 and thinking of, you know, where our forces in the Asia-
8 Pacific should be deployed. I know we've had this
9 deployment to Darwin. My understanding is, you know, there
10 are elements of that that may have had kind of a -- an idea
11 from the NSC, not driven by the Marine Corps or the DOD, but
12 a, you know, more political idea during the Obama
13 administration to do the Darwin deployment.

14 I mean, how are we looking at the forces in Okinawa,
15 forces in mainland Japan, forces on Guam, in terms of the
16 next 50 years? I mean, we need to get it right, and it does
17 seem, to a number of us -- and, you know, Senator McCain's
18 taken a lot of interest in this issue, I have -- that we
19 haven't, kind of, looked at the future and said, "Hey, where
20 should we be?" Particularly given the new National Defense
21 Strategy that has China as the facing threat with regard to
22 the Asia-Pacific, in terms of our national security.

23 General Walsh: That's probably fair to say, that the
24 strategy is new. And how does, say, the DPRI, the agreed-to
25 Pacific laydown, how does that match up against that? I'd

1 have to take that for the record to see how senior
2 leadership is matching up the current agreed DPRI. I've not
3 heard of any changes to the DPRI --

4 Senator Sullivan: Right.

5 General Walsh: -- to match up against what the
6 strategic new National Defense Strategy is. What it -- so,
7 I -- I'll take that part for the record.

8 [The information referred to follows:]

9 [SUBCOMMITTEE INSERT]

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1 General Walsh: What I would say, though, is, looking
2 at the strategic competition with, say, China in the Pacific
3 is -- much of what we're doing now is focusing on allies,
4 partners, working with them closely. And a lot of it is in
5 the higher-end combat area, building those capabilities as
6 partnerships and alliances, differently than we probably
7 would have before we had the National Defense Strategy.

8 Senator Sullivan: Great. Okay, thank you.

9 Thank you, Mr. Chairman.

10 Senator Wicker: Thank you, Senator Sullivan.

11 Gentlemen, did it offend or surprise either of you to
12 hear me say that I'd heard concerns that the Marines may
13 have prioritized readiness recovery on aviation, to the
14 detriment of combat?

15 General Walsh: I think, over the last, probably,
16 couple of years, Senator, there's been a lot of metrics
17 associated with our aviation readiness. So, the good thing
18 I would say about aviation, it's a very technical area, and
19 it's very easy -- I shouldn't say easy, but it's an area
20 where we have a lot of focused attention on readiness. We
21 can grade that work very closely. A lot of it has to do
22 with mishaps over the years that we've occurred -- that have
23 occurred, to not focusing on readiness and the right
24 equipment at right place and time. So, I think looking at,
25 over the last 2 years, how much we've ridden our aircraft so

1 hard that we could see that the readiness had gone down, and
2 a lot of our industrial capacity wasn't there. So, I think
3 we've improved that over the last couple of years, and now,
4 I think, as the focus goes from the readiness side, I think
5 our reset on the ground side is going very well. It's
6 almost complete. So, I would say our readiness on the
7 ground side is not something that's as a high concern as
8 much as the modernization capability of the equipment that
9 we have not put a lot of money into ground future readiness
10 versus current readiness.

11 Senator Wicker: Okay. And then, let me ask you -- I
12 don't think we got around -- back around to very shallow
13 mine countermeasures. So -- I mean, I brought that up in my
14 opening statement -- so, how are we doing on that? The
15 situation is that we've done pretty well with our deep
16 water, but not so good on the full ship-to-shore. So, who'd
17 like to take that.

18 Mr. Smith?

19 Mr. Smith: Yes, I'll take that one, Senator. Thank
20 you.

21 The Navy and Marine Corps continue to work together on
22 their mine countermeasure doctrine. Very shallow water into
23 the surf zone, into the -- what's -- what we're going to
24 call the clearance coordination line, getting to that point,
25 the clearance coordination line, that's the Navy's

1 responsibility, to get the Marine Corps to that point and
2 clear mines in that path. It's the Marine Corps'
3 responsibility from the clearance coordination line on to
4 that inward target, to clear mines from that standpoint, on
5 -- once they're on shore. The Navy and Marine Corps, as I
6 said, are working very closely, jointly to make sure that
7 that mission still concurs. But, the doctrine hasn't
8 changed for decades. But --

9 Senator Wicker: Well, do we have a deficiency, when it
10 comes to shallow water countermeasures?

11 Mr. Smith: We have challenges in that area, Senator.
12 From a physics-based standpoint, there are certain things
13 that you just can't do, and technology today may not get you
14 there solely. Not yet.

15 Senator Wicker: What about that, General?

16 General Walsh: It's -- I think, like Mr. Smith said,
17 this is a hard problem. To try to find mines in surf in
18 that beach zone, very shallow water, is a difficult,
19 difficult problem. What I will say is -- you talked about
20 the littoral combat ship, and how that is focused on deeper
21 water, but I wouldn't say deep water -- I'd have to go back
22 into what the Navy terminology is -- very shallow water --
23 but, where I would say the Navy has put a lot of effort on
24 is getting capabilities in the hands of the Naval
25 Expeditionary Combat Command, outside of the littoral combat

1 ships. And I know I -- I talked to Admiral Merz about this
2 -- over the FYDP -- who's the N9 over at OPNAV -- the Navy's
3 put over a billion dollars into mine countermeasures over
4 the Fiscal Year Defense Plan. So, a lot of effort's going
5 in there, because I think the technology is getting much
6 better with unmanned systems that can cover much more of the
7 water area -- the water column.

8 Still, the surf zone in that beach zone is a real
9 difficult problem. One of the things the Commandant had me
10 working with JIIEDO, who is focused on mines on land, what
11 capabilities and technology do they have that can help us in
12 that beach zone, surf zone? So, it's a tough problem, but I
13 think technology's getting better, and certainly the Navy
14 investment is increasing tremendously.

15 Senator Wicker: Thank you, gentlemen. We appreciate
16 your testimony, and we appreciate your service.

17 And this hearing is closed.

18 [Whereupon, at 3:43 p.m., the hearing was adjourned.]

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