

[H.A.S.C. No. 115-57]

**NAVY READINESS—UNDERLYING  
PROBLEMS ASSOCIATED WITH THE USS  
FITZGERALD AND USS JOHN S. McCAIN**

---

JOINT HEARING  
BEFORE THE  
SUBCOMMITTEE ON READINESS  
MEETING JOINTLY WITH  
SUBCOMMITTEE ON SEAPOWER AND  
PROJECTION FORCES  
OF THE  
COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED FIFTEENTH CONGRESS  
FIRST SESSION

---

HEARING HELD  
SEPTEMBER 7, 2017



---

U.S. GOVERNMENT PUBLISHING OFFICE

27-560

WASHINGTON : 2018

## SUBCOMMITTEE ON READINESS

JOE WILSON, South Carolina, *Chairman*

ROB BISHOP, Utah	MADELEINE Z. BORDALLO, Guam
AUSTIN SCOTT, Georgia	JOE COURTNEY, Connecticut
STEVE RUSSELL, Oklahoma	TULSI GABBARD, Hawaii
MIKE ROGERS, Alabama	CAROL SHEA-PORTER, New Hampshire
VICKY HARTZLER, Missouri	A. DONALD McEACHIN, Virginia
ELISE M. STEFANIK, New York	SALUD O. CARBAJAL, California
MARTHA MCSALLY, Arizona, <i>Vice Chair</i>	ANTHONY G. BROWN, Maryland
SCOTT DESJARLAIS, Tennessee	STEPHANIE N. MURPHY, Florida
TRENT KELLY, Mississippi	RO KHANNA, California
MIKE GALLAGHER, Wisconsin	

MARGARET DEAN, *Professional Staff Member*

BRIAN GARRETT, *Professional Staff Member*

MIKE GANCIO, *Clerk*

---

## SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

ROBERT J. WITTMAN, Virginia, *Chairman*

K. MICHAEL CONAWAY, Texas	JOE COURTNEY, Connecticut
VICKY HARTZLER, Missouri	SUSAN A. DAVIS, California
BRADLEY BYRNE, Alabama, <i>Vice Chair</i>	JAMES R. LANGEVIN, Rhode Island
SCOTT DESJARLAIS, Tennessee	MADELEINE Z. BORDALLO, Guam
MIKE GALLAGHER, Wisconsin	JOHN GARAMENDI, California
DUNCAN HUNTER, California	DONALD NORCROSS, New Jersey
PAUL COOK, California	SETH MOULTON, Massachusetts
JIM BRIDENSTINE, Oklahoma	COLLEEN HANABUSA, Hawaii
STEPHEN KNIGHT, California	A. DONALD McEACHIN, Virginia
RALPH LEE ABRAHAM, Louisiana	

DAVID SIENICKI, *Professional Staff Member*

PHIL MACNAUGHTON, *Professional Staff Member*

DANIELLE STEITZ, *Clerk*

# CONTENTS

	Page
STATEMENTS PRESENTED BY MEMBERS OF CONGRESS	
Bordallo, Hon. Madeleine Z., a Delegate from Guam, Ranking Member, Subcommittee on Readiness .....	2
Courtney, Hon. Joe, a Representative from Connecticut, Ranking Member, Subcommittee on Seapower and Projection Forces .....	6
Wilson, Hon. Joe, a Representative from South Carolina, Chairman, Subcommittee on Readiness .....	1
Wittman, Hon. Robert J., a Representative from Virginia, Chairman, Subcommittee on Seapower and Projection Forces .....	4
WITNESSES	
Moran, ADM William F., USN, Vice Chief of Naval Operations, United States Navy; and RADM Ronald A. Boxall, Director, Surface Warfare (N96), United States Navy .....	8
Pendleton, John H., Director, Defense Force Structure and Readiness Issues, U.S. Government Accountability Office .....	8
APPENDIX	
PREPARED STATEMENTS:	
Moran, ADM William F., joint with RADM Ronald A. Boxall .....	59
Pendleton, John H. ....	66
Wilson, Hon. Joe .....	57
DOCUMENTS SUBMITTED FOR THE RECORD:	
[There were no Documents submitted.]	
WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING:	
Mr. Gallagher .....	97
Mr. Hunter .....	97
Mr. Norcross .....	97
QUESTIONS SUBMITTED BY MEMBERS POST HEARING:	
Mr. Courtney .....	101
Mr. McEachin .....	101
Mr. Wilson .....	101



**NAVY READINESS—UNDERLYING PROBLEMS  
ASSOCIATED WITH THE USS FITZGERALD  
AND USS JOHN S. McCAIN**

---

HOUSE OF REPRESENTATIVES, COMMITTEE ON ARMED  
SERVICES, SUBCOMMITTEE ON READINESS, MEETING  
JOINTLY WITH THE SUBCOMMITTEE ON SEAPOWER AND  
PROJECTION FORCES, *Washington, DC, Thursday, Sep-  
tember 7, 2017.*

The subcommittee met, pursuant to call, at 3:10 p.m., in room 2118, Rayburn House Office Building, Hon. Joe Wilson (chairman of the Subcommittee on Readiness) presiding.

**OPENING STATEMENT OF HON. JOE WILSON, A REPRESENTA-  
TIVE FROM SOUTH CAROLINA, CHAIRMAN, SUBCOMMITTEE  
ON READINESS**

Mr. WILSON. I call this joint hearing of the Subcommittees on Readiness and Seapower and Projection Forces of the House Armed Services Committee to order.

We are here in honor and memory of the 7 USS *Fitzgerald* sailors: Shingo Douglass, Noe Hernandez, Ngoc Truong Huynh, Xavier Martin, Gary Rehm, Dakota Rigsby, Carlos Victor Sibayan; and the 10 USS *John S. McCain* sailors: Kevin Bushell, Dustin Doyon, Jacob Drake, Timothy Eckels, Charles Findley, John Hoagland, III, Corey Ingram, Abraham Lopez, Kenneth Smith, and Logan Palmer.

And we are very grateful that today we have Ms. Rachel Eckels, the mother of Petty Officer Timothy Eckels, Jr., is here with us today. Ms. Eckels, we send to you our deepest sympathies and profound sorrow for your loss and appreciation for your son's service to our Nation.

I want to welcome our members to today's hearing. And I want to especially recognize that we have with us the committee chairman, the Honorable Mac Thornberry. Chairman Thornberry has been the leader of our ongoing efforts to mitigate our military readiness challenges. And I want to thank him for his leadership and for being here today to hear about the challenges illuminated by the tragic collisions in the Pacific.

I also want to send a warm welcome to Congresswoman Elizabeth Esty from Connecticut and Congressman Rodney Davis from Illinois.

I ask unanimous consent that a member who is not a member of the Committee on the Armed Services be allowed to participate in today's hearing after all subcommittee members and then full committee members have had an opportunity to ask questions. Is there an objection?

Without objection, such members will be recognized at the appropriate time for 5 minutes.

As we begin today's unclassified hearing on "Navy Readiness—Underlying Problems Associated with the USS *Fitzgerald* and the USS *John S. McCain*," I have no doubt that our Navy remains the most powerful in the world. But these recent tragic events only reinforce our committee's concerns about the depth of readiness challenges the Navy faces. I am especially concerned about the shortfalls in the force structure, and whether the sustained operational tempo of a reduced 277-ship Navy may have contributed to these events.

I also believe that the first responsibility of the national government is to provide for the national security for our citizens to do for us what we cannot do for ourselves. And that is especially true of our sailors, soldiers, airmen, and Marines. Therefore, it is our responsibility as members of this subcommittee to continue to better understand the readiness situation and underlying problems of the United States Navy, and then for us to chart a course which best assists the Department of the Navy in correcting any deficiencies and shortfalls.

We now ask the senior leaders of the U.S. Navy and Government Accountability Office here with us today to be candid and, in your best judgment, advise us on the underlying problems associated with the USS *Fitzgerald* and USS *John S. McCain* and how to recover from these tragic events.

This afternoon we are honored to have with us Admiral Bill Moran, the Vice Chief of Naval Operations; Rear Admiral Robert Boxall, who is the Director of Surface Warfare; and Mr. John Pendleton, the Director of the Defense Force Structure and Readiness Issues of the U.S. [Government] Accountability Office.

I would like to now turn to our ranking member, Congresswoman Madeleine Bordallo of Guam, for any remarks she may have.

[The prepared statement of Mr. Wilson can be found in the Appendix on page 57.]

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

Ms. BORDALLO. Thank you very much, Mr. Chairman and Chairman Wittman, for agreeing to convene this timely hearing on the Navy readiness, particularly with regards to the 7th Fleet operations in the Indo-Asia-Pacific region. Chairman Wittman and I recently returned from Japan where we visited and met with Vice Admiral Sawyer, and saw the damage to the USS *Fitzgerald* firsthand.

Thank you to our witnesses for joining us today. Admiral Moran and Boxall, I appreciated our meeting earlier this week, and I look forward to continuing our discussion.

Mr. Pendleton, thank you as well for your time and your work on this subject, as it is critical in aiding our oversight mission on this committee.

The recent mishaps with the USS *Fitzgerald* and the USS *John S. McCain* resulted not only in significant damage to the vessels, but also the tragic, tragic loss of life of 17 American sailors. Earlier

in the year, we saw two additional mishaps, avoidable, as I understand it, also involving surface ships assigned to the 7th Fleet. While investigations into the specific mishaps are still ongoing, and the Navy is in the midst of conducting two separate comprehensive reviews of surface fleet operations, I am interested to learn of the initial findings and the foundational challenges that need to be addressed to reverse the concerning trend that we are seeing with the readiness of our forward-deployed naval forces [FDNF].

Specifically, I am interested to hear what steps may be taken to ensure appropriate time is allocated for crew training and ship maintenance in the forward-deployed naval forces model, and how the chain of command will be held accountable to ensure Navy standards are being met. In addition to the training and the maintenance time, I will be interested to hear how the Navy is investing in developing and utilizing next-generation training systems to maximize the efficiency and the effectiveness of this time.

This committee and the Navy's military and civilian leadership owe it to our sailors to learn from these incidents and take appropriate actions to ensure the contributing factors are properly addressed. Points have been raised about how the forward-deployed forces model in the Pacific AOR [area of responsibility] has both stressed existing resources and highlighted gaps and deficiency in the manning of our vessels, the training of our sailors, and the maintenance of the fleet. Understanding that a balance needs to be struck and a review of posture in the region is underway, let me note that I believe maintaining a forward presence in the Indo-Asia-Pacific is critical to our security in the region.

Whether it be for deterrence, power projection, humanitarian assistance, bilateral and multilateral exercises, or a myriad of other critical missions, the Navy is able to rapidly react to contingencies only with forward-deployed forces. However, these missions and our credibility are undermined if we are not able to effectively manage and operate the fleet.

The Navy's deployment of significant capabilities overseas didn't occur overnight. And the Pacific did not become a heavy traffic theater overnight. So I am concerned that the request for resources and the strategic prioritization of where to spend these resources has not properly reflected the operations, the maintenance, and the training needs of the fleet.

Finally, I will conclude by stating that today's hearing and the Navy's ongoing investigations and reviews should be viewed as just the starting point. I hope that we will have a continuous dialogue between this committee and the Navy on the issues, the lessons learned, and specific actions that need to be taken to ensure the readiness of the surface fleet.

I want to thank you, the witnesses, and I look forward to the discussion. And, Mr. Chairman, I yield back.

Mr. WILSON. Thank you, Ranking Member Bordallo.

We now will turn to the gentleman from Virginia and chairman of the Seapower and Projection Forces Subcommittee, Congressman Rob Wittman, for any remarks he may have.

**OPENING STATEMENT OF HON. ROBERT J. WITTMAN, A REPRESENTATIVE FROM VIRGINIA, CHAIRMAN, SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES**

Mr. WITTMAN. Thank you, Chairman Wilson.

I want to welcome Admiral Moran, Rear Admiral Boxall, and Mr. Pendleton, and I want to thank you all for attending our hearing on this tremendously important issue. I, again, want to thank Chairman Wilson for offering to hold this joint subcommittee hearing today. It is of essence that we get to the bottom of this in the interest of our Nation.

I believe that we may arrive at some conclusions that require the joint efforts of both of our subcommittees, and I look forward to working with the gentleman from South Carolina to expeditiously resolve these potentially egregious underlying issues to our surface Navy forces.

Before I proceed any further, I also want to recognize our special guest in the audience today, Ms. Rachel Eckels. Ms. Eckels' son, Petty Officer Timothy Eckels, Jr., lost his life onboard the USS *McCain* just a few weeks ago.

Ms. Eckels, thank you for being here with us today and for the enormous sacrifice that you and your family have made for this country. We are here today to ensure that the Navy—yes.

[Applause.]

Mr. WITTMAN. We are here today to ensure that the Navy and Congress learns from these tragedies and makes the necessary changes. I want you to be assured that your son's life, given on behalf of this Nation, was not given in vain.

Naval warfare is inherently dangerous. As we continue to review the recent collisions associated with the USS *Fitzgerald* and the USS *John S. McCain*, it is important to note that even in a benign environment, we send our sailors into precarious and oftentimes deadly situations. Our Nation asks much of our service members, and they never fail to deliver.

I hope that today's hearing provides some positive steps forward to ensure that our sailors are provided the best training and the best ships to sustain their daily lives, and in time of war, prevail over our enemy. I think we can all agree that our Nation failed these 17 sailors and their families with these tragic collisions.

Last week, I led a bipartisan congressional delegation with the gentlelady from Guam, Ms. Bordallo, to visit the 7th Fleet commander, Vice Admiral Sawyer, and the sailors homeported in Yokosuka, Japan. I was encouraged at their zeal and the overall tenacity of the fleet, even in the face of these difficult events. Nevertheless, I look forward to turning our attention to assess whether there are procedural issues that may have contributed to a degraded material and training readiness of our forces in the 7th Fleet.

As the committee reviews the degraded state of the 7th Fleet, two things are painfully obvious. The material condition and operational readiness of the ships are significantly degraded and not acceptable. Of our large surface combatants, the majority of forward-deployed ships are not properly ready to perform their primary warfare areas. Overall, the negative trend lines associated with the operational readiness of our forward-deployed ships are deeply



troubling. These negative training trends clearly contributed to the lack of seamanship evident onboard the USS *John McCain* and the USS *Fitzgerald*.

As to the ships themselves, the material condition of the forward-deployed ships suffer as Navy prioritizes operational deployments over maintenance and modernization. This maintenance and training model places sailors at risk, and most likely contributed, in part, to the incidents that we have witnessed with the 7th Fleet.

It is equally problematic that the Navy intends to increase the number of forward-deployed ships over the next few years with no increase to the maintenance capacity in Yokosuka, thereby increasing the risk to the fleet and our sailors. This increasing reliance on forward-deployed naval forces is a model that is not sustainable and needs to be significantly modified.

We have also learned that many of the destroyers based out of Yokosuka are only supposed to be forward deployed for no more than 7 to 10 years. However, we know that the USS *John S. McCain* has been forward deployed to Japan for over 20 years. Further, the USS *Fitzgerald*, USS *Curtis Wilbur*, and USS *Stethem* have each been homeported in Yokosuka for well over 10 years.

The Navy has proven that it cannot manage the requirements for forward-deployed ships in the 7th Fleet with a fleet of just 277 ships. The ships in Yokosuka have been outside the continental United States for too long, and consequently, their material condition is in an unacceptable state.

I remain convinced that one of the long-term fixes of this problem is to increase the overall force structure and build the Navy that our Nation needs. A larger fleet would allow the Navy to place less strain on each available ship, which would reduce the chance that any sailor is placed in a high-risk environment.

In the short term, I fully support the need to adequately fund training, and most importantly, provide the fleet the time it needs to complete required maintenance and training.

I think there are a number of contributing factors that should be explored, including Navy training models, impacts associated with the cannibalization of other ship parts, overall funding requirements associated with ship maintenance, and the incredibly high operational tempo endured by the fleet, specifically in the 7th Fleet area of responsibility, and also the operational failures that have occurred with our surface fleet. Each of these areas deserves additional assessment.

The forward-deployed Navy model is ripe with risk, and this risk will increase in the future. The Navy needs to offer an alternative model that meets the Nation's need at reduced risk to our sailors.

I thank Chairman Wilson for working with the Seapower and Projection Forces Subcommittee on this important issue, and I yield back the balance of my time.

Mr. WILSON. Thank you, Chairman Rob Wittman.

And now for the gentleman from Connecticut and ranking member of the Seapower and Projection Forces Subcommittee, Congressman Joe Courtney, for his remarks.

**STATEMENT OF HON. JOE COURTNEY, A REPRESENTATIVE  
FROM CONNECTICUT, RANKING MEMBER, SUBCOMMITTEE  
ON SEAPOW AND PROJECTION FORCES**

Mr. COURTNEY. Thank you, Mr. Chairman. And thank you to Admiral Moran, Rear Admiral Boxall, and Mr. Pendleton for your testimony today. And I would also like to recognize Ms. Eckels for being here today and putting a human face on the subject that we are talking about here today, and really representing the other families. That is an important contribution that is being made here today.

So thank you, Ms. Eckels.

The circumstances that bring us to today's hearing are painful and tragic. As our lead witness today, Admiral Moran, pointed out in his order to the Navy's Fleet Forces Command dated August 24, 2017, in the span of 65 days, 17 sailors were lost in ship collisions and accidents on naval vessels. These were not, as he pointed out, limited occurrences, but part of a disturbing trend of mishaps in the Asia-Pacific region that, since January, has involved the USS *Antietam*, the USS *Lake Champlain*, the USS *Fitzgerald*, and the *McCain*. To put that in perspective, these heartbreaking casualties are more than the number of service members that we have lost in the Afghanistan war zone in 2017.

Two of those sailors are from my State of Connecticut: sonar technician second class Ngoc Truong Huynh of Watertown, Connecticut—and the Congressman from that community, Congresswoman Esty, is with us here today—and electronics technician second class, Dustin Doyon, from Suffield, Connecticut, in the northwestern portion of my district was lost onboard the USS *John S. McCain*. Their families and the entire State of Connecticut are mourning the loss of these two patriots, and are intensely watching the response of the Navy and Congress to fix this disturbing trend.

Several reviews by the Navy and the Secretary of the Navy are underway right now to dig deep into this disturbing trend. I applaud those efforts, and I know I think I speak for all my colleagues today, that we expect the Navy to be fully transparent with our panels as these efforts move forward and that we will convene again as many times as needed to provide support to fix this problem.

Indeed, article I, section 8, clause 13 of the U.S. Constitution is very clear. It is Congress's duty to, quote, "provide and maintain a Navy," which certainly means a Navy that is well-equipped, well-trained, and adequately manned.

What does seem to be clear at this early stage is these incidents are a glaring manifestation of the sharply increased demand being placed on our forward-deployed Navy vessels, particularly in the Asia-Pacific region, and the declining readiness of these forces. We ask these forward-deployed ships to do difficult work, which is oftentimes not well understood by the public at large.

For instance, prior to her collision, the USS *McCain* conducted a highly visible freedom of navigation operation in the South China Sea. Likewise, the *Fitzgerald* was a pivotal player in providing needed presence in response to Kim Jong-un's recent threats and missile tests. Simply put, these are not the kinds of ships and crews that we can afford to lose to preventable mishaps.

As my colleague Mr. Wittman correctly pointed out, one obvious response to this high operational tempo is to grow our fleet and shorten the backlog of repair and maintenance for the existing fleet to take the pressure off the heel-to-toe operations of our forward-deployed ships in places like Yokosuka, Japan, and Rota, Spain.

These two committees, I would note, have pushed more aggressively on a bipartisan basis to add funding to ship construction and readiness than any other entity in the Congress. This year's House NDAA [National Defense Authorization Act] plussed up these accounts significantly above the White House's budget that was submitted last May, and passed with the biggest bipartisan vote since 2008. We will have more work to do to complete the 2018 process, and I am sure this hearing will increase the members' determination to get the best outcome possible.

But today is not just about resources. It is also about whether Navy systems and policies need to be realigned to improve readiness. Unfortunately, concerns about systems and policies are not new. As the GAO [Government Accountability Office] has repeatedly reported over the last several years, and as our witness today will discuss, a growing number of our forward-deployed vessels are operating without the certifications expected of a ship heading out to deployment. Unfortunately, this trend has worsened since the last report in 2015, and this needs to be corrected.

Similarly, in 2010, the Navy conducted a review by Vice Admiral Phillip Balisle, which outlines shortfalls and concerns about surface force readiness that are strikingly relevant today in looking at these incidences in the larger state of Navy fleet readiness. One of his priority recommendations includes clarifying who in the chain of command specifically has the ultimate say in whether a ship is manned, trained, and equipped to the level needed to safely do their job before being sent out on deployment.

To put it another way, the certification process which covers key competencies in seamanship, surface warfare, ballistic missile defense, to name just a few, need to be reviewed and approved by an accountable decisionmaker. Unfortunately, this recommendation raised by Vice Admiral Balisle has not been addressed in the 7 years since his report came out.

We expect a lot from the Navy, and with good reason. Our sailors are the best in the world. And the sight of a U.S. Navy vessel in a foreign port or operating in international waters sends a powerful message of protection for a rules-based order in the maritime domain. And those sailors do what they need to do to keep the peace and the sea-lanes of the world's great oceans free and open. In return, our sailors and families should expect that their leaders, who send them out to sea, have done all they can to provide the tools, resources, and training they need to conduct their work safely and return safely.

I hope today's hearing will focus on the steps that the Navy will take to fulfill that expectation and what it needs from us here in the Congress to get it done.

Thank you. I yield back my time.

Mr. WILSON. Thank you, Ranking Member Joe Courtney.

Admiral Moran, we now turn to you for your opening remarks.

**STATEMENT OF ADM WILLIAM F. MORAN, USN, VICE CHIEF OF NAVAL OPERATIONS, UNITED STATES NAVY; AND RADM RONALD A. BOXALL, DIRECTOR, SURFACE WARFARE (N96), UNITED STATES NAVY**

Admiral MORAN. Thank you, Mr. Chairman. I will be short.

I want to be very clear that no matter the circumstances, the operating environment, or how strained our force might be, we should not and cannot have collisions at sea. Fundamental professional seamanship is the foundation for safe operations around the fleet. In all of the marvelous technology, the magnificent hardware that we put together on these ships, and the power of our weapons systems are meaningless without well-trained, skilled, patriotic, and experienced sailors, who are well led.

You have my promise that we will get to the bottom of these mishaps. We will leave no stone unturned. We will be accountable to you, to our sailors, and to the American public. Like you, our Navy stands with Ms. Rachel Eckels and all of our Navy families with hearts broken, but determined to investigate thoroughly all the facts to get at the root causes, to address contributing factors, and to learn so that we will become a better Navy at the end of this. We have an absolute responsibility to keep sailors safe from harm in peacetime, even as they prepare for war.

Mr. Chairman, although we are 20 feet apart, there is no gap between what we need to do from here on out. Admiral Boxall and I look forward to your questions.

[The joint prepared statement of Admiral Moran and Admiral Boxall can be found in the Appendix on page 59.]

Mr. WILSON. Thank you very much, Admiral.

We now turn to Mr. John Pendleton from the Government Accountability Office for your opening comments.

**STATEMENT OF JOHN H. PENDLETON, DIRECTOR, DEFENSE FORCE STRUCTURE AND READINESS ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE**

Mr. PENDLETON. Thank you, Chairman Wilson, Chairman Wittman, Ranking Members Bordallo and Mr. Courtney, Chairman Thornberry. Thank you very much for having me here today to summarize GAO's past work on Navy readiness.

Unfortunately, grim circumstances do bring us together. Mr. Chairman, I don't know what specifically caused the accidents, but I do know the Navy is caught between an unrelenting operational demand and a limited supply of ships.

The Navy has been warning for some time that they have been keeping a pace that is unsustainable. Our work has confirmed the difficulties and our reports have shown it. However, our body of work has also spotlighted risk associated with the way the Navy is managing the demands on it. Some of these risks present significant challenges in the building blocks of readiness, training and manning, and maintenance.

Just over 2 years ago, we published a report warning about the increased reliance of overseas basing of ships. In that report, we found that ships based in Japan did not have dedicated training periods like U.S.-based ships. Their aggressive deployment sched-

ule gave the Navy more presence, it is true, but it came at cost, including detrimental effects on ship readiness.

In fact, we were told that the overseas-based ships were so busy that they had to train on the margins, a term I had not heard before. And it was explained to me that meant that they had to squeeze training in when they could. Given the concerns, we recommended that the Navy carefully analyze the risks that were mounting, especially given the plan to increase overseas basing in the future to meet the demands.

I think it is important to note that the Department of Defense, on behalf of the Navy, wrote the response to our report, and they concurred with the report and our recommendation, for the most part, and I think their response is instructive. And I am going to read a short passage, please.

We assess the Navy is well aware of risk associated with increased reliance on overseas homeporting. The decision to accept these risks was ultimately based on the operational decision to provide increased presence to meet combatant commander requirements.

Mr. Chairman, I fear this was a bad gamble, in retrospect. In preparing for this hearing, we followed up on that work and learned a couple of things that concerned us.

First, the Navy had told us that they planned to implement a deployment schedule for the overseas ships that will allow dedicated training. As of the writing of—as of this hearing, they have not yet done that. They have a notional idea, but it has not yet been implemented.

The second thing we learned was that training certifications—this is the way the Navy periodically determines that its crews are proficient in everything from seamanship, driving the ship, to warfare areas—were being allowed to expire at, frankly, an alarming rate. In 2015, looking just at the cruisers and destroyers, all of the certification areas, about 7 percent of those were expired. By late June of this year, that number was up to 37 percent expired, a more than fivefold increase.

Manning has been a persistent challenge for the Navy. The Navy had a study in 2014 that indicated that sailors, on average, were working well over 108 hours a week. The Navy concluded at that time that this was unsustainable and could contribute to a poor safety culture. Maintenance is also taking longer and costing more. Due to the pace of operation, ship deployments have often been delayed. Although, Admiral Moran told me before the hearing that, you know, been keeping deployments shorter lately. But deployments have been extended, and then the ships have more problems when you bring them in. And the shipyards have trouble keeping pace for a number of reasons, which I think many of you are aware of.

At this point, the lost operational days because of the maintenance delays number in the thousands. And having two destroyers out of service due to the recent mishaps is not going to help rebuild readiness. In fact, I think the Navy is treading water at this point in terms of readiness rebuilding.

Mr. Chairman, GAO has made 11 practical recommendations to the Department of Defense to help guide the Navy and all the serv-

ices toward improved readiness. The DOD [Department of Defense] and the Navy have concurred with our recommendations generally, but today have partially implemented only one. Several of the recommendations are crafted on—excuse me—are focused on crafting a comprehensive readiness rebuilding plan that balances resources with demands and is transparent about what it will cost and how long it will take.

We have also made recommendations specific to the Navy that are directly relevant to today's conversations, particularly in the areas of analyzing the risk associated with overseas basing and reassessing the workload that sailors actually face, and using that to decide how many people to put on a crew.

In closing, Mr. Chairman, I should acknowledge that we did all of this work because this committee requested that we do so. Thank you for your foresight, and we are honored to assist the committee in its oversight going forward. Thank you very much. I am happy to take any questions.

[The prepared statement of Mr. Pendleton can be found in the Appendix on page 66.]

Mr. WILSON. Thank you very much. And, Mr. Pendleton, we all appreciate the Government Accountability Office for your independent professionalism. As particularly important to me personally, I have a son serving in the U.S. Navy, and your recommendations are so important for the health and safety and protection of the American people.

Additionally, I particularly appreciate that a report was presented as a report to congressional addressees on June 14, which highlighted the issues of readiness just 4 days before the *Fitzgerald* incident. And so your efforts just could not—and your organization's efforts could not be more timely, and they are greatly appreciated by all of us.

The GAO statement today that you have provided indicates that the expired training certification as provided by the afloat training group for cruisers and destroyers homeported in Japan had increased fivefold since the 2015 report, from 7 percent expired to 37 percent expired in June of this year. Again, the month of the incident.

Mr. Pendleton, can you explain the sharp trend of the training certifications since your report? What are the GAO's observations in what is happening with our forward-deployed forces?

Mr. PENDLETON. Sir, we updated that information in preparation for this hearing, so we have not been back out to talk to the fleet about them. We did gather that information when we did the work a couple of years ago, and we asked for it to be updated, and the Navy provided it.

And when we looked at it, we saw that, again, if you imagine all of the 11 ships based in Japan, 3 cruisers and 8 destroyers, and then 21 or -2 certification areas. When you look at—the ones that were red that they were expired, it had grown to 37 percent. Of all those little blocks, if you imagine it being red.

Another thing that concerned us is there were specific areas that were even higher than 37 percent, and one of those was seamanship. Eight of the eleven ships had expired certifications for sea-

manship as of late June, and there were some other areas as well that were sharply lower than you would hope to see.

Mr. WILSON. And, again, I want to commend you, the analysis that you did is going to be so helpful to us, and then the actions needed to address the mission challenges are real world. And it is just, again, reassuring, as a Member of Congress, but as a parent. Thank you for what you are doing.

Mr. PENDLETON. Mr. Wilson, if I may, the report that you held up is a compilation report and it is designed to identify what we believe is the major challenges facing the Department of Defense. I think what is significant about it is we lead with readiness rebuilding, that really we think is one of the priority areas the Department needs to focus on.

Mr. WILSON. And you also provided extraordinary insight in regard to health care being provided to our military personnel. I urge all members of both subcommittees and the full committee to get a copy and—and it is really very helpful.

Mr. PENDLETON. Thank you, sir.

Mr. WILSON. Admiral Moran, obviously, the trend is so significant, and I appreciate your heartfelt statement earlier.

Can you help the subcommittees better understand the issues? I am trying to figure out how most—our most forward-deployed ships are apparently not being held to the same standards as the rest of the fleet. Who certifies the ships homeported in Japan?

Admiral MORAN. Mr. Chairman, the certification is done locally by the operational commanders in Japan. So it starts with the commanding officer of the ship that makes a request for waivers or to extend their certification. It goes to his direct—in the chain of command, there is a DESRON [destroyer squadron] commander, and that is worked out then above his level with a one-star, two-star commander of the task force in Japan as well as the 7th Fleet commander ultimately makes that decision.

Mr. WILSON. And—

Admiral MORAN. So if I could, there—when someone is expiring on a certification, they are required to put a risk mitigation plan in place and request the waiver. And once the risk mitigation plan is approved in the chain of command, then they are allowed to operate along those certifications. So while the certifications are expired, there is a risk mitigation plan for each one of them.

But to your point, and to the point that the GAO has thoughtfully put out here, is the trend of the number that we are asking for waivers is increasing at an alarming rate, one in which ought to give us all pause for just how hard we are driving the crews in 7th Fleet. Changing schedules, delayed maintenance, and additional missions that they have been asked to perform, are making it more difficult to get the ship and the command, which is called the afloat training group in Japan in WESTPAC [Western Pacific], onboard the ship to do the certification at the right time before it expires. It is not an indication necessarily that they are not qualified to do those missions or those certifications.

Mr. WILSON. And what is the role of the afloat training group and what certifications?

Admiral MORAN. I will let Admiral Boxall address it. He has got direct comms [communications] with that group.

Admiral BOXALL. Sir, the afloat training group is how we—they are the senior sailors, usually at the senior enlisted level, who go out and are experts in each area of the specialties, the 21, 22 mission areas that the GAO mentioned.

Those sailors that do that work for us generally need the time to go do that. And so these sailors will go out and they will observe operations. There is a series. And for each of one of those certifications, you know, zero might be making sure the training is there. Step one might be to make sure that the team knows how to do the basic drill sets to an assessment in a phase 4. So if they do not meet all four of those phases, they do not get the certification.

Mr. WILSON. And what would be their professional skills and training?

Admiral BOXALL. So they are usually assigned to ATG, afloat training group, only after demonstrated fleet performance. So these are our best of our sailors, we look throughout the fleet, that are—so one may be a boatswain's mate for deck evolutions, for example, or a quartermaster for navigation, or an electrician for engineering, those types of sailors.

Mr. WILSON. And these are extraordinarily important people. And are they fully staffed to perform their duties?

Admiral BOXALL. The answer is they are not fully staffed to their—so in Yokosuka, for example, there are two afloat training group areas. One is in Sasebo, Japan, and one is in Yokosuka. The two together work together to try to help ships from both homeports meet their qualifications.

We have put a lot of money into buying the manpower or buying the people we need to get those billets. We have increased from 120 up to 180. Unfortunately, they are only manned not quite to that level. Actually, they are missing about 30 to 40 folks on that team due to the fact that it takes many years to generate an E-7 or an E-8, that senior enlisted specialist, and the priority goes to putting those specialists first on ships and then out to the ATGs.

Mr. WILSON. And as I understand it, they have 22 areas of certification. And is there, again, sufficient personnel with skills to really determine the level of certification?

Admiral BOXALL. So in a perfect planning world, the answer is we would. If we had all the people we expected and we had the time to do it, then we probably would. But the reality is that we are seeing that, because of these compressed timelines, they have to train in smaller and smaller periods, meaning we have to send those evaluators to different places to catch up with the ship. That is a very inefficient model, and it further exacerbates a challenging certification process.

Mr. WILSON. And in line with that, is it normal to have a single mission area of certification waived prior to deployment?

Admiral BOXALL. So we use the term—we create this risk area mitigation plan. Before a certification goes out of periodicity, because of all these challenges they have—the time to do it, sometimes there is a specific piece of equipment, sometimes it is an exercise that can't get done, and so those ramps have to be put in place for every certification. They are put in place by the commanding officer of the ship through their commander, back to the



surface force commander, and then that is reviewed as the operational chain of command.

Mr. WILSON. And is this the same standard that is used in Norfolk?

Admiral BOXALL. The difference in Norfolk is that ships coming from the mainland United States from the east and west coast, they work up together with an aircraft carrier, and the answer is no. They work a plan that gives a 36-month period to get those qualifications done, but it is a very regimented piece. All the ships come out about the same time. They go into a training period for about 6 months: basic, intermediate, and advanced. And then they work up together, deploy, through the deployment, come back, and are prepared to surge, if needed, and then they start the cycle again. That is the Optimized Fleet Replacement Plan.

Mr. WILSON. And with the number of waivers being provided, say, per ship, when does it become dangerous for personnel to be serving on that particular ship?

Admiral BOXALL. Well, sir, I think that is exactly one of the things that we are going to look very closely at in the comprehensive review, because we do have different models. Those ships forward that are in Yokosuka are closer to the operational areas that we deploy ships to. And so the trade-off of where is the operational risk too great is exactly something that the fleet commander's interest is focused on today, and we are looking at the comprehensive review to make a permanent process change.

Mr. WILSON. And who in the chain of—Navy chain of command grants the waivers?

Admiral BOXALL. So in the chain of command for a risk area mitigation plan is—all those plans are approved by the surface force commander. They are the man, train, equip person at Commander Naval Surface Forces, and they review all those to ensure that they can do everything they can to make that ship meet what it can do given the constraints of time or exercise or the equipment that is not available to help them achieve the certification.

Mr. WILSON. And then, finally, was the Navy leadership aware of so many forward-deployed ships' certifications being waived?

Admiral BOXALL. Sir, I think that is something that the comprehensive review will look at. Again, I defer to the fleet on this one because—and Admiral Davidson will certainly get to this as the United States Fleet Forces commander. But I think, clearly, this is an area that we have to get to the bottom of. Where is the right amount of risk given our over-focus on trying to achieve the mission?

Mr. WILSON. Thank you very much.

And I now will refer to the ranking member, Madeleine Bordallo of Guam. And of course, the American people are so appreciative of the very patriotic, dedicated citizens of that very vital American territory.

Ms. BORDALLO. Thank you, Mr. Chairman. And I want to take this opportunity to thank the military for providing the great security that they did for Guam during this exchange with North Korea. So thank you very much.

It definitely is apparent that training and certification issues have been building for years within the forward-deployed fleet.

Now, I have this question for both Admiral Moran and Boxall. I am concerned that there is a critical deficiency in the feedback loop. Are ship captains voicing their concerns regarding the readiness of their crews and the condition of their ships? If they are voicing those concerns, who is assuming that risk? And do you feel they have an adequate understanding of the risks they are assuming and how that impacts the sailors that are forward deployed? I will start with you, Admiral Moran.

Admiral MORAN. Yes, ma'am. It is a great question. First of all, it is the obligation of any commanding officer [CO] to voice concerns, if they have them, with respect to the responsibility that they have, the obligation that they have to protect the safety and well-being of their crew. It is not unusual at all for a CO to express their concerns when there are manning issues or training issues, resourcing issues, and those conversations happen on the water-front all the time.

What I think has happened here, though, to I think Chairman Wittman's point, is we have allowed our standards of the numbers of certifications to grow—our standards to drop as the number of certification waivers have grown. While not against the rules, they are below the standard that we should accept.

And to Admiral Boxall's point earlier, these are the kinds of things that the comprehensive review that Admiral Davidson is going to undertake to look at is where is the acceptable standard for the number of certifications? And then how are those concerns by commanding officers being transmitted up the chain of command and what are they doing in response?

Once the commander's senior approves the waiver, they are in a sense accepting that risk. They are allowing the ship to move with a greater number of waivers and a number of expired certifications. And so the responsibility of our fleet commanders and our commanders in the operational environment is to wake up every day, assess the environment and assess the risk that they are taking from unit to unit across the waterfront. And so I think we have got a lot of learning to do on that front to your very good question.

Ms. BORDALLO. Well, thank you, Admiral. I think what I really would like to know, have these captains or commanders ever come to you with risks? Is there a list somewhere? Or have they never said anything? That is what I would like to know.

Admiral MORAN. Well, are you talking specifically *Fitzgerald* and *McCain*?

Ms. BORDALLO. Yes.

Admiral MORAN. Yes. So that is part of the investigation—

Ms. BORDALLO. Or any ship for that matter, but especially—so you have never received any complaints or—

Admiral MORAN. At our level, we would not necessarily receive direct from the commanding officer. There is a chain of command that runs through the operational chain to the surface force commander, and then it would come to us if it were something that they needed additional resourcing that they couldn't provide for themselves.

Ms. BORDALLO. I understand the protocol, you know, that the commander should do this. But I just wonder, are they doing it or are they just avoiding some of these things?

Admiral MORAN. I think as Admiral Boxall described, they are following the process that requires the chain of command to get involved in the risk mitigation process and the steps to mitigate any certification that is about to expire. So they are all taking on that risk by mitigating it with very specific steps that are outlined that they have to follow through on.

Ms. BORDALLO. So, Admiral Boxall, have you—do you have a list of some of these risks?

Admiral BOXALL. I can give you an example of the type of—the mitigations that are in place. For example, as I described to Chairman Wilson, the individual steps that it takes, they may have four steps or five steps in a process of one particular qual [qualification]. They may have—for example, they may need to go out, and for a seamanship, they have achieved, you know, the basic, the second part where they have—and they get to the point where they meet something, they didn't have an opportunity to moor to a buoy, for example. That becomes a mitigation so that they do not certify, but they say, well, the risk of that ship going and doing a moor to buoy for what I want them to do probably isn't an issue, and therefore, that has been addressed operationally by the commander.

Now, to your question whether or not the COs will tell us when—we expect that, we train them to do that. We go through a lot of workups when our command qualifications almost exclusively puts COs in a bad position where we have to ensure that they will tell leadership when they don't feel they can meet the demand. That is what we train them to do.

Now, the question, if they are going to go be doing an operational mission, you know, our sailors are kind of conflicted because they want to do that mission. And so the question is, is do they feel it, do they want to do that mission, do they feel—that is something I think the comprehensive review is going to get to. Do we have systems in place that accurately measure the risk independently, and the operational fleet commander ensures that due diligence has been done to the level of risk for the level of operation that they will be doing. And that is what I think we are getting to.

Ms. BORDALLO. Thank you. I feel that, you know, if maintenance and training and all of this is lacking, the commanders, the captains of these ships, should be, you know, letting everyone know about it, and certainly maybe we wouldn't be in this fix.

The other question I have is, Admiral Moran, the need to grow the size of the fleet has often been a point raised when we talk about the Navy readiness. However, the Navy's proposal to grow to 355 ships would take decades to be realized, which means we have to make do with the size of the fleet that we have in the near term.

With that in mind, what near- and mid-term measures are being considered with respect to how we crew, train, and maintain the ships that we have today in order to rebuild and sustain readiness? How will the Navy prioritize missions or, in some cases, turn down missions so we don't put sailors at risk by running the fleet ragged without being properly trained and maintained?

Admiral MORAN. Yes. It is—a key question for Admiral Davidson's team is to assess how much operational tempo in places like Japan, Rota, Bahrain, where we have forward-deployed forces is—reaches a point where we can't do the maintenance and the train-

ing and have the appropriate amount of time left to do the operations.

On forward-deployed forces like in Japan, the training is done while you are at sea operating on deployment, for the most part. There is not dedicated time, as the GAO pointed out, like we have back here in CONUS [continental United States]. So that is an issue that both chairmen have raised as a serious point that we have to study to make sure that when we build the model for how we maintain and operate ships in the forward-deployed naval forces, we have sufficient time to do those things.

The size of the force, of course, as I testified last February and March, does matter. But wholeness of the force matters just as much, because you can have a large force that is not whole and you are going to run into these problems. If maintenance takes longer, it disrupts the schedule. If the schedule is disrupted, it disrupts the ability to train. If the training is disrupted, you end up in these places you have described with expired certifications and so on and so forth. So we do have to look at this model from the ground up.

But we also recognize, part of the reason why we have FDNF forces is because we get four times the presence with those forces than we would if we had them all in CONUS. So, for example, the fact that we have got one carrier in Yokosuka, it actually gives us an equal—roughly equal to 16 carriers when we only operate 10. That is a big difference. Having four destroyers in Rota, Spain, operating off of BMD [ballistic missile defense] stations was the principal reason we wanted to put those forces forward was to get more out of those ships and not have to rotate as many from CONUS to do those missions.

So all of these things culminate with this notion that we aren't big enough to do everything we are being tasked to do. And our culture is we are going to get it done because that is what the Navy is all about. And sometimes our culture works against us. And I think we ask the sailors to do an awful lot, to your earlier point, and perhaps we have asked them to do too much, and that is what the comprehensive review will look at.

Ms. BORDALLO. Thank you.

I have just one quick final question for any one of you who want to answer. Would you say that sequestration might have had something to do with the lack of maintenance and the training and so forth, funding not being there?

Admiral MORAN. I am on record, ma'am, that that is absolutely the case. That along with nine consecutive continuing resolutions, and we are about to hit another one. Those budget uncertainties drive uncertainty into schedules, drive uncertainty into maintenance. Our private yards, our public yards, this is an issue across the board. So the most useful thing we could have out of Congress right now in terms of addressing a lot of our readiness concerns is stability in the budget.

Ms. BORDALLO. Thank you. And I am looking forward to the report. And I do want to say, I had a nice conversation with Rachel before the hearing today. She is one brave woman.

Thank you, Rachel, for being here with us.

And I yield back.

Mr. WILSON. Thank you, Ranking Member Bordallo.

We now proceed to Chairman Rob Wittman.

Mr. WITTMAN. Thank you, Chairman Wilson. Admiral Moran, Rear Admiral Boxall, Mr. Pendleton, thank you for coming before us today. Thanks for your service, and thank you for your candor and frankness. It is critical for us to get to the bottom of this.

Mr. Pendleton, I want to begin with you. In terms of the material and training readiness of our ships homeported in Japan versus ships homeported in the United States, is there a difference in levels of readiness? And which group of ships are more ready than the other?

Mr. PENDLETON. The information that we have in the 2015 report that we weren't able to update shows trends, and the Navy calls them equipment casualties, it is broken stuff, had basically been upward for both U.S.-based and overseas-based ships. The overseas-based ships casualty reports were—and, again, that is equipment—was more steeply upward. But we weren't able to update that trend line since then. So I can't answer it since 2014 when our data ended.

Mr. WITTMAN. But the recent data you have, lower state of readiness for forward-deployed naval forces versus those in the United States?

Mr. PENDLETON. We saw more—a more steep increase in breakdowns for the overseas-based ships.

Mr. WITTMAN. Admiral Moran, do you agree with GAO's assessment?

Admiral MORAN. I do, Mr. Chairman. There is a—I think this speaks to what you raised earlier in terms of the—if we are not rotating those ships back, the older they get, the more care they are going to need. And that might be an indication, and it is part of what we are looking at in the comprehensive review, is these extended periods at FDNF having a detrimental effect and impact on their material condition the longer they go. And is the SRF [ship repair facility], the ships force—the maintenance force in Japan, have enough capacity to deal with the increased numbers we have put in FDNF Japan in the last 3 years.

Mr. WITTMAN. Following up on that, in order to maintain overseas presence, will the Navy increase or decrease forward-deployed forces in Japan and elsewhere?

Admiral MORAN. Well, I think we have all taken a pause here, for all the right reasons, to figure out whether our current plan is the right plan. And we are looking forward to Admiral Davidson's report in 60 days to let us know whether we need to make adjustments to that plan.

Mr. WITTMAN. Was the plan prior to this to increase or decrease that in the future?

Admiral MORAN. The current plan—we just completed the third DDG [guided-missile destroyer] crew DASH [drone anti-submarine helicopter] ship in Japan that was added to that force.

Mr. WITTMAN. Okay.

Admiral MORAN. And so I am not aware of additional ones this year or next year.

Admiral BOXALL. The strategic laydown plan as we bring in LCS [littoral combat ship] in station and rotate them forward will increase the presence. But, again, that is with the existing strategic

laydown plan. We are going to look at that, I am sure, as part of this review. Certainly, how we do that is, you know, a double-edged sword. We know it is harder, more expensive to maintain, but we need ships forward to be there, given especially the number of ships we have.

Mr. WITTMAN. Gotcha. Very good.

Mr. Pendleton, from a financial perspective, is it more cost effective to homeport ships to the United States or to forward deploy those ships?

Mr. PENDLETON. That is a hard question to answer. I mean, if you look at it on the margin, it is marginally a little more expensive to have ships overseas. We did analysis to show that. I would caution against the rule of thumb, not to differ with Admiral Moran, because I have heard this many times about you get four times more presence. That is true from a four-structure standpoint, right? I mean, one ship can cover down on what four ships would do. But that is mainly because of the way they are deployed.

So, essentially, the U.S. based—the OFRP model, the Optimized Fleet Response Plan model has them going out 7 months out of every 36. FDNF ships are scheduled to go out 16 months out of every 24. There is a graph in our report that describes this. I mean, it is difficult to quantify the impact of that, sir.

Mr. WITTMAN. Very good. Thank you, Mr. Pendleton.

Admiral Moran, do you agree that if we had more ships in our Navy fleet, we could spread the workload more evenly, we wouldn't be pushed up against the demands and the stresses that happen when you have ships forward deployed for more than the planned number of years, extended maintenance periods, truncated training periods? Give me your perspective about how the number of ships we have today—and let me put it in perspective.

If you go back to the 1980s when we had a Navy of 600 ships, we had 100 ships forward deployed. Today, we have 277 ships. We have 100 ships forward deployed. Give me your perspective about the size of the fleet in relation to where we are today with forward-deployed naval forces.

Admiral MORAN. Well, you just gave the answer for me, Mr. Chairman. I mean, that math is pretty hard to argue with. And while Mr. Pendleton and I have had this discussion, you can argue over the factors, you know, it is four times or three times, but the fact is, even with that, those ships are a lot closer to where we might have to fight by being there. And I think that is a value you can't put a times anything on. It is clearly—and the message that sends to our allies and partners in the region is vitally important.

That said, I think you made the point about if we are still operating 100 ships deployed today at a force that is 40 plus percent smaller than it was in the 1980s, it is—actually, the 1980s and 1990s, it is going to be a bigger stressor on that force. So, yes, I agree with you.

Mr. PENDLETON. Mr. Wittman, may I add one thing?

Mr. WITTMAN. Yes, please, please.

Mr. PENDLETON. The admiral makes a great point. And it is important to emphasize that the Navy doesn't create the demands, the Navy responds to demands. They are being asked by the com-

bat commanders and the Department of Defense to fulfill those demands. So it is important to make that distinction.

Mr. WITTMAN. Gotcha. Very good.

Rear Admiral Boxall, let me ask this. In order to get ships ready today to deploy, you spoke a little bit earlier about what they do for material readiness. And what we see is them going to other ships, cannibalizing parts in order to get ships ready to maintain that material readiness. Is cannibalization a systemic problem with surface ships? And is the root cause sufficient money to procure new parts or stocks of parts to make sure you have them on hand to keep up with routine maintenance or expected problems with wearing of parts and wearing of systems?

Admiral BOXALL. Sir, the cannibalization of parts off ships is something we try to avoid as much as possible. But there is a lot of reasons why we do it. Sometimes it is the availability of the part. Sometimes it is the—even when we have the money to buy the parts is—you know, we have had a lot of money restored in the last year, especially the 2017 RAA [request for additional appropriations]—but it takes time to go buy that part. Some of these are made by very unique vendors, so there is some pent-up readiness, spare parts, sparing challenges out there, contracting time to do those things. So we are seeing some cannibalization increases.

We are also seeing an increase in the C2, C3 CASREPs [casualty reports]. That to everyone is kind of—a C2 is where it becomes kind of an attention getter for an operational commander. C3 means there is a major issue on that ship we got to get to very quickly. There is kind of two reasons for that. One is the actual material readiness is degrading and we need to bring it to the leader's attention. The other reason is is that in places where we are having a difficult time getting work done to repair these CASREPs in the yards because of the demand, the commanders are trying to boost the priority of their jobs to get them in because it is the best way they know how. That is a signal back to us also that says, we got to get something right and get—not just because we want the reporting to be accurate. We don't want commanding officers—again, we challenge them with telling us when things are wrong, and when they do, they send the flare, and we expect them to do that. But if they are doing it because it is the only way they can get the response, then that is another issue. And this goes to the demand that we have specifically in SRF, ships repair facility, in Yokosuka for is probably the more significant example.

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

Mr. WILSON. Thank you, Chairman Wittman.

We now proceed to Ranking Member Joe Courtney.

Mr. COURTNEY. Thank you, Mr. Chairman. And Admiral Moran, I guess—one thing I think might be helpful, for some of us anyway, just sort of walk through what the investigative process and reporting process is going to look like over the next, you know, 60 to 90 to 120 days in terms of the various efforts that are underway.

Admiral MORAN. So immediately after both collisions, any mishap, we stand up an investigative team. In the case of these two collisions, in Japan, we put a dual-purpose investigation together. That includes the normal safety investigation and the JAGMAN [Judge Advocate General Manual] investigation. Those are privi-

leged investigations. We do not share that information publically so we can protect folks from being very open with us and giving us as much information as possible to determine the root cause.

So those investigations are stood up immediately by the convening authority. The convening authority for *Fitzgerald* was the commander of 7th Fleet. The convening authority for *McCain* was Admiral Swift because of the other investigation going on, and because we relieved the 7th Fleet commander in the interim.

So those investigative officers are usually—in this case, are both flag officers. They take a team to the site, to where the collision occurred or where the—in this case, both ships were brought back to appear—one in Singapore, one in Yokosuka. And they go through every aspect of an investigation. There is a checklist of things you do. We added cyber to that checklist because of obvious concerns with the fact that everything we operate has a cyber component to it—networks, gear, radios. Everything. And so we want to make sure we understand that that is not—we want to eliminate that as a potential causal factor to a mishap.

Those investigations can take a week, 2, 3 weeks. And a report is then passed to the convening authority. The investigation is not complete at that point. That convening authority then gets to endorse the report, ask additional questions, go review the following things—I am not satisfied with X, Y, or Z. And then the investigating officer has to go back, look at those things, and provide an addendum to the report.

And then when commander of the 7th Fleet is complete with his endorsement, it gets passed to PAC [Pacific] Fleet. And in the case of *Fitzgerald*, that is where the current report and investigation reside with Admiral Swift. He then has a responsibility to look at the report for completeness and any findings of fact that he is unsatisfied with and wants further investigation. He can direct it in that endorsement.

Ultimately, it comes to me, both of those investigations. So a lot of people think that once the investigating officer submitted a report, the investigation's done, we should share that information. But I appreciate the opportunity to explain that the endorsement process is still part of the investigation, because we could ask for additional investigations. So that is on the investigation side. That is the very tactical level. What happened to that ship? What caused that particular incident?

The comprehensive review that we directed Admiral Davidson stand up, 60 days was to go out and look at all the man, train, and equip functions across the force but with specific focus on FDNF Japan because of these four mishaps that have occurred in the last year out there, to look for things like career path management, for are we doing the right training? Is the model for how we employ forces in FDNF the right model? Is the maintenance model that supports it the right model? All of those things we have kind of already talked about in this hearing.

And then above that level, the Secretary is doing a strategic readiness review where he is going to look across the Department at things that are policy related, resourcing related. Are we making the right choices? Do we need more guidance?



And it will be a nice complement to the comprehensive review, because it will look above where Admiral Davidson is looking. So we will get a very strategic, operational, and tactical understanding of what has occurred, why it occurred, and then what are the things we are going to do to fix those issues. Does that help?

Mr. COURTNEY. It is. Thank you.

And I think it is important just for the public and obviously the families to understand, you know, again, the different steps. And I am sure, you know, the committees will be, you know, following it like a box score in terms of, you know, asking questions.

In your written testimony, which I know you summarized, and we, you know, appreciate that. But you did make, I thought, a very powerful statement, which is as follows: No matter how tough our operating environment or how strained our budget, we shouldn't be and cannot be colliding with other ships and running aground. This is not about resourcing. It is about safety, and it is about leadership at sea.

And, again, just to go back to the process we are in right now. That is really what the 60-day comprehensive report is really aimed at in terms of just, you know, why is this a recurring event in this particular area of the world; is that right?

Admiral MORAN. Yes, sir. But I would also compliment GAO in this regard, that I think they offer a pretty nice blueprint for some of the things we need to go look at in terms of trends and what of those macro trends and what do they imply about the force readiness in FDNF Japan and across the fleet.

So we will get at some of those as well inside a comprehensive review. But it is part—a key part of it is do we have the right training in place for our commanding officers? Are they getting enough of what they should have to operate in waters that have become highly congested and contested in that region. And it is a lot busier than it was just 8 years ago.

And so we need to review that, and we need to review the training. We need to review the career paths for our officers, our junior officers, and we need to make sure that we understand that we have the right manning models in place. And GAO calls this out in the report about how we establish the workweek and how do we respond to the manning profiles for those ships.

Mr. COURTNEY. Thank you.

Well, and, again, I think that sort of follows up on what GAO sort of was asking for over the last couple of years as well.

I guess one sort of footnote I was wondering, you know, what you would think about this in terms of that statement, which is that it is about leadership at sea, but it is also about leadership, I think, ashore as well in terms of just, you know, the way, you know, decisions are being made. And I have to say, going back to the Balisle report, which I am assuming all the witnesses are pretty familiar with—I mean, that was sort of a key critique that Admiral Balisle had which is that the lines are kind of blurred in terms of just dealing with some of the issues we are talking about here today.

I mean, ultimately, you know, we are trying to figure out who decides. You know, when you have the certification issues that Mr. Pendleton described, you know, who calls, you know, time-out and just says, you know, no. You know, as persistent as the combatant

commanders' requests are, you know, when does it reach a point where—on where does it reach the point where someone says, you know, that is just not going to be deployed because it is not safe and it is not ready. And so I am assuming that that is also a part of the comprehensive review.

Admiral MORAN. Yes, sir. And I believe the Secretary is going to look at that, and a strategic review as well, for organizational C2, command and control. Who is responsible precisely for readiness and man, training, equip, and operational demand in the Pacific Fleet? And how does that get balanced against the larger fleet that Admiral Davidson is managing out of Fleet Forces [Command]?

Mr. COURTNEY. Because even today, I have been a little confused about, you know, who is the decisionmaker. You know, is it the operational commander? Is it the, you know, forces commander?

And I think, again, Admiral Balisle really, I think, nailed that pretty well in terms of just that being an issue that has got to be cleaned up. So—

Mr. Pendleton, you described the trend of the increasing lack of certifications which was kind of a top line in terms of the number of ships that are out there.

Can you give us some more specific information regarding the *Fitzgerald* and the *McCain*, to what extent do they lack certifications?

Mr. PENDLETON. I would rather defer specific questions about the *Fitzgerald* and *McCain*. They did have missing certifications, as did most ships. I would like to talk about the key warfare mission areas, though, if—

Mr. COURTNEY. Sure.

Mr. PENDLETON. And I would give the admirals a chance to comment on the specific ships with the ongoing investigation. I am uneasy about that.

I mentioned earlier that 8 of 11 seamanship certifications of 11 ships in Japan were expired. There were others that had fairly significant expirations of 7 of 11 ships for fire support and surface warfare. And for undersea warfare, 8 of 11 ships had expired certifications. Some of those certifications were several months overdue.

So when we looked at some of the basic certifications, the things you have to do to, you know, keep track of maintenance and antiterrorism and communication, that kind of thing, those were better. They weren't great, but they were better. It seemed that seamanship stood out as a problem area. And then when you got over into the warfare mission areas, the kind of things that you have to do together to be able to do the missions of the ship. That is when we started—I presume that those were more complicated certifications to obtain. Honestly, I haven't been out to talk to them about it. Those were—had the higher percentage of ships that had expired certifications.

Mr. COURTNEY. Thank you. Well, again, I am sure my question is going to be asked at some point—

Mr. PENDLETON. Yes, sir.

Mr. COURTNEY [continuing]. In this process because—and, frankly, it is a question that needs to be flushed out.

Mr. PENDLETON. Yes, sir.

Mr. COURTNEY. So thank you.

I yield back.

Mr. WILSON. And thank you, Ranking Member Courtney. And truly an indication of how important this hearing is. Our love and affection for the 17 sailors that we have lost and others who were injured, we have been joined today and we now turn to the full chairman of the Armed Services Committee, Mac Thornberry.

The CHAIRMAN. Thank you, Mr. Chairman. And thank you all for being here. I just want to say I really appreciate the work of GAO as well as the work of these committee members and our staff on these issues.

The leadership of the Department in the last administration denied we had a readiness problem. They said we were just making it up. And I appreciate the persistence [of] members on both sides of the aisle in getting the facts. And certainly GAO has helped with that.

Admiral Moran, I very much appreciate you and Admiral Richardson's commitment to get to the bottom of this matter. I looked a little earlier at your testimony from earlier in the year, and you highlighted the stresses and strains on the force based on the operational tempo, et cetera. You also testified that you thought that the deployed fleet was in pretty good shape, the ships here in the United States were really suffering.

Based on what you know today, would you revise that assessment?

Admiral MORAN. Mr. Chairman, so—I promised you I would be frank, and I will be. I personally made the assumption—have made the assumption for many, many years that our forward-deployed naval force in Japan was the most proficient, well trained, most experienced force we had, because they were operating all the time.

I made the assumption. It was a wrong assumption, in hindsight. And so obviously, at this point, I would tell you that what we have sent from CONUS to deploy, I would maintain my position in the hearing last February.

Clearly, because the models are different and because the strain on the force in Japan is so evident to us today, we are going to have to get after that question. I don't know precisely. And, you know, I am also very anxious to remind the committee that—the committees that we have to get to the root cause of both mishaps before we can make a determination.

But the trends that the GAO has pointed out, the trends that we are seeing in our reporting stats are concerning, and they do demonstrate a fraying of the readiness on the edges that we need to address.

The CHAIRMAN. Yeah. I would just comment: I don't think we can look at this too narrowly. This is looking at the surface fleet. But we know we cannibalize submarines, we have got these problems and a variety of other problems. And the other services have it too, by the way, which is a more widespread problem.

Let me just ask you this. We talk a lot about the stresses and strains on the people. How come the Navy has not asked for more people, increased end strength.

Admiral MORAN. Manpower, as you know—3 years as the Chief of Naval Personnel, I have dealt a lot with the manpower issues.

Manpower requires you to project at least 2 years ahead to be able to know if you are getting to the right numbers. And I don't want to bring this back to uncertainty in budgeting and resourcing, but it impacts our ability to assess the right number of people when we can't predict or project what we are going to be in 2 years.

So it has an impact. We are always trying to catch up with manpower, and I think that is part of what Admiral Boxall described in the afloat training group. We bought the billets 2 years ago. But it takes time to fill those billets, because we have to go find the right experienced, right folks that have operated and understand what the challenges are in building and attaining certifications.

So manpower is a bit more challenging to get precise. And as you know well, manpower also costs an extraordinary amount of money. So we are always trying to dial it right. We are not getting it exactly right, but we are doing the best we can with the inability to project precisely where we would like to be in 2 years.

The CHAIRMAN. Okay. If you are going to be frank, you got to be frank with us and tell us where we complicate your life with CRs [continuing resolutions] and the Budget Control Act. You did that earlier, and I appreciate it. But don't hesitate to—

Admiral MORAN. Sir.

The CHAIRMAN [continuing]. Where we are deficient.

Let me just ask this, and it goes right back to something Mr. Courtney was talking about. It seems to me the hard issue is—and you talked about it—for a commander in a ship, saying okay, I have got these problems. I got to ask for a waiver. I have a risk mitigation plan. You and Mr. Courtney talked about it a little bigger. But what is going through my mind is, when do you and Admiral Richardson basically say to the Secretary of Defense or the President, We cannot do what you expect us to do? And to us?

You said earlier the culture works against us. It is true in every service you salute and say, You give us a mission, we will do it. I don't know if you have any comments on this. But what is going through my mind is when does a service chief or vice chief say, We cannot do what you expect us to do with what you have given us?

Admiral MORAN. Sir, there is one very good example of where we have done that in the past few years. You will recall where we gapped carrier presence in the gulf for several months. We have done that twice. And that was a recognition that we were going to overstress the force and weren't able—we were concerned about sticking to our plan in Optimized Fleet Response Plan, which was a 7-month deployment. We wanted to get there, and we wanted to maintain that.

The world gets a vote. A lot of pressure came up. And we went down and argued why we thought we needed to stick to those 7-month deployments. And the joint force accepted those gaps. It was painful. It was a difficult message to send to the region, but it was necessary to be able to continue to try to reset the Navy.

The CHAIRMAN. We are going to stay after this, ma'am. We are going to stay after this.

I yield back.

Mr. WILSON. Thank you very much, Chairman Mac Thornberry. We appreciate your leadership.

We now proceed to Congresswoman Susan Davis of California.

Mrs. DAVIS. Thank you. I want to thank all of our chairs who are up here today and really have provided a lot of good leadership of walking us through these issues. And thank you to all of you for being here. And to Ms. Rachel Eckels, thank you. Thank you for being here on behalf of 17 shattered Navy families who are grieving today. We appreciate that. And it helps us to think about your son as well.

I know that we have been talking a lot about all the problems that have been encountered, how tragic they are. But one of the things I wanted to ask very quickly was really about the heroism that was demonstrated on the ships as well.

And I know, in having read almost that minute-by-minute account of what happened on the *Fitzgerald*, that there were specifically two sailors who were mentioned repeatedly for their heroism. Are they up for awards? Have those been submitted for recognition? What are we doing to really acknowledge the heroism as well?

Admiral MORAN. Well, I appreciate you asking that question.

There is a difference between heroic and valorous. And people often get confused by that. And it sounds like you are not. So I appreciate the fact that the question resolves around our sailors who operated that night, some who lost their lives, who gave their lives for others.

It is a command's responsibility to initiate the recommendation for awards in any circumstance. So as you might imagine, right now their focus might be elsewhere. But we will get to those. And when they come forward, we will do the appropriate recognition that comes from those recommendations.

In addition to that, though, I think you also know that we posthumously advanced all 17 sailors to the next pay grade in recognition of who they could have been. So thank you for the question.

Mrs. DAVIS. Sure. Thank you. I wonder as well—we have been talking about whether or not the forward-deployed model is sustainable and the fact that it is used so much. I wonder as you are—have looked at a whole host of different areas if you are feeling comfortable yet kind of ordering those in terms of priority. Is it the training for sure that has to be different?

One of the things that I recall reading with this is—I guess at one time it sounds like the initial training, sort of the foundational training, if you will, was much longer and so that our sailors really, you know, were intimate in many ways with the apparatus, with everything that they are asked to do differently. Maybe you can speak to that.

You know, people who know how to build computers obviously can respond to the needs of a computer a lot faster than those of us who just, you know, use it to get our job done. And so is that true? I mean, is there a real difference in the time that is spent helping to familiarize our sailors with the ship, with what they work with. And on the other hand, then, it is driving under, you know, sub—you know, decent conditions that they also have to have to be aware of. Where does that fit?

Admiral BOXALL. As we look—we are continually modifying our training methodologies, new technologies we have. You know, I am sure you have heard, since the Balisle report, we had taken a lot of our initial training away for our new commissioned officers. We

used to have, up at Surface Warfare Officer School in Newport, a very long 16-week course.

Since that time, we have restored 15 of those 16 weeks in either pre-division officer training, when they first graduate from the academy or ROTC [Reserver Officer Training Corps], or whatever, and then another 5-week period, 6-week period afterwards. So we have restored a lot of that. We have got a lot of the same peak U.S. personnel qualifications standards that we require every person on every ship to go through.

I do believe that we should be open to looking at all of this as part of the comprehensive review. And Admiral Davidson, as a surface warfare officer himself, certainly understands that, you know, we focused our training a lot on ship handling. These are very powerful ships. We want to handle them close to a pier, where we need to be. We put a lot of money and time into bridge resource management, that team piece. The combat team and the bridge team working together.

As we go forward, we will look and say, Do we need to do more of that type of training by individual training. I don't know the right answer just yet. I am open to the fact that we may have it wrong.

Mrs. DAVIS. All right. Thank you. I believe my time is up.

Thank you, Mr. Chairman.

Mr. WILSON. Thank you, Congresswoman Davis.

We now proceed to Congressman Duncan Hunter of California.

Mr. HUNTER. Thank you to both the chairmen and the ranking members for having this hearing today. Gentlemen, thank you for being here and for your service.

I will just get down to brass tacks really quick.

You had seven ballistic—you had seven BMD ships forward deployed. You lost two. What are you going to do in the meantime for those two? What is going to fill that gap while they are getting repaired?

Admiral MORAN. Admiral Swift has moved ship deployments and ships around within Pacific Fleet, which is our largest contingent of naval power. I can't talk about who and what and when, for obvious reasons. But he has what he needs to replace the BMD capability that he thinks he needs to have at this crucial stage.

Mr. HUNTER. So we know you had seven. Seven minus two equals five. Are you planning on going back to seven?

Admiral MORAN. Are we replacing the capability we need to do the operations we have been tasked to? The answer is yes.

Mr. HUNTER. Okay. Are you going back to seven ships?

Admiral MORAN. The seven ships will be—yes, sir, we will stay with seven ships.

Mr. HUNTER. Okay. So you will have seven ships there.

Admiral MORAN. Remember, seven ships—some are in maintenance and some are—you know, they are not always all at sea. So we are able to move some of those around to accommodate Admiral Swift's demand signal.

Mr. HUNTER. So you will be replacing those two ships—you will be replacing the capability of those two ships?

Admiral MORAN. We will be replacing—

Mr. HUNTER. So you will have the same capability that you had beforehand.

Admiral MORAN. Yes, sir.

Mr. HUNTER. How long will that take?

Admiral MORAN. As long as it takes.

Mr. HUNTER. I mean, how long until that capability gap is filled?

Admiral MORAN. Oh I am sorry. I don't have a specific. I can get back to you on that.

[The information referred to can be found in the Appendix on page 97.]

Mr. HUNTER. Okay.

Next, I have been seeing some articles that said that surface warfare officer [SWO] training was cancelled. And I haven't gotten to the veracity of this. There used to be like a 6- or 7-month SWO school. And there is not. Now it is DVDs [digital video discs] and on-the-job training. Is that correct, or no?

Admiral BOXALL. It is true at one point. Back in 2003, we initiated what we call computer-based training. That lasted about 5 years, 6 years. And then it was—it was removed as a bad idea for all the reasons it still sounds like a bad idea.

Mr. HUNTER. So you don't mind stopping there—we have a virtual trainer in San Diego for one of the LCS variants that I went to, I don't know, 4 or 5 years ago. And it is like basically being in a—like an F-35 trainer or something. But it is the ocean and the whole bridge. Is that what you call computer training?

Admiral BOXALL. Absolutely not. The computer-based training that I am speaking of are—think PowerPoints on a CD [compact disc]. So that is what was kind of given to them. Because we took away their school, we said go to the ships. Do all your training there.

As I mentioned to Mrs. Davis, we have restored almost all of that timing. We do it in the fleet concentration centers instead of in Newport right now at the division officer level. And all other training is similar.

But you bring up a great point. Our training for LCS, the littoral combat ship, that we do in San Diego, and Mayport will be doing, is the best there exists that I have seen in surface warfare. And so I believe that we will look forward to—as part of this review, looking at where we can better use. And we already do use a lot—

Mr. HUNTER. Let me interject, now that you said that. There is two things. One is called the immersive virtual ship environment, right? That is the LCS—

Admiral BOXALL. Yes.

Mr. HUNTER [continuing]. Trainer that we were on the actual bridge. Then there is a live virtual constructive training, right? And that is the—that is like an Xbox game where you can—you can have the ship blow up in places and do things. And then you can basically see all the outcomes and affect those outcomes like with an Xbox controller, right?

So my point to this—so after you say that it is great, the Navy has only fulfilled 40 percent of that contract, and that is a semi-parochial thing, because it is in San Diego. But I would think that you would have these virtual trainers for every bridge, for every

deck, because they are so inexpensive and so much easier to train the guys and have them, you know, fall in immediately as opposed to doing on-the-job training.

Admiral BOXALL. So certainly we are looking at what you call live virtual constructive is—we kind of use that for our advanced training when we integrate ships, submarines, aircraft in a—you know, we don't want to know if it is real, live, or not. But for the specific type of technologies, we already have that in other areas, not just LCS. But I do believe that we are getting some economy with it in that we are getting better quality fidelity training. And we are doing it at a better price.

If you will go back and look at those folks that—the same trainers that criticized computer-based training, the same types of folks that are leading this other virtual training that we are doing are like “This is a best of both worlds.”

Mr. HUNTER. Let me get into—I appreciate that. Let me get in one last thing.

I think we—Mac said—or the chairman said he didn't want to get too narrow on this. I think there is a lot of things that we are blaming from forward-deployed model, fleet size, maintenance schedule. This wasn't a complex—like a suppression of enemy air defense, or something crazy like that. These are ships hitting other ships and running aground. And I think it is easy to obfuscate and say there is all these different problems as opposed to not seeing a ship on a radar or with your binoculars out the window. I think it is almost easy to get too carried away and not be narrow enough in this case. And I hope we just stay on this.

Thank you. Mr. Chairman, I yield back.

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

We now proceed to Congressman Don Norcross of New Jersey.

Mr. NORCROSS. Thank you, Chairman. And very humbling day when we go to review something like this. But having been on a job three times in my lifetime when somebody was killed, it immediately took me back to the thoughts that people that I worked with immediately reviewed what it is that they are doing and how can they prevent something from happening.

So there was the first collision with the fishing trawler. Then there was the *Fitzgerald* when seven people were killed. And I would think that every commanding officer in every ship would immediately look to see how they are performing so it didn't happen to them. And then the *McCain* happened.

So I ask you: What is preventing the next one from happening? What is being done different today that was being done different from before the *McCain* accident and before the *Fitzgerald*?

Admiral MORAN. Sir, it is a very appropriate question that, as you—I think you are aware, we conducted an operational pause around the entire fleet. An operational pause is not something we take in lightly. This happens in every region on the globe where we have got ships operating and those tied up at the pier back home.

It is an opportunity for commanding officers to do just what you said, to also review what they—lessons learned from other similar mishaps so that we give them a chance to decide, is our training where we need to it be? Are our standards as high as they should



be? What do we need to do as a team to operate better as a team? Because driving ships around is incredibly team-oriented. And that is one of the things we are looking very closely at, at both of these investigations.

Mr. NORCROSS. But the pause happened after the *McCain*, correct?

Admiral MORAN. Yes, it did.

Mr. NORCROSS. Why didn't that happen after the first collision? After the second collision?

Admiral MORAN. Sir, it should have.

Mr. NORCROSS. As individual COs on the ships, wouldn't they go through a self-evaluation almost immediately to say, What am I doing and how do I prevent before somebody has to tell me that?

Admiral MORAN. Absolutely.

Mr. NORCROSS. Do you know if that happened on the *McCain*?

Admiral MORAN. I do not know exact. We are waiting on the results of the operational pause. We asked every fleet commander to provide input back on what did they learn from that operational pause, talked about these things, who actually took some action, what kind of additional training. The commander of surface warfare sent out additional types of training for every commanding officer to use in that with their representative crews. But I do not have a list for you. I am not sure if Admiral Boxall does.

No, we do not. But we will get you one when we have it.

[The information referred to can be found in the Appendix on page 97.]

Mr. NORCROSS. Finally, what is happening today differently other than the operational pause? Is there anything during the operation that you have sent out to all the commanders to say you need to do this immediately?

Admiral MORAN. Yes, sir.

So Admiral Swift has already initiated several steps, several actions to include a zero base review of the material condition of every ship at FDNF to find out where they have issues both in the physical plant but also perhaps with training and certification. They are going to zero base the certifications and make sure that all of those get recertified across the force in FDNF and then expand it into the entire PAC Fleet.

He is doing a zero base review of the ATG manning. I am not sure you were here when we talked afloat training group. But that is the group that goes out to the ships as an independent team to look at whether that crew is operating to our standards. And so he is going to probably ask for more resources for all of those things.

Mr. NORCROSS. Has any of this immediate review in turn caused any ship to be returned home or to cease operating because they were in such violation?

Admiral MORAN. Not to my knowledge.

Mr. NORCROSS. Thank you.

I yield back my time.

Mr. WILSON. And thank you very much, Congressman Norcross. We now proceed to Congresswoman Vicky Hartzler of Missouri.

Mrs. HARTZLER. Thank you, Mr. Chairman. Thank you. Thank you, gentlemen.

So I, like many others here, heard the news of the first accident. And I was just—I couldn't believe it. Like, how can this happen? And then to have it happen a second time. It is both disheartening and disturbing at the same time. And I wanted to follow up with some of the things—line of questioning of my colleague, Mr. Norcross, in that what are we doing now?

And one thing is—I mean, we knew there was a pause. But did you say that you haven't gotten the results of the pause yet where we had the USS *Fitzgerald* in June had the accident. So you haven't received that yet?

Admiral MORAN. The operational pause, ma'am, was taken after the *McCain*, not after *Fitzgerald*.

Mrs. HARTZLER. Okay. Okay. But you haven't received those results either.

Admiral MORAN. Not—

Mrs. HARTZLER. That is just—

Admiral MORAN. No, ma'am. Not all of them.

Mrs. HARTZLER. Okay. I want to talk about the number of hours. Mr. Pendleton, you touched on that. But how much are sailors expected to work right now? And is over 100 hours out of line for that? And how do you think the Navy should address this?

Mr. PENDLETON. Yeah. I will defer to the admirals to talk about how much they are working now.

In 2014, a Navy internal study indicated that the average sailor was working over 100 hours a week, about 108. And they—so that meant—there is 168 hours in a week. They had—so they were working 108 and they had 60 off. So that is about 15½ hours a day.

The standard workweek, which is founded on a 70-hour base workweek and ultimately, when they add other duties, is 81, it is fairly grueling in and of itself. So.

If the Navy was—to the standard that it has, it would—the sailor would have 81 hours off and roughly—excuse me, 81 hours on and 87 off.

So just about—just over 11 hours a day is what is sort of programmed in.

Mrs. HARTZLER. So Admiral Moran, is that something that you all are striving to get to, those type of numbers?

Admiral MORAN. We are examining that through—we have an organization down in Millington, Tennessee, that is used to go and look at all sea duty to determine what the right workweek levels ought to be. We have done this for decades.

We have been pretty consistent with it, but I think, based on the trend lines that we are seeing in FDNF that we referred to earlier, it is certainly time to look at whether the maintenance backload, the work effort that is going on at FDNF Japan today, by sailors on the waterfront, is reaching a point where that workweek needs to be modified.

Mrs. HARTZLER. Great.

What about—when I first heard about this, I had the thought that maybe it was cyber. Now, I have read some reports saying that, perhaps, that has been ruled out. But you did mention that you are going to—in this study, in the review, they are going to make sure it is eliminated.

What can you tell us about that? How do you go about eliminating that somebody took over your systems?

Admiral MORAN. It is relatively new ground for us. This is the first time we have sent a team from our Cyber Command here in Washington. Commander, 10th Fleet, sent a team over there to pull as much data from that ship as possible that records data to see if there were any disruption or interruptions that are abnormal.

I would also offer to you that just about every three-letter agency in Washington, DC, has looked to see if there were indications of an intent or potential acknowledgment of a cyber attack. We have seen—I have personally not seen any evidence of that.

But we are not stopping there. The team is in place in Singapore today, has been for several days, capturing all of the computer and network information to see if they can find any abnormalities or disruptions.

Mrs. HARTZLER. Okay. Well, I am glad to hear that. And in some ways it would be easier if you could blame somebody else rather than taking a hard look at, you know, maybe it is just that we need more training and it is our own policies and procedures that need to be addressed.

But the last thing is that—you know, I take very serious, as do all fellow members, of appointing our young men and women to your service academies. And the Naval Academy is just exemplary. But it is always a very sobering, but inspiring as well, event when I have the parents and the young men and women come that are going to have this opportunity. But it is sobering, the fact that I look into the eyes of those parents. And that while they are very, very proud, many times I see a little bit of fear in the back too. What is going to happen to my son or daughter?

And so this is a tough question. But, Admiral, from a scale of 1 to 10, with 10 being 100 percent confident that, when we send this young man or woman out to sea, that they are going to have the resources they need to come home safe, not from an enemy but from our own equipment and our own readiness.

How confident are you that you would tell me so I can go home to my parents and look them in the eye and say they are going to be okay?

Admiral MORAN. Tough question to answer. How I would answer it—how I will answer it is that I have incredible confidence in this team to learn from this and to get it right. And I would share that with any parent that has got a son or daughter who is considering the Naval Academy or enlisting in the service.

We are not perfect, but we need to strive to be that. And that is part of what this review is all about is to make sure we understand what went wrong and fix those things to the best of our ability to regain the confidence of not only our parents and their families but our sailors as well.

Mrs. HARTZLER. Absolutely. They deserve that. And I know we all stand ready to partner with you to do whatever we need to do to get this right so our sailors come home safe.

Thank you.

Mr. WILSON. Thank you very much, Congresswoman Hartzler. We now proceed to Congresswoman Colleen Hanabusa.

Ms. HANABUSA. Thank you, Mr. Chair. Thank you, gentlemen. And thank you, Mrs. Eckels, for being here. Thank you very much.

Admiral Moran, one of the things that you said is troubling to me. And as you know, the GAO report in 2015 had a certification and looked at, I think, 22 areas, 11 were found to be, I guess, expired. And the one that seems to be appropriate for what happened is the mobility seamanship where 8 certifications out of 11 had expired for about 73 percent.

What I am first curious about is—we have to look at these two collisions. And they are really with commercial vessels, large commercial vessels—the tanker for *McCain* and then, of course, the container ship for the *Fitzgerald*.

I am curious as to whether part of the training that they receive—and you said it yourself in your testimony. It is very congested. And when—in these areas than they were 2 years ago, just the amount of traffic. And we all know. The Asia-Pacific area has just grown, and the amount of commercial traffic that we are dealing with is different. And it is sort of the tension between commercial plus military. And I am pretty sure our ships don't go out and advertise that they are going out.

So what is it that is done in terms of the training of our sailors as to how to prepare when they are—you know, it is not whether you can aim the missile correctly or anything like that. This is different. This is just being in—like on the freeway. How are you going to manage that? Is that something that we have sort of overlooked? We are so busy training them on cybersecurity and radar and everything else that we are not—we missed the fundamental types of issues like how to navigate?

Admiral MORAN. We are asking the same question. And I think Admiral—I know Admiral Davidson is going to look very hard at that in this comprehensive review.

But you are absolutely right. We have moved from a country road to 395 going south right now in places like the Singapore Straits, in the Red Sea, and other areas where we need to be as a Navy.

But it is—I would offer Admiral Boxall, who has been there and driven ships in that region, maybe he could comment on that as well.

Admiral BOXALL. Absolutely.

The region has gotten much more difficult to navigate. There is no question. But to your point of, we ought to be able to do it there, anywhere, all the time. And we absolutely agree with you there and why we are so committed to getting this right.

We have—to your question on the certification specifically. There is two certifications that I think come most to mind when you look at our ability to safely navigate. One is MOB-D, mobility—I'm sorry—MOB-N, mobility navigation, and the second one is mobility seamanship.

The seamanship looks mostly at deck evolutions. Those are how do you tie up the ship, how do you use boats and things like that. The navigation one is absolutely critical and why, if you look, most of those are done first when the ships come out.

We have a tiering concept now that focuses on those skill sets. And even in the GAO report, he will let you know that the tier 1 are less expired than the tier 2, warfighting.

We probably need to look more closely at—there might be a tier 0, ones that never go out. And these are the types of things that we need to look very closely. That is what I sense. I have been in those waters. I had a carrier strike group there, but I have done it as an ensign off the Singapore Strait. And I am shocked at the difference between those 30 years in my career. It is like two different worlds.

So this does—you know, we are preparing for a lot of other missions as we return to sea control. But this, if nothing else, reminds us of our absolute imperative to get mariner skills right. We are committed 100 percent to doing that. And we will do whatever it takes. And that is what—Admiral Davidson will make that a fundamental part of his investigation.

Ms. HANABUSA. And I guess—I am almost out of time. But how do you prepare for that? It is like learning how to drive, right? You got to be on the road, and you got to do it. There is no, I guess, replacement for that.

So is there an idea how you are going to train your sailors to do that?

Admiral BOXALL. Absolutely. I have a teen driver also. I use this analogy. My teen driver next month will be able to drive anywhere in a car, according to the State. Not according to his dad. So there is this same type of process. We have got to give them the basic tools, we have got to train them together, and someone—and this is what we will look at—has to ensure that they meet a standard—not just that officer but the team—to keep that team safe.

It is not just that one radar operator. It is not just the lookout. It is not just the person driving the ship. It is the team, the ability to communicate that data to keep situational awareness and keep that ship out of danger. We owe nothing less to those sailors.

Ms. HANABUSA. Thank you.

Thank you, Mr. Chair. I yield back.

The CHAIRMAN. And thank you, Congresswoman Hanabusa.

We now proceed to Congressman Bradley Byrne of Alabama.

Mr. BYRNE. Thank you, Mr. Chairman. Thank you, gentlemen.

I was listening to you, Admiral Moran, about the difficulties presented to you when we pass a continuing resolution.

Last July, July of this year, the House of Representatives passed an appropriations bill. Last year in the appropriations bill, we appropriated \$38 billion for operation and maintenance for the Navy. The Navy requested a \$7 billion increase this year. And our appropriations bill that we passed in July, we plussed it up another \$500 million above your request.

So the House of Representatives appropriated the money for fiscal year 2018 that you need for your readiness. The response we have gotten back today from the United States Senate is a 90-day continuing resolution. Let me read from your prepared testimony and ask you to respond to that in light of your statement: Funding at prior year levels through a continuing resolution not only disrupts the gains, it begins to reverse them.

Are you telling us that a continuing resolution actually reverses the gains you are attempting to make in readiness for the United States Navy?

Admiral MORAN. What I mean by that, Congressman, is that when we cannot put ships on contract for avails [availabilities], and we were on a recovery path, and we no longer can stay on that recovery path, we are reverting back to a different plan—a different ramp.

Mr. BYRNE. But that is as a result of a continuing resolution—Admiral MORAN. Yes, sir.

Mr. BYRNE [continuing]. As opposed to actually appropriating.

Admiral MORAN. Yes, sir. That is correct.

Mr. BYRNE. All right. So explain in a little more detail exactly how does a continuing resolution disrupt that or reverse that? What is it in your process that that causes a problem with?

Admiral MORAN. Well, if you can't put an avail that you have told the yard that they are going to get on contract, because there is—the limits of our continuing resolution rules do not allow us to put those new contracts in place until we have a budget, then that yard has got to do something with its workforce. And when we do get the money and go back to the contract in the next quarter, it is going to be less efficient, and it is going to be far more—well, I won't use that word, but it will be more expensive, because they have had to make adjustments. They have had to move work around. They have maybe had to let people go and then hire them back.

So those are some of the impacts in disrupting the yards that are trying their hardest to help the Navy get better in terms of eating away at that mountain of backlog maintenance that we all know is out there. And they have done a terrific job over the last year.

And thanks to Congress's support in the RAA in 2017, we were able to put \$1.6 billion immediately on contract to bring avails back into 2017, which we were planning now to have to defer into 2018 only to have them deferred again. So that is the disruption I am talking about.

And Ron, if you want to add anything to that.

Admiral BOXALL. No, sir. That is—

Admiral MORAN. He is the guy that pays the money when you appropriate it. So—it is important.

Mr. BYRNE. We appreciate what you both do.

Let me go back to the administration's request for fiscal year 2018. The administration requested the construction of nine new ships for fiscal year 2018, and the House passed NDAA—we passed earlier this summer. We authorized the construction, and our appropriation bill followed this, for the construction of 13 ships.

So I think—listening to your prior answers to Mr. Wittman's questions, I think you would agree with me it is better for us to be finding the extra money to buy those extra ships than to stick with what the original request was. I think you would agree with that.

Admiral MORAN. I would agree we need a larger Navy, sir.

Mr. BYRNE. Yeah. But to get there, we have to spend more money.

Admiral MORAN. Yes, sir, because the trade-offs we are having to make, I think, are pretty apparent. And most of those trade-offs involve readiness, training, and manpower. When you buy ships or you prioritize ships, those are the trade-offs you got to make inside a limited control on your top line.

Mr. BYRNE. Well, Admiral, there was a lot of talk about what is your responsibility in all this. Congress bears a responsibility in all this. If these accidents tell us anything, it is that we can't wait to build up our fleet. We need to start now. And so I was proud to vote for that appropriations bill and our authorization bill earlier this year.

I am disappointed that the Senate has chosen to send us a continuing resolution instead of making an appropriations bill. But I believe you can count on the members of this committee continuing to do everything we can to provide you with what you need, not only to defend America but to keep our sailors safe in doing so.

I thank you, Mr. Chairman. I yield back.

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

We now proceed to Congressman Anthony Brown of Maryland.

Mr. BROWN. Thank you, Mr. Chairman.

I too believe that Congress has a responsibility to fully resource our armed services. In fact, I will go so far as adopt and associate myself with General Milley's comment, and I paraphrase, that continuing resolutions—and I will add sequestration—is comparable to legislative malpractice.

But also, Admiral Moran, I want to thank you for acknowledging, and Mr. Courtney pointed out, and I am reading from your statement, this is not about resourcing. It is about safety, and it is about leadership at sea.

Something is wrong. In a few months, 2 cruisers, 2 destroyers, 17 lives. I represent the Fourth Congressional District in Maryland. Three of those seventeen young men were Marylanders: Alex Martin; Kevin Bushell; and Timothy Eckels, whose mother was here today.

Something is definitely wrong. In my 9 months as a member of the House Armed Services Committee, I think I have lost count at the number of times that senior leaders from all services have come to this committee and said that "We are ready to fight tonight." I don't think that these collisions are consistent with that claim. And regardless of the OPTEMPO [operations tempo] or the resource constraints, whether you have a 250- or 350-ship fleet, whether the defense budget is \$550 or \$650 billion, we all have a responsibility. And yours is to manage those resources in a way where readiness is not exclusive or mutually exclusive with safety.

I thank you for your leadership. And I understand and I acknowledge that you get that.

So here is my question, and it has been touched on earlier. Admiral Moran, in your written testimony, you identified cybersecurity afloat and ashore as a significant readiness shortfall that was helped by the fiscal year 2017 additional appropriations. So that is good. You have identified it as a shortfall. You came to Congress, and Congress helped.

Can you elaborate on the progress that the Navy has made to improve cybersecurity on our forward-deployed naval forces, and

are the forward-deployed naval force cruisers and destroyers and their control systems currently equipped to defeat cyber threats?

Admiral MORAN. Congressman, I would appreciate an opportunity to come and bring that to you in a more classified setting. It deserves that kind of detail, otherwise I am just going to gloss over it here and it won't be satisfying.

Mr. BROWN. And I appreciate that. And I would hope that, through committee staff and my personal staff, that we can do that, because—look, I was on the USS *Nimitz* 4, 5 months ago. I went to the command information center. I visited the bridge. There is a lot of floating technology. There is a lot of networking—ship to ship, ship to air, ship to shore. It is not a floating city, it is a floating State. Tremendous technological assets. And the first thing that came to my mind, when I read about the first incident of two large vessels colliding with one another, is how does that happen?

And I think, as my colleague from California said, you know, sure, we talked about certification and training and maintenance. We are talking about men and women on a bridge with equipment and technology to see on the open seas. How does that happen?

So I would really like to have a better understanding of the cyber vulnerabilities, our defense, our security, when it comes to our floating, you know, vessels. I mean, it is—because I have got to believe—and I am glad to hear that you are including that in the investigation, that your surface vessels, your aircraft are just as vulnerable to cyber attacks that are going to be disruptive in combat and noncombat operations. I certainly welcome the opportunity to hear more.

Thank you, Mr. Chairman. I yield back.

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

And we now proceed to Congresswoman Elise Stefanik of New York.

Ms. STEFANIK. Thank you, Mr. Chairman. I want to associate my questions with a follow-up to my colleague Mr. Brown. I too think it is incredibly important that we receive a briefing in a classified setting regarding cyber threats to our naval ships.

But I want to ask you specifically. You mentioned that we are integrating cyber and network vulnerabilities as part of our ongoing investigation. How is that happening specifically, even if it is just to rule out cyber as a potential cause?

Admiral MORAN. Specifically, Vice Admiral Gilday, at 10th Fleet, is our fleet Cyber Command, he has a team that he has formed that will go—they are a team of experts. I mean, very, very talented young men and women that will—that are in place and will use their knowledge of how they would attack to determine whether we have been attacked. And they will know where to go look.

This is the first time we have done this. And we are not stopping just—this is to try to institutionalize doing cyber as part of any mishap—aviation, submarine. You name it. We need to go look at it as an order of business and not hand-wave it to its cyber.

Ms. STEFANIK. Yes.

Admiral MORAN. That is where we are headed.

Ms. STEFANIK. Yes. I agree with that, and that leads to my question. You mentioned that you are institutionalizing this process.



This is the first time that cyber has been integrated. Is that service-wide? Is that going to be a part of any future investigation?

Admiral MORAN. Yes. Absolutely.

Ms. STEFANIK. Can you describe other activities the Navy is institutionalizing, like Task Force Cyber Awakening and CYBERSAFE, to up our game when it comes to protecting our critical tactical platforms from cyber threats?

Admiral MORAN. I am sorry. Can you repeat the question?

Ms. STEFANIK. Sure. What other activities is the Navy institutionalizing, such as Task Force Cyber Awakening and CYBERSAFE, to increase our cybersecurity when it comes to protecting our tactical platforms?

Admiral MORAN. Yes. Great question.

So those efforts weren't started and completed. We continue to work through several of the—several of the discoveries during tests for Cyber Awakening, as an example.

One of the journeys that we are on right now that our CNO [Chief of Naval Operations], John Richardson, has really brought forward is this notion of understanding all of the digital connections that are in—that are resonant within every system we have out there today. And they are not connected as well, and we are not able to operate them as effectively as we should.

That is also driving—when you dive into it that deeply, you also realize that there is a cyber component to trying to make the Navy more digitized, because it could become vulnerable more quickly unless you protect that—those digital databases and the ability to do analytics and those sorts of the things.

So, again, when we come over to brief you on the classified level, we will show you what we did with the money that Congress gave us at the end of this year, in fiscal year 2017, where we applied it, to what defensive systems and protections that we needed to do.

And in some cases, it is fundamentally basic things like shifting to the new Windows across the board where we are getting commercial protection that comes with that product as opposed to living off of older Windows versions on older gear that are very vulnerable without that protection.

Ms. STEFANIK. Sure. Just to use that example, there is a sense of urgency to this. Technology is changing. If an example is making sure that you have the updated version of Windows, we need to do better in terms of addressing this.

Admiral MORAN. And the Department of Defense has mandated that across the services. All of us are responding to this. We have a deadline; it is coming up. And we are all—I can only speak for the Navy, but we are on track to meet that deadline on things as basic as what you just described.

Ms. STEFANIK. Thank you very much, Admiral Moran.

And I yield back.

Mr. WILSON. Thank you very much, Congresswoman Stefanik.

We now proceed to Congressman John Garamendi of California.

Mr. GARAMENDI. Thank you, Mr. Chairman.

And I want to thank my colleagues for delving into this issue of cybersecurity.

Admiral—Admirals—and we thank you for all of your service and for being on top of this. The loss of life is of great concern to all of us, and our hearts go out to all the families.

The question of cyber is much more than hacking. The single point of failure of most everything is GPS [Global Positioning System]. I assume you will be looking at the downgrading of GPS that can occur rather easily, particularly in those areas where there happens to be other folks around. So I would like to have that as part of that review.

Also, the electronic equipment, not specifically with regard to hacking or cyber but, rather, its validation that is it actually working as it is supposed to, navigation equipment, all of the radar and so on, I assume that the review will be in that area as well as the cyber area. Is that correct?

Admiral MORAN. Yes, sir. That is correct.

Mr. GARAMENDI. Okay. And I would suggest that the companies that built that equipment not be the ones responsible for certifying that it is actually working. You might think about that.

Also, the commanders, the commanding officers of the ship, how often are they moved from one ship to another? What is the length of time that they spend on any one ship?

Admiral BOXALL. As a commanding officer?

Mr. GARAMENDI. The top three officers.

Admiral BOXALL. Okay, top three officers.

So the executive officer on the destroyers—right now, we are on a model that has the executive officer fleeting up to be the commanding officer. And the intent was to build continuity to ensure that there is a clean turnover. So that tour is about 18 months. There is a short break in the middle to kind of get them a little bit of head-clearing, and then they go back to the same—

Mr. GARAMENDI. On the same ship or to a new ship?

Admiral BOXALL. On the same ship.

Mr. GARAMENDI. And the commanding officer?

Admiral BOXALL. The commanding officer, after they leave, will go ashore, usually, or to another at-sea job. And then they will be up for a major command job on a cruiser, for example, or a big-deck amphib or a major command-level ship.

Mr. GARAMENDI. I have a general concern about the way in which the military moves people from one job to another within very, very short periods of time. The concern is that it was the previous guy that is responsible and left the problem and it is not really solved. I have seen this in other areas. I would like to have a fuller discussion about whether that cycle is too fast and nobody is around long enough.

I am pleased to hear that the executive officer stays with the ship. Or not?

Admiral BOXALL. Yeah, the executive officer usually stays with the same ship. Sometimes there is an anomaly, but for the most part—but we are looking at the whole training model, not just the commanding officer level, but also at the division officer level we do rotate ships. There are advantages to doing it, in that you get different perspectives. There are also disadvantages, in that you lose continuity on that ship.

This is something that Admiral Davidson, we believe, will address as he looks at the training paths of those that ultimately command those ships. Command of those ships is critical, and obviously we want to make sure that they have the most qualifications they can have.

Mr. GARAMENDI. When the final reports come back, I assume we will have another hearing on the final reports, and that will be informative.

My final question really goes to a piece of testimony earlier having to do with virtual training facilities. You specified the LCS as a successful virtual training program. I assume that is a bridge that is virtual.

Could you go into that for the next minute and talk a little bit more about that and how that might be expanded if, in fact, it is as good as you say it was?

Admiral BOXALL. Well, again, we are looking at the feedback from people using it and then from the fleet. So this is not all done virtually. We still do real, live, similar to how a pilot will get simulator time. What is different is that we can create a virtual environment. We don't have to have the level of feel and touch that an aviation helicopter or fixed-wing aircraft will have to use.

So this technology is out there. The sailors are comfortable with it; they understand it. And perhaps we can use that to continue to improve these skills where we may not have the dedicated at-sea time to do so while the force is working very hard to meet its commitments.

Mr. GARAMENDI. Those virtual experiences have proven to be very successful in the airframe operations. And further discussion on that would be useful, and your report, I suppose, will deal with that as a potential training asset.

With that, I yield back. Thank you, Mr. Chairman.

Mr. WILSON. Thank you, Congressman Garamendi.

We now proceed to Congressman Mike Gallagher of Wisconsin.

Mr. GALLAGHER. Thank you, Mr. Chairman.

Gentlemen, thank you for joining us today.

I want to revisit two lines of questioning, hopefully without being repetitive. I think one of my colleagues mentioned the 2015 GAO study that found the Navy was only able to meet 44 percent of requests from combatant commanders [COCOMs] to meet operational requirements. At the time, the Navy indicated that it would require over 150 more ships to fully meet all COCOM demands.

So my question is, has that number changed? If so, what is the number now? And what fleet size would that correspond to?

Admiral MORAN. Sir, I do not know whether that number has changed. It has probably gone up, not down. So I will do some research and get back to you, if that is okay.

[The information referred to can be found in the Appendix on page 97.]

Mr. GALLAGHER. Sure.

Admiral MORAN. Thank you.

Mr. GALLAGHER. Yeah, I just think, obviously, the reviews are underway, and we really appreciate your commitment to getting a thorough understanding of what happened. But I suspect, when the

dust settles, the simplest conclusion will remain, that we have placed an enormous amount of stress on the fleet.

So I think the question we need—and I know that Chairman Thornberry alluded to it earlier—the question we need to answer is, what is the right number of ships you need in order to avoid placing that stress on the force and avoid tragic accidents like that?

And I think you have a variety of people here on this committee that are committed to making an argument for that number. And I think we forget that the 355 number that we throw out so often is indeed a minimum based on the requirements that the COCOMs are seeing out there.

Separately, there was a talk about the 10-year hiatus for surface warfare officers and training, and I would just like to dig a bit into what appears to be the relative deprioritization of surface warfare in the Navy.

It has been about 10 years since the SWO commanded the Pacific Fleet and 9 years since the SWO commanded the 7th Fleet. Isn't the Navy's traditional policy to rotate these commands so that the standards are upheld amongst the surface, submarine, and aviation communities?

Admiral MORAN. At this level, at the three- and four-star level, we pay less attention to what the community device you are—and what community you are from than we do at experience level, judgment. And, you know, in very simple terms, best athletes for the job.

It, of course, would be ideal if we had an even spread all the time, but that often gets disrupted by some of the other issues we have been dealing with here for the last several years that I think you have read about that have put a real squeeze on the talent level that is available because of ongoing investigations. So hopefully that ends here real soon and we will be back to more of a steady state.

Mr. GALLAGHER. Sure. So it would be fair to say that, if we have concerns that there are no qualified surface warfare officers available to relieve the vice admiral—I forget the last name, apologize—from your perspective, that is less of a concern because the particular heritage of that officer, their community, matters less than their overall fitness.

Admiral MORAN. Yes, sir. Admiral Sawyer, who we put into 7th Fleet, he was already designated to go there. This—clearly near the end of his predecessor's tour, so he was already confirmed by the Senate.

But here is an officer, a submarine officer, that operated extensively in 7th Fleet as not only a commander but as a junior flag officer, but also as the deputy fleet commander in PAC Fleet, so enormous experience and credibility in that region. So, I mean, we looked at that much more than we did the fact that he was a submariner.

Mr. GALLAGHER. Is it not true, though, that if you look more broadly at Navy leadership from a historical perspective, there is a relative dearth of surface warfare officers at present at the highest levels of service?

Admiral MORAN. Well, we have Admiral Davidson and Admiral Howard as two four-stars leading our Navy in critical places

around the force. We have three-stars in very important places throughout the Navy. So I wouldn't call it a dearth, Congressman, but I would call it maybe less than our average for this point in time.

Mr. GALLAGHER. Got it. And, finally, I just would like to echo what my colleague from Alabama said about our responsibilities here in Congress to provide you with the funds that you need in order to do your job. And, you know, in light of the job that we are asking your sailors to do every single day—and, you know, a lot of this goes unnoticed, right? Because the majority of what you do in uniform is actually not high-end combat; it is waging peace.

I just really feel that we need to step up to the plate and do a better job here in Congress to end the defense sequester and begin the process of rebuilding the Navy. So thank you, gentlemen, for being here today. This is important.

I yield.

Admiral MORAN. Congressman, if I could, just for the record, Admiral Kurt Tidd, a surface warfare, is commander of SOUTHCOM [U.S. Southern Command], a combatant commander as well, sir. Thank you.

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

We now proceed to Congressman James Langevin of Rhode Island.

Mr. LANGEVIN. Thank you, Mr. Chairman.

And, gentlemen, I want to thank you for your testimony today.

The incident involving the USS *Fitzgerald* and the *McCain* were tragic events, and I wish we had never gotten to this point. And my thoughts and prayers are with the families of those who were lost and those who were injured, and we are all anxious to get to the bottom of what happened.

But this appears to be a symptom of a larger problem. I know we have touched on this in many different capacities here today, but the U.S. Navy—it is my understanding of all of this—has moved training out of the schoolhouses and, instead, embraced an on-the-job training model, which has left sailors really to operate with little sleep and without a singular focus on learning.

So, you know, in an attempt to meet a high OPTEMPO demanded by the Navy, which only continues to increase, we have made structural choices that have left us with insufficient shore-side training infrastructure and really hindering our ability to keep our sailors safe, in my view.

Would you agree with this assessment? And how do you believe we can reinvigorate training initiatives to make sure that any incidents such as these are not of our own making.

And I guess—

Admiral BOXALL. Yes, sir. I will take that, if you don't mind.

The Surface Warfare Officers School, obviously, in the great State of Rhode Island, is an absolute core place where we achieve our competencies, from division officer all the way up to major command and further.

We are going to look at that training. As I said before, we did take the schoolhouse training for division officers out of Surface Warfare Officers School and move them to a surface warfare officers school in the homeports where they are going. So we took that

16 weeks of training we used to go when I was an ensign versus the 16 weeks we do in a 9-plus-5 and -6 model we are on right now.

So, to your point of what else can we do, I think the review will look at that, whether we need more improved and more capacity of training in the schoolhouse, whether it be on the waterfront or up in Surface Warfare Officers School. And, you know, again, I think we will have more information when we see the outcome.

Mr. LANGEVIN. Thank you.

Mr. Pendleton, do you have anything to add?

Mr. PENDLETON. Not really, sir. That is not something we looked at specifically, the schoolhouse training.

What we pointed out was, respect to the forward-deployed naval forces, is they were just so busy that they didn't have dedicated training time. So most folks arrived—we heard when we went on ships and did focus groups that the fact that sailors would arrive green and untrained put a burden on the sailors that were already there. And we heard that consistently.

Mr. LANGEVIN. Thank you. Admiral Moran and Admiral Boxall, I also fear that the current OPTEMPO is not sustainable but that we seek to sustain it to the detriment of training and certification requirements.

Now, recent reports indicate a large margin of separation when it comes to training and certifications between U.S.-based cruisers and destroyers versus forward-deployed naval forces.

So were there any indications or warnings that the forward-deployed naval forces' OPTEMPO was leading to a train-on-the-margins scenario and not meeting qualifications or certification standards for key surface warfare systems?

Admiral MORAN. Sir, it is a great question and one that Admiral Davidson will absolutely look at in his comprehensive review. What did we miss? What should we have seen earlier to address them in order to prevent the trends that were already starting earlier with *Antietam*, for example, and *Lake Champlain* that preceded both the *Fitzgerald* and *McCain*?

So we have to get after this question about why didn't we see these trends earlier, why didn't we take more action much earlier than now, for example. So it is a fair question and one that Admiral Davidson will look at.

Mr. LANGEVIN. Good.

Well, I know that the review is also looking at any potential cyber vulnerabilities. I have had a chance to speak directly with Admiral Gilday about this from 10th Fleet, something that first came to mind when I heard of the incident. I hope that is not the case, but I also think that we are going to get to the bottom of the training issues.

So I appreciate your due diligence on the review, and we are going to continue to focus on this as well.

Thank you, and I yield back.

Mr. WILSON. Thank you, Congressman Langevin.

We now proceed to Congress Rodney Davis of Illinois.

Mr. DAVIS OF ILLINOIS. Thank you, Mr. Chairman, and thanks to all the members, especially Chairman Wilson and Chairman Thornberry, for allowing a non-committee-member to be here today.

And I really want to say a special thank you to the HASC [House Armed Services Committee] staff. They helped connect my office in a very difficult time for one of the families in my district after the loss of Petty Officer Logan Palmer, one of the sailors on the USS *John S. McCain*.

That is why I am here today. I am here because I appreciate what my colleagues on this committee are doing to urge the Navy and urge our military to investigate what caused these tragic accidents and what caused the tragic accident that took the life of my constituent, Mr. Palmer. We are never going to forget the service that our sailors have provided, or their sacrifice. And we are praying for all their families and friends and also the shipmates during this difficult time.

And it is up to us as Congress to allow you the opportunity and the resources to fully investigate why these accidents have occurred. I really, getting here at the end of the hearing, have been able to listen to so much and so many questions that I would have had, be it the issue on the possible cyber attack that my colleague from Missouri brought up, be it the sequestration issue and the funding issue that we in Congress need to do a better job of addressing so that our military, each and every one of you who are leading our young sailors, you have the resources that you need to not only investigate what happened but also to ensure that it never happens again to any of us and any of the families that have been affected.

So we want to provide you those resources, and we want to do a better job on our end. But throughout this process—which was a first for me, to be so engaged with a family who lost one of our heroes. And I want to ask you about what maybe you can do, as a military, to do a better job of serving those families during these difficult times.

I didn't have the best experience working with the Navy. And, again, very appreciative of the HASC staff for their intervention. And the families didn't have the best experience. While the personnel was very good at getting answers, it just seemed like it took a lot longer than what I would have imagined. It was very bureaucratic. And just getting information on Logan took too much time, and it involved way too many people.

What can be done or is actively being done to help the families have a better, more streamlined process when tragedies like this occur? Because, again, my first experience, the Palmers' first experience, while it was good, could have been a lot better.

Admiral MORAN. Sir, I don't think there is anything that anybody could have said today that would have made us feel any worse than to hear that a family member experienced something less than the sufficient amount of service that we owe those families. So I will take that on personally, and I promise you that we will fix whatever issues came up with the Palmer family. But I will tell you that we would all appreciate your personal involvement in helping get some of the information for the Palmers.

We know we fell short on transportation issues. We know we fell short, in some cases, on announcing that missing sailors had been found before we got to the families. We know that the social media

environment that we are in works inside of our ability to move information around to those who need it first.

Our focus has always been, ever since both of these tragedies, has always been, first and foremost, the families. And we thought we were doing a pretty good job, but from time to time we didn't meet our own standard. And I am afraid to say the Palmers were one of them, and I regret that. I apologize for that.

Mr. DAVIS OF ILLINOIS. Well, I appreciate your regret. I appreciate your willingness to work together. Let us help you make the steps even better. I don't want to see any family not get any answer. Granted, I know you got a lot of good people working this case.

I will tell you, I was probably most concerned that an outside organization had to pay for the flights of the family to go see their son's body returned to Dover Air Force Base.

Admiral MORAN. It wasn't that they had to pay for it, Congressman; it was that we did not get the government to move as fast as we should have.

Mr. DAVIS OF ILLINOIS. So the government does have a process then.

Admiral MORAN. Yes, sir, they do.

Mr. DAVIS OF ILLINOIS. That is not a requirement, to go to an outside—

Admiral MORAN. No, sir, it is not.

Mr. DAVIS OF ILLINOIS. So, yes, thank you for agreeing to do a better job to make sure those families, who may not live as close as others—

Admiral MORAN. Absolutely.

Mr. DAVIS OF ILLINOIS [continuing]. So they have the opportunity to get to that point to see their loved one return for the sacrifice that that entire family has made. So I appreciate—

Admiral MORAN. And for them to be with the loved ones and crewmates of their fallen sons and husbands in the location where that crew is going to memorialize their falling. And we are doing that.

Mr. DAVIS OF ILLINOIS. I appreciate your service, I appreciate your recognition of the issues, and I look forward to working with you.

Admiral MORAN. Thank you.

Mr. DAVIS OF ILLINOIS. Thank you.

I yield back.

Mr. WILSON. And thank you, Congressman Davis, for your compassion for the family.

And we now proceed to Congresswoman Elizabeth Esty of Connecticut.

Ms. ESTY. Thank you, Mr. Chairman.

And, again, I want to thank the committee for their allowing my colleague Mr. Davis and I to join in today's proceedings.

I, too, lost a constituent, Navy sonar technician third class Ngoc Truong Huynh, on the *Fitzgerald*. It was his birthday, and the family basically surmised by checking his Facebook feed, and when the responses to his birthday wishes stopped coming, they began to worry. And that is the era we live in now. That is the era we live in now.



So my focus, also, as a member of the Veterans Committee, is thinking about what we owe those who serve. And so my focus is very much going to be on the human side, not so much the equipment but rather the human side, because much of what has been reported on today has to do with training, with leadership, and a culture of safety.

And I say this as a daughter of a Navy man, who insisted on great discipline in our household. And it does make me think about what we can do better, as so many of my colleagues have said, that we owe it as Members of Congress to provide you with those resources. We need to ask you to say when we are asking too much with what you have and to be willing and able to say, "We cannot do what you are asking us to do without putting the lives of men and women at risk." And we need to know that from you. And I understand that is against your culture, but it is required because of the commitment these young people have made to this country.

So that is unfair, that we put you in that position. And sequester and continued resolutions has made that worse. But it makes it all the more important that you stand up for them and for this country and for their safety. So that is one.

I look at the safety culture and think about the importance of leadership from the top. These incidents, I note, seem to have occurred in the wee hours of the morning. I wonder if that is an over-reliance on equipment and technology with very young sailors who may be concerned and not have the experience with how heavy the shipping lanes are.

So I think the heaviness of the shipping lanes suggests we maybe need to do different training. But also a safety culture of, if you have any doubt whatsoever, anything that seems not right, you must immediately notify right up the chain of command. Do not worry that you are waking someone up. Do not worry that you have never seen this before and it is your second week on the job.

So I think if you have a safety culture, that might empower our young sailors, and then go to the training of those young sailors. The notion that they are working hundred-hour workweeks is really terrifying for them and for us. And it makes me think about what happened in medicine when we looked at the death rates with new interns who are working in hospitals and working very long shifts. It got so bad that States began to pass laws prohibiting longer workweeks.

So, again, I think that is something you need to look at, the capacity of people to operate under pressure with those kinds of hours. It is simply unfair to them, it is unsafe, and it is wrong. And we need to do our job with providing you the resources. But, again, we can learn from other areas, like medicine, where, again, you are talking about young people who are working very long hours and being given enormous responsibility. So I hope we can learn from "The Checklist Manifesto" and other areas which could help save lives here.

So those were really kind of my thoughts about what we can do but also what we may all collectively need to do to protect the lives of these young people. And I think about this as the aunt of a nephew who is training to be a SEAL [Sea, Air, and Land teams] and is in process of that right now; of the young men and women

who come to us, who we are honored, as colleagues have mentioned, to nominate to the academies, who hope to make their way to the ranks of commanding officers. And we owe it to all of them to do a better job.

So I hope you heard from all of us, we are not looking to assign blame, but we are looking to correct this as rapidly as possible, and then to be honest with the American public about what those demands are and what resources are necessary to meet them.

So, again, I want to thank you for your service, but it is urgent that we address this immediately. And we owe it to the families who are here today, the families who were unable to join, and the traumatized shipmates of those, and those who went back into those ships to try to retrieve their friends and their comrades.

So, again, thank you very much. And, again, many thanks to the HASC committee for their hard work in assisting us, those of us who are not on the committee, in trying to do our jobs for our constituents.

Thank you, and I yield back.

Mr. WILSON. And, Congresswoman Esty, thank you very much for your positive comments and input today.

Two brief questions from me, and then we will proceed to my other colleagues here, and then we will be concluding.

But, Mr. Pendleton, how do you believe that you be will be able to determine when the services are achieving readiness recovery?

Mr. PENDLETON. Mr. Chairman, we are doing a broader body of work essentially monitoring the readiness recovery efforts. We made a series of recommendations in September of last year, basically saying that the Department of Defense needed a readiness rebuilding plan that matched the priority it was claiming that it had that said what the goals were and when they would be achieved and what it would take in terms of money and time, and that there needed to be agreement on it from the top.

Because what we saw when we looked at it in depth was all the services were pursuing individual plans in zeal but not necessarily being pulled together in a departmentwide plan. So what we are looking for, is it clear what the goals are, and how are we doing against those goals?

In the case of the Navy—Admiral Moran mentioned it—they had a glide path that got them to close to where they wanted to be at some point in the future that was classified. And our concern was the glide path didn't necessarily constitute exact goals. So, he mentioned earlier, this is going to knock them off the glide path.

So being able to articulate the impacts of the decisions that you make if you continue with demands and that kind of thing, that that is the way we are going to look at, sir.

Mr. WILSON. Well, again, thank you. And I just have to reiterate again how professional and independent your reports have been, and so helpful for Members of Congress and our military.

And speaking of a plan, Admiral Moran, do you believe that we have an effective plan for readiness recovery, to erase the maintenance backlogs, to restore the manning shortfalls, to allow the Navy to meet the critical operational requirements, again, without risking the lives of our sailors?

Admiral MORAN. We do have a plan. We think it is an appropriate plan for recovering all the areas you just talked about—buying down the maintenance backlog, getting our manpower in the right place. We must have some stability in the budget so that we can follow through on those plans. If we are constantly changing it year after year, quarter to quarter, it makes it difficult to assess our baseline.

So I think we have a much better understanding of what it is going to take to recover in CONUS than, clearly, we understand what it is going to take to recover in FDNF. And that is what we have to get after.

Mr. WILSON. And with the accidents, is the technology available to maintain and determine the perimeter of vessels so this won't happen again?

Admiral MORAN. We have a lot of systems that do it, contribute to the information that is available to the team on the bridge and CIC [combat information center] and elsewhere. What we have to do is really examine—and Admiral Boxall has talked about this—the integration of those systems and do we have all of that information being provided to multiple sets of eyes on that bridge at any given time.

Mr. WILSON. Well, that is so important for Navy and military families.

Chairman Rob Wittman.

Mr. WITTMAN. Thank you, Mr. Chairman.

Admiral Boxall, I want to go back to you and get some definition about time versus resources.

The Navy asked for a billion dollars to be reprogramed into maintenance and modernization accounts and now says that in 2018 those accounts will be fully funded. We know what happens with a CR.

But let me get to a more fundamental question, and that is time versus resources. Understanding those situations, are we in a situation of having the proper resources going forward to get all of the modernization and maintenance work done to make sure we have the full capability so that mission certifications can be gained on time? And do we have the time to do that?

So I just want to get your perspective on time and resources and where you see it going forward to get to where we need to be, based on the inadequacies we see today.

Admiral BOXALL. Sure.

Time is critical. I think you heard that over and over again today. If we don't have the time to train, we don't have the staff to maintain the ships to the level we need, then the maintenance goes longer, the time to train gets shorter, OPTEMPO goes up, and we get into this spiral that is not healthy.

Having said all that, we also need to maintain a good path. I mean, those yard periods are for a reason. We are restoring that readiness. We have put a lot of capacity in there because we are trying to restore that readiness. Trying to do them both at the same time is having some of the effects of trimming that time available.

So we need to be modernized as well. As we look at choices between readiness and force structure, a very key element of that is

modernization. And year after year, we unfortunately have to make the difficult choice to delay modernization, which goes to our capability to stay up with the threats as we see them around the globe.

I do worry about that, and that is something that we will continue to press forward as we continue to submit our budgets to restore readiness. It also includes that keeping up not just the capacity but the capability that is achieved through modernization.

Mr. WITTMAN. Yeah.

When you talk about capacity and capability, let me talk about it in a different sense, and that is in the yard capacity and capability.

When we talk about time, time is an element for the Navy when you have the capacity in the yards to get the work done. Then it is a matter of managing where things go. But doesn't it get to a point where there is only so much capacity and capability in the yard, to where time is then not manageable by the Navy because you just don't have enough capacity to get the work done? And when that work stacks up, then there is no way that you can pipeline.

And give me a perspective about where things are with the Navy, where we are today, and the capability and capacity in our yards.

I am going to ask you in a larger perspective. I know that your OPNAV [Office of the Chief of Naval Operations] duties are there with the surface Navy.

But, Admiral Moran, I will get you to pipe in too.

That becomes a bigger issue when it comes to what we see with submarines and other ships in the force. It kind of cascades.

But, Admiral Boxall, give me your perspective from the surface Navy standpoint. I will get Admiral Moran to add in the larger perspective of the Navy, because I do think it has some reverberations there with surface Navy work.

Admiral BOXALL. Absolutely, sir. As you know, all surface ship availabilities and maintenance are done in the private shipyards. They want stability, as you know, and to get stability you have to have the money there and the commitment to doing that maintenance and modernizations that we—so, right now, we are putting money into that, and we are seeing this kind of lagged response and delay in building the workforce, delay in having the available private shipyard workers, and, oh, yeah, the quality of the people in those shipyards. They are all competing for the same workers.

So, as the workload goes up, good news story that we are restoring readiness. But we can't do it quickly enough, and we are going to get bogged down, which will put more pressure on those forces.

I think that is what you were hopefully trying to get at.

Mr. WITTMAN. Yeah, it was.

And then, Admiral Moran, I wanted to get your perspective, because we are starting to see some of that reverberate over into ramping up there also with the public yards. And then there is a crossover, because the public yards and the private yards are competing for the same skilled workforce. So then, Admiral Boxall, that complicates your issue in getting throughput through the private yards.

Admiral MORAN. Yes, sir. It is a tough problem just in the talent that we have across the yards. But on the public side, it is the only place we can do nuclear work. So it is the only place you can—

Mr. WITTMAN. Yeah.

Admiral MORAN [continuing]. Build and fix carriers, the only place for—

Mr. WITTMAN. Uh-huh.

Admiral MORAN. Yes, sir. Go ahead.

Mr. WITTMAN. And I think as far as the whole scope of this goes, one of the things we have seen both with the Secretary of the Navy's office and within the Navy is a roller-coaster ride on throughput of work. And if we have that roller-coaster ride, we won't be able to maintain capacity and capability to get the work done.

So even if we do have the will and the resources and then we make the time for this to happen, if we don't have the workforce there or if we ask the workforce to spin up with thousands of workers and then spin down by sending them out, we are going to be in a very, very difficult situation.

So I am hopeful that, as you all look at this, both in Admiral Davidson's view of what is going on, the internal review, as well as Secretary Spencer's review, that it also carries over into the courses of action to correct this and seeing what do we do to make sure that there is that capacity there that is sustainable in yards public and private.

Admiral MORAN. Yes, sir. That is a critical element of these reviews, no doubt.

Mr. WITTMAN. Yeah. Very good.

Let me end with one additional question for Rear Admiral Boxall.

In each of the two collisions for *Fitzgerald* and *John McCain*, these were happening during routine operations. And what we see around the world today—and you all have alluded to that—that there are over 50,000 vessels transiting in the oceans every day. That is a lot of traffic out there. Even though the oceans are big, that is a lot of traffic. And as you point out, too, much of it is necked down into some critical areas—Tokyo shipping lanes, Straits of Malacca, Straits of Hormuz, all those areas where the Navy operates on a daily basis.

What we see, too, is we have the ships that we interact with that are much less capable as far as the capability of their sensors, their situational awareness. Our warships, the best in the world, lots of sensors, lots of capability.

Admiral Boxall, as you know, and going to your background, being the former Shiphandler of the Year there, Pacific Fleet, you have firsthand experience about what it takes to successfully handle a ship. Based on your experience, give me your perspective on where we need to go in training within that realm today and what we need to do to make sure we are developing the best mariners for our surface force.

And I know you spoke a little bit about that, but I wanted to get your perspective, because you have been there, you had that experience, you were there on the bridge handling that ship, have been

recognized for your skill in doing that. So you have a unique perspective.

I just wanted to get you to share this as we kind of close things down. I know we are going to go to Mr. Courtney too, so——

Admiral BOXALL. Yes, sir. Honestly, when I have heard of these incidents, I was, frankly, shocked. I have observed a lot of strong professionalism in the folks that I have dealt with in my strike group tour, throughout the service. So I am not sure what that is going to find and what we are going to do and how we address those things.

But to your question of how we get good at our mariner skills, we have to get back to basics. I mean, yes, we are warships with the best sensors and capabilities in the world. A lot of those aren't used for navigation. But yet our tools for navigation are good enough to do what we need to do. The question is, are we using them the best way we can?

I know you are a fisherman in your past, and I know you spend a lot of time on the water, as I do. And I believe there is a fundamental skill that mariners, whether you are in a fishing boat, whether you are in a merchant vessel, or whether you are in a U.S. Navy warship—but we in U.S. Navy warships absolutely have to make that our core competency.

I have had several discussions with Admiral Rowden, the Commander of Naval Surface Force, about this. He is as adamant as I am. I had command of a ship just like *McCain*, and every time I see the pictures of those sailors, I think of the ones that were with me. And I know we have a lot more to do.

And so I am not sure where we go from here just yet. I would like to see what the teams find out. And then I am ready to go and roll up sleeves and go do whatever it takes, to include coming back here to ask you to maybe assist us, as we make any changes in those recommendations.

Mr. WITTMAN. Well, listen, I appreciate that. I appreciate your perspective too. I know that you are extraordinarily well respected. A former employee in my office today, Commander Kevin Bosse, served under you, learned a lot, and is very complimentary of your experience there and how you pursued things.

I know that you will use that experience in what we need to do collectively to make sure that we are gaining the correct and directed seamanship skills, navigating skills, with all of our officers and crew members onboard our surface fleet.

With that, Mr. Chairman, I yield back.

Mr. WILSON. Thank you very much, Chairman Rob Wittman.

We now proceed to Ranking Member Joe Courtney.

Mr. COURTNEY. Thank you, Mr. Chairman.

Again, I want to thank all the witnesses for your outstanding testimony here today.

You know, I was thinking, having listened to the whole hearing, about Admiral Moran's first visit to this Congress back in January, where, again, there was a lot of excitement over the Force Structure Assessment and increasing the size of the fleet. And, again, I think our committee has gotten us off to a good start in terms of the NDAA.

But your testimony was: Let's remember, first things first. We have to, you know, focus on the existing fleet to make sure that, you know, during that time that it takes to—with shipbuilding being such a long game, to get to these higher numbers, that we are still able to perform the missions of the Navy.

And I think, again, those words really reverberate today in terms of just, you know, the discussion and the incidences that we are talking about, that, you know, focusing on what you told us to focus on is really critical to all of the goals that we are trying to achieve, which is to, you know, do what the Navy does in terms of its missions but also making sure that it gets done safely.

And I guess, you know, Mr. Wilson asked the question about how do we get to that level of adequate readiness. And your comment about the fact that, you know, the forward-deployed forces is still really the tough one here in terms of just how do we, you know, achieve that. I think you said you had a pretty good vision or the Navy has a pretty good vision about how to do it with the ships that are based in the U.S.

And, Mr. Pendleton, your graph on page 6 of the report, which, again, showed the difference between, you know, training, maintenance, and deployment and planned schedules for, you know, U.S.-based ships versus Japan, again, really vividly shows the sharp difference in terms of—and that sort of adds the degree of difficulty in terms of trying to solve this problem.

So, in the meantime, the question which we have been talking about is, you know, who is the decisionmaker for the forward-deployed forces while we are trying to figure this out? And I know that is probably going to be part of the Davidson study, in terms of just trying to get the lines of decision making clear, but one last time: Who decides, you know, for the forward-deployed fleet in terms of man, train, and equip decisions and, you know, the final decision to send these ships to sea? Is it the operational admiral, or is it the forces commander?

Admiral MORAN. Yeah. Understandably, Congressman, this is not simple. And I think when we talk about man, train, and equip, there are many people that are responsible for that. It works its way all the way through the surface force, for example, when we talk surface ships. Obviously, the carrier has components of aviation, so on and so forth. So there are many places and people that are responsible for adequately resourcing the manning, training, and equipping.

The operational tempo, the operations and how often those ships and what types of missions they are going on and how to prioritize the training that they do get, or that they are required to get, for those missions, is clearly the local operational commanders in Japan.

The model, though, the model that you reflect here on page 6, is a big Navy discussion. So the CNO and I and the four-star fleet commanders have got to look at what Admiral Davidson's review finds. Is the model out of alignment for what we have asked them to do? And, going forward, do we need to make adjustments? That will be title 10, [section] 1, if you will, responsibility to make those course corrections based on the recommendations.

In the interim period, Admiral Swift is going after this to make sure, as we go through the review, he has a deeper understanding and will adjust where he needs to adjust to lower the tension, if you will, between that OPTEMPO and the maintenance/training aspects of what he is doing out in Japan.

Mr. COURTNEY. I think that answer sheds more light in terms of the question.

And, again, I thought your answer to Chairman Thornberry about the fact that, you know, the Navy made a tough call in terms of the carrier deployments, but, again, it was just driven by external forces, you know, that we had to set up a schedule and stick to it. And I think that answering the question that you just did and Admiral Davidson's report is going to help us sort of make sure that we are just not biting off more than we can chew.

And I think it kind of screams out from the report from GAO that that is something that we have to understand, that, you know, a 100-hours-a-week deployment has—you know, there has to be a way to decide when to rebalance.

Thank you, Mr. Chairman. I yield back.

Mr. WILSON. And thank you very much, Ranking Member Joe Courtney.

And we want to thank all of our witnesses for your being here but, also, in particular, for your service to the American people to protect American families.

Also, it is an opportunity for us to thank the professional staff who have been here and have been so helpful. The Armed Services Committee is just blessed with remarkable people. And we are particularly blessed with Margaret Dean, because not only is she a professional staff member but she was a very appreciated member of the Navy Reserve.

So, at this time, we shall adjourn.

[Whereupon, at 5:55 p.m., the subcommittees were adjourned.]



---

---

# **A P P E N D I X**

SEPTEMBER 7, 2017

---

---



---

---

**PREPARED STATEMENTS SUBMITTED FOR THE RECORD**

SEPTEMBER 7, 2017

---

---



**Statement of the Honorable Joe Wilson**  
**Chairman, Readiness Subcommittee**  
**“Navy Readiness—Underlying Problems Associated with the USS**  
**Fitzgerald and USS John S. McCain”**

**September 7, 2017**

I call this joint hearing of the subcommittees on Readiness and Seapower and Projection Forces of the House Armed Services Committee to order.

We are here in honor and memory of the seven USS Fitzgerald sailors

Shingo Douglass  
Noe Hernandez  
Ngoc Truong Huynh  
Xavier Martin  
Gary Rehm Jr.  
Dakota Rigsby  
Carlos Victor Sibayan

And the ten USS John S. McCain sailors

Kevin Bushell  
Dustin Doyon  
Jacob Drake  
Timothy Eckels Jr.  
Charles Findley  
John Hoagland III  
Corey Ingram  
Abraham Lopez  
Kenneth Smith  
Logan Palmer

Ms. Rachel Eckels, mother of Petty Officer Timothy Eckels, Jr., is here with us today. Ms. Eckels, we extend our deepest sympathies and profound sorrow for your loss.

I want to welcome our members to today’s hearing, and I offer a special welcome to our full committee Chairman, the Honorable Mac Thornberry. Chairman Thornberry has been the leader of our ongoing efforts to mitigate our military readiness challenges and I want to thank him for his leadership and for being here today to hear about the challenges illuminated by the collisions in the Pacific.

I also extend a warm welcome to Congresswoman Elizabeth Esty from Connecticut and Congressman Rodney Davis from Illinois.

I ask unanimous consent that a Member who is not a member of the Committee on Armed Services be allowed to participate in today's hearing after all subcommittee Members, and then full committee Members, have had an opportunity to ask questions.

As we begin today's unclassified hearing on "Navy Readiness—Underlying Problems Associated with the USS Fitzgerald and USS John S. McCain" I have no doubt that our Navy remains the most powerful in the world, but these recent tragic events only reinforce our committee's concerns about the depth of readiness challenges that the Navy faces. I am equally concerned about shortfalls in force structure and whether the sustained operational tempo of a 277 ship Navy may have contributed to these events.

I fully believe that the first responsibility of the national government is to provide for the national security of its citizens—and that is especially true of our sailors, soldiers, airmen and marines; therefore, it is our responsibility as members of this subcommittee to continue to better understand the readiness situation and underlying problems of the United States Navy, and then for us to chart a course which best assists the Department of the Navy in correcting any deficiencies and shortfalls.

We now ask the senior leaders of the U.S. Navy and Government Accountability Office, here with us today, to be candid and in your best judgement advise us on the underlying problems associated with the USS Fitzgerald and USS John S. McCain and how to recover from these tragic events.

This afternoon we are honored to have with us:

- Admiral Bill Moran, Vice Chief of Naval Operations
- Rear Admiral Ronald Boxall, Director, Surface Warfare
- and
- Mr. John Pendleton, Director, Defense Force Structure and Readiness Issues, U.S. Government Accountability Office

I would now like to turn to our Ranking Member, Congresswoman Madeleine Bordallo of Guam, for any remarks she may have.

NOT FOR PUBLICATION UNTIL  
RELEASED BY THE HOUSE ARMED  
SERVICES COMMITTEE

STATEMENT OF

ADMIRAL WILLIAM F. MORAN  
Rear Admiral Ronald Boxall

U.S. NAVY

VICE CHIEF OF NAVAL OPERATIONS

BEFORE THE  
HOUSE ARMED SERVICES COMMITTEE

ON

NAVY READINESS – UNDERLYING PROBLEMS ASSOCIATED WITH THE USS  
FITZGERALD (DDG 62) AND USS JOHN S. MCCAIN (DDG 56)

SEPTEMBER 7, 2017

NOT FOR PUBLICATION UNTIL  
RELEASED BY THE HOUSE ARMED  
SERVICES COMMITTEE

Chairman Thornberry, Chairman Wilson, Chairman Wittman, Ranking Member Bordallo, Ranking Member Courtney, and distinguished members of the subcommittees, I appreciate the opportunity to testify today.

First and foremost, I want to express our deepest regret and sadness for the recent loss of 17 members of our Navy family who served their country and their Navy with pride and honor. At the dignified return of remains last week for the ten John S. McCain Sailors, we were once again reminded of our solemn obligation for the safety of our teammates. Family members present were strong, faithful, proud and of course anxious to find out what happened, why it happened and wanted reassurance that we learn from this tragedy in order to prevent mishaps like this from occurring in the future. Just like with families of USS Fitzgerald, our immediate concern and focus was and continues to be providing full support to these families and to our crews.

I'd like to reiterate that the process of determining cause and affixing responsibility is methodical, and while it's frustrating and often difficult, all of us must resist making assumptions or arriving at conclusions in the absence of evidence. It is critical that the integrity of the ongoing investigations be protected and that the greatest degree of transparency is demonstrated in their results to the Administration, Congress and the American people.

These incidents were tragic. But in the midst of catastrophic flooding, loss of critical systems, and crew casualties, our Sailors saved shipmates and kept their ships afloat. This doesn't just happen; it's a testament to the effective training, proficiency, and discipline of the Sailors on FITZGERALD and MCCAIN.

Today I will return to many of the same themes that you heard from me in February. Our operational demands continue to grow with an undersized fleet. In short, we continue to have a supply and demand problem which is placing a heavy strain on the force. The Navy has deployed, on average, about 100 ships around the world each day, collectively steaming thousands of underway days each year, despite having the smallest battle fleet since before World War I, and significantly smaller than the Navy we had immediately after 9/11 over a decade ago.



Although warfighting capabilities of ships have dramatically increased in the last century, the size and scope of U.S. responsibilities around the world have also increased. The old adage that "quantity has a quality all its own" rings true in today's maritime environment. And we've taken important steps to address this issue by stationing more forward deployed units in the Western Pacific, Arabian Sea and Europe which enables greater presence than the current fleet size could otherwise support. This allows us to deter aggression, and when necessary, defuse threats and contain conflict to prevent wider regional disruption. However, even with adding more forward deployed naval forces (FDNF), demand continues to grow, exposing these forces to the strains of persistently high operational tempo.

An often-overlooked aspect of funding readiness is that we don't just fund readiness with dollars. We also fund it with time. Like dollars, time is a currency that must be budgeted and protected to ensure our ships are maintained, modernized, and trained to carry out the missions assigned. Persistent high operational tempo costs us time to prepare, maintain and thoroughly train our crews. Add to this mix, a lack of timely approved budgets which generate impacts on planning large events like ship maintenance and modernization yard periods and we end up piling work, time and difficult resourcing decisions on the Fleet.

Back in February, I cited funding reductions and consistent uncertainty about Congressional budget approvals as especially damaging, as they prevent us from taking steps to mitigate the burden on ships and sailors imposed by the high operational demand.

Crucially, Congress approved \$2.8B in funding in the Fiscal Year 2017 Request for Additional Appropriations that addressed the most significant readiness shortfalls in the Fleet. This helped us begin to dig out from readiness holes that resulted from repeated Continuing Resolutions and Budget Control Act (BCA) impacts. The addition of the FY17 funds enabled us to retain five deployments, fund fourteen maintenance availabilities, add needed flying hours, improve cyber security afloat and ashore, reduce gaps at sea in key operational billets and provide critical facility restoration and modernization. We have continued to build on this foundation in the Navy's submission in the Fiscal Year 2018 President's Budget, which adds \$3.4B in order to maintain these readiness gains and also make the Fleet whole. Our Fiscal Year 2018 requests target Fleet wholeness through investments that increase end strength, increase the numbers of people who maintain and repair our ships and aircraft, fund afloat

readiness accounts to their maximum, and purchase future platforms and capabilities needed to sustain the advantage over our adversaries.

These funds will only have the desired impact if they are approved and executed in a stable manner. While we have prioritized our maintenance and readiness dollars, the positive effects of funding do not remove this deficit overnight; they take both time and predictable resources that are adequate to sustain the upward trend. Funding at prior year levels through a Continuing Resolution not only disrupts the gains, it begins to reverse them.

As documented in various studies and reports, both from within and outside the Navy, managing these challenges is complex and we don't always get it completely right. We are constantly developing, measuring and refining our force generation methods. Naval Forces are accustomed to long and arduous hours at sea, and are accustomed to short notice high intensity demands in congested waterways, rapidly shifting mission sets and persistent threats in all theaters. The Navy remains a force that prioritizes getting the mission done in support of our Nation.

All of this, in light of recent mishaps at sea, demands we take a hard look at our processes, organizations, training, and systems to ensure that we are providing our Sailors with the necessary resources and adequate training to effectively carryout our missions. No matter how tough our operating environment, or how strained our budget, we shouldn't be and cannot be colliding with other ships and running aground. That is not about resourcing; it is about safety and it is about leadership at sea. We are shocked by these recent events, and that is why the Chief of Naval Operations has initiated a 60-day Comprehensive Review, led by Admiral Davidson, Commander United States Fleet Forces.

These reviews will include, but not limited to, trends in individual training, unit level training, development and certification of deployed forces, operational tempo and risk management, and material readiness and practical utility of navigation equipment, sensors, and combat systems. They will also focus on surface warfare training and career development, including tactical and navigational proficiency. All resources will be available for these reviews.

There are also multiple investigations into the cause of the mishaps ongoing to determine specific root causes of these two separate incidents. As stated in my opening, drawing conclusions at this point is premature, but I am confident the Navy's investigation process will highlight the areas that contributed to the mishaps, and point us to areas that we must address.

I'll conclude by stating that professional seamanship is the standard with no exceptions. We owe it to the Sailors and families of the lost to learn from these tragic events. Although we operate in a dangerous and demanding environment and will never be able to eliminate all risk, you have my assurance that we will, with great speed, provide you, the American people, and our Navy team with our assessment of how to best move forward. On behalf of all Sailors, their families, and our Navy Civilians, I thank you for your continued support, and look forward to your questions.

**5/31/2016 - Present**  
**ADMIRAL BILL MORAN**

Adm. Bill Moran is a native of New York and graduated with a Bachelor of Science from the United States Naval Academy in 1981 and a master's degree from the National War College in 2006.

As a flag officer, he has served as commander, Patrol and Reconnaissance Group; director, Air Warfare (N98) on the staff of the Chief of Naval Operations; and most recently as the 57th chief of naval personnel.

His operational tours spanned both coasts, commanding Patrol Squadron (VP) 46 and Patrol and Reconnaissance Wing 2. He served as an instructor pilot in two tours with VP-30 and as a staff member for Commander, Carrier Group 6 aboard USS Forrestal (CVA 59).

Ashore, he served as executive assistant to the chief of naval operations; executive assistant to Commander, U.S. Pacific Command; deputy director, Navy staff; and assistant Washington placement officer and assistant flag officer detailee in the Bureau of Naval Personnel.

Moran assumed duties as the Navy's 39th vice chief of naval operations, May 31, 2016. He is a senior naval advisor to the secretary of the Navy and the chief of naval operations.

He is entitled to wear the Distinguished Service Medal, Defense Superior Service Medal, Legion of Merit (five awards) and other various personal, unit and service awards.

**Rear Admiral Ronald A. Boxall**  
**Director, Surface Warfare (N96)**

Rear Adm. Ronald Boxall is a native of Holland Patent, New York. He attended The Pennsylvania State University, earning a Bachelor of Science in Science and was commissioned in 1984. He also attended the Naval Postgraduate School in Monterey, California, where he earned a Master of Science in Information Systems and later attended the Naval War College in Newport, Rhode Island, earning a Master of Arts in National Security and Strategic Studies.

Boxall's sea duty assignments include: commander, Carrier Strike Group 3 embarked in USS John C. Stennis (CVN 74); command of USS Lake Erie (CG 70) and USS Carney (DDG 64); executive officer of USS Hue City (CG 66); combat systems officer in USS Simpson (FFG 56) and USS Ramage (DDG 61); and division officer in USS Merrill (DD 976) and USS Kinkaid (DD 965). During his seagoing career, he has made numerous deployments around the world from the Western Pacific, Atlantic and Indian Oceans to the Baltic, Mediterranean and Caribbean Seas as well as combat operations in the Arabian Gulf and counter-narcotics operations off South America. A former Pacific Fleet Shiphandler of the Year, he was also fortunate to have been associated with four outstanding Battle "E" winning crews.

Ashore he served in numerous joint and staff billets to include: deputy director for Joint Strategic Planning (J-5) and deputy and chief of the Joint Staff Quadrennial Defense Review Office (J-8) on the Joint Staff, where he was selected as Action Officer of the Year; deputy director for Surface Warfare (N96B), executive assistant to the deputy chief of naval operations for Integration of Capabilities and Resources (N8), and executive assistant to the director of Navy Warfare Integration (N8F) on the Office of the Chief of Naval Operations (OPNAV) staff; and placement officer and deputy Surface Officer Distribution Division (PERS-41B) at Naval Personnel Command.

He is currently serving as the director, surface warfare, OPNAV N96 in the Pentagon.

Boxall's military awards include the Defense Superior Service Medal, Legion of Merit, Defense Meritorious Service Medal, Meritorious Service Medal, Joint Service Commendation Medal, Navy and Marine Corps Commendation Medal and the Navy and Marine Corps Achievement Medal, as well as various campaign and unit awards. Additionally, he was a recipient of the 2016 Penn State Eberly College of Science Outstanding Alumni Award.

Updated: 18 May 2017



---

United States Government Accountability Office

Testimony  
Before the Subcommittees on  
Readiness and Seapower and  
Projection Forces, Committee on Armed  
Services, House of Representatives

---

For Release on Delivery  
Expected at 2:00 p.m. ET  
Thursday, September 7, 2017

## NAVY READINESS

### Actions Needed to Address Persistent Maintenance, Training, and Other Challenges Facing the Fleet

Statement of John H. Pendleton, Director,  
Defense Capabilities and Management

## GAO Highlights

Highlights of GAO-17-798T, a testimony before the Subcommittees on Readiness and Seapower and Projection Forces, Committee on Armed Services, House of Representatives

### Why GAO Did This Study

Since January 2017, the Navy has suffered four significant mishaps at sea that resulted in serious damage to its ships and the loss of 17 sailors. Three of these incidents involved ships homeported in Japan. In response to these incidents, the Chief of Naval Operations ordered an operational pause for all fleets worldwide, and the Vice Chief of Naval Operations directed a comprehensive review of surface fleet operations, stating that these tragic incidents are not limited occurrences but part of a disturbing trend in mishaps involving U.S. ships.

This statement provides information on the effects of homeporting ships overseas, reducing crew size on ships, and not completing maintenance on time on the readiness of the Navy and summarizes GAO recommendations to address the Navy's maintenance, training, and other challenges.

In preparing this statement, GAO relied on previously published work since 2015 related to the readiness of ships homeported overseas, sailor training and workload issues, maintenance challenges, and other issues; GAO updated this information, as appropriate, based on Navy data.

### What GAO Recommends

GAO made 11 recommendations in prior work cited in this statement. The Department of Defense generally concurred with all of them but has implemented only 1. Continued attention is needed to ensure that these recommendations are addressed, such as the Navy assessing the risks associated with overseas basing and reassessing sailor workload and factors used in its manpower requirements process.

View GAO-17-798T. For more information, contact John Pendleton at (202) 512-3489 or pendletonj@gao.gov.

September 7, 2017

## NAVY READINESS

### Actions Needed to Address Persistent Maintenance, Training, and Other Challenges Facing the Fleet

### What GAO Found

GAO's prior work shows that the Navy has increased deployment lengths, shortened training periods, and reduced or deferred maintenance to meet high operational demands, which has resulted in declining ship conditions and a worsening trend in overall readiness. The Navy has stated that high demand for presence has put pressure on a fleet that is stretched thin across the globe. Some of the concerns that GAO has highlighted include:

- Degraded readiness of ships homeported overseas:** Since 2006, the Navy has doubled the number of ships based overseas. Overseas basing provides additional forward presence and rapid crisis response, but GAO found in May 2015 that there were no dedicated training periods built into the operational schedules of the cruisers and destroyers based in Japan. As a result, the crews of these ships did not have all of their needed training and certifications. Based on updated data, GAO found that, as of June 2017, 37 percent of the warfare certifications for cruiser and destroyer crews based in Japan—including certifications for seamanship—had expired. This represents more than a fivefold increase in the percentage of expired warfare certifications for these ships since GAO's May 2015 report. The Navy has made plans to revise operational schedules to provide dedicated training time for overseas-based ships, but this schedule has not yet been implemented.
- Crew size reductions contribute to sailor overwork and safety risks:** GAO found in May 2017 that reductions to crew sizes the Navy made in the early 2000s were not analytically supported and may now be creating safety risks. The Navy has reversed some of those changes but continues to use a workweek standard that does not reflect the actual time sailors spend working and does not account for in-port workload—both of which have contributed to some sailors working over 100 hours a week.
- Inability to complete maintenance on time:** Navy recovery from persistently low readiness levels is premised on adherence to maintenance schedules. However, in May 2016, GAO found that the Navy was having difficulty completing maintenance on time. Based on updated data, GAO found that, in fiscal years 2011 through 2016, maintenance overruns on 107 of 169 surface ships (63 percent) resulted in 6,603 lost operational days (i.e., the ships were not available for training and operations).

Looking to the future, the Navy wants to grow its fleet by as much as 30 percent but continues to face challenges with manning, training, and maintaining its existing fleet. These readiness problems need to be addressed and will require the Navy to implement GAO's recommendations—particularly in the areas of assessing the risks associated with overseas basing, reassessing sailor workload and the factors used to size ship crews, and applying sound planning and sustained management attention to its readiness rebuilding efforts. In addition, continued congressional oversight will be needed to ensure that the Navy demonstrates progress in addressing its maintenance, training, and other challenges.

---

Chairmen Wilson and Wittman, Ranking Members Bordallo and Courtney, and Members of the Subcommittees:

Thank you for the opportunity to be here today to discuss issues related to Navy readiness in the wake of four significant mishaps at sea thus far in 2017. The most recent of these occurred in August when an *Arleigh Burke* class destroyer—the USS *John S. McCain* (DDG 56)—collided with an oil tanker while underway near Singapore. This collision resulted in serious damage to the ship, the loss of 10 sailors, and injury to five more. It was the second collision involving the loss of life for Navy ships underway in the last three months and the fourth significant at sea mishap in the past year.<sup>1</sup> In response to these incidents, the Chief of Naval Operations ordered an operational pause for all fleets worldwide, and the Vice Chief of Naval Operations directed a comprehensive review of surface fleet operations, stating that these tragic incidents are not limited occurrences but part of a disturbing trend of mishaps involving U.S. warships.<sup>2</sup>

While we await the Navy's official findings on this matter, you asked us to testify today on findings from our recent Navy readiness reviews. Before we begin, however, it is important to set the context for the challenges the Navy faces. In June 2017, we issued a report highlighting five key mission challenges facing the Department of Defense (DOD).<sup>3</sup> In that report, we noted that the United States faces an extremely challenging national security environment at the same time that it is grappling with addressing an unsustainable fiscal situation in which DOD accounts for approximately half of the federal government's discretionary spending. Within this environment, DOD is working to both rebuild the readiness of its forces and modernize to meet future threats while facing constrained

---

<sup>1</sup>Significant mishaps include collisions with other ships and groundings. We provide information on the other three at sea mishaps of 2017 in the background section of this testimony.

<sup>2</sup>On August 24, 2017, the Vice Chief of Naval Operations directed the Commander, U.S. Fleet Forces Command, to lead a comprehensive review of surface fleet operations and incidents at sea that have occurred over the past decade with final results to be provided within 60 days, unless an extension is requested and granted.

<sup>3</sup>This included a detailed discussion of our priority recommendations to DOD. Since August 2015, we have identified priority recommendations in letters to the Secretary of Defense—recommendations that we have made to DOD that we believe the department should give a high priority to addressing. See GAO, *Department of Defense: Actions Needed to Address Five Key Mission Challenges*, GAO-17-369 (Washington, D.C.: June 13, 2017). As of June 2017, 78 priority recommendations remained open.



---

budgets. Each of the military services today are generally smaller and less combat ready than they have been in many years, and each military service has been forced to cut critical needs in areas such as training, maintenance, and modernization due to budgetary constraints. Put simply, our work has shown that readiness challenges persist across a number of areas including, but not limited to, the Navy.

This statement provides information on Navy readiness, including the effects of homeporting ships overseas, reducing crew size on ships, and not completing maintenance on time, and summarizes GAO recommendations to address the Navy's challenges.<sup>4</sup> This statement is based on our body of work issued between 2015 and 2017 examining the readiness of ships homeported overseas, sailor training and workload issues, maintenance challenges, and other readiness issues.<sup>5</sup> To perform our prior work, we analyzed Navy readiness, training, and maintenance data, and interviewed cognizant Navy officials involved in fleet operations. The reports cited throughout this statement contain more details on the scope of the work and the methodology used to carry it out. This statement also includes updates to information as of August 2017, as appropriate, based on Navy documentation and discussions with Navy officials.

The work on which this testimony is based was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

---

## Background

Since January 2017, the Navy has suffered four significant mishaps at sea that have resulted in serious damage to Navy ships and the loss of 17 sailors (see figure 1). Three of the four at sea mishaps that have occurred—two collisions and one grounding—have involved ships homeported overseas in Yokosuka, Japan. Appendix II provides a

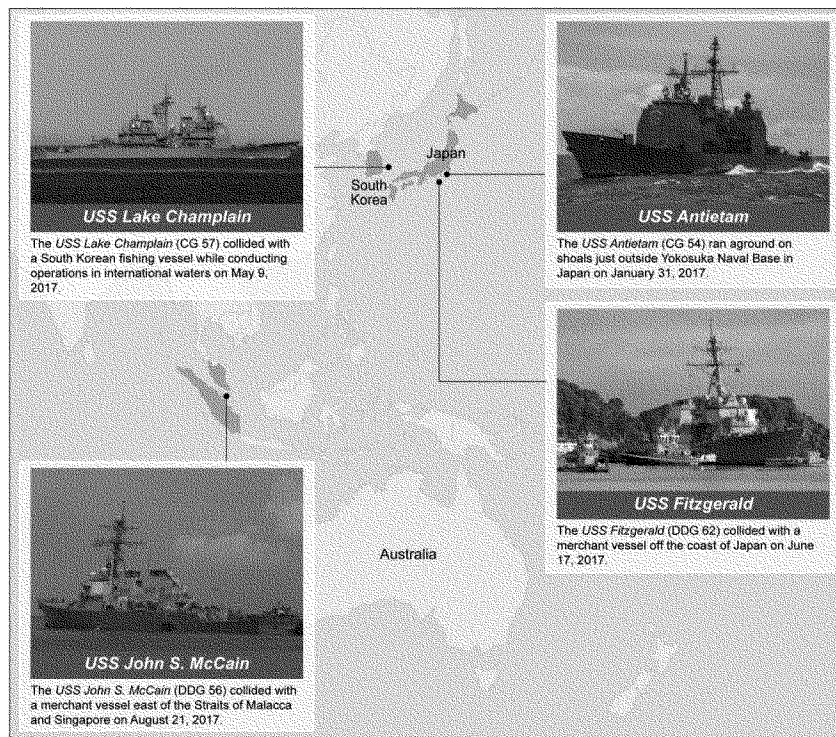
---

<sup>4</sup>The status of our recommendations made in the work cited in this statement is provided in appendix I.

<sup>5</sup>A list of related classified and unclassified GAO products is provided in appendix III.

summary of major mishaps for Navy ships at sea in fiscal years 2009 through 2017.

Figure 1: Overview of Significant Mishaps at Sea for Navy Ships, January – August 2017



Source: GAO analysis of Navy data; Defense Video Imagery Distribution System and U.S. Navy (images). | GAO-17-798T

---

The Navy currently has 277 ships, a 17 percent reduction from the 333 ships it had in 1998. Over the past two decades, as the number of Navy ships has decreased, the number of ships deployed overseas has remained roughly constant at about 100 ships; consequently, each ship is being deployed more to maintain the same level of presence.<sup>6</sup> We reported in September 2016 that the Navy, along with the other military services, had been reporting persistently low readiness levels.<sup>7</sup> The Navy attributes these, in part, to the increased deployment lengths needed to meet the continuing high demand for its aircraft carriers, cruisers, destroyers, and amphibious ships. For example, the deployment lengths for carrier strike groups had increased from an average of 6.4 months during the period of 2008 through 2011 to a less sustainable 9 months for three carrier strike groups that were deployed in 2015. In 2016, the Navy extended the deployments of the *Harry S Truman* and *Theodore Roosevelt* Carrier Strike Groups to 8 and 8.5 months, respectively. In addition, the Navy has had to shorten, eliminate, or defer training and maintenance periods to support these high deployment rates. These decisions have resulted in declining ship conditions across the fleet and have increased the amount of time required for the shipyards to complete maintenance on these ships.<sup>8</sup> Lengthened maintenance periods, in turn, compress the time that ships are available for training and operations.

---

<sup>6</sup>Center for Strategic and Budgetary Assessments, *Deploying Beyond Their Means: America's Navy and Marine Corps at a Tipping Point* (Nov. 18, 2015).

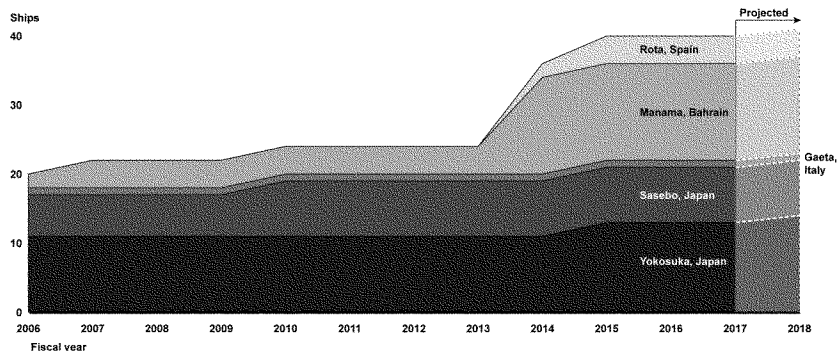
<sup>7</sup>GAO, *Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan*, GAO-16-841 (Washington, D.C.: Sept. 7, 2016).

<sup>8</sup>*The State of the Military: Hearing Before the H. Comm. on Armed Services*, 115th Cong. (2017) (statement of Admiral William F. Moran, U.S. Navy, Vice Chief of Naval Operations).

### Ships Homeported Overseas Provide Increased Forward Presence but Train Less, Defer More Maintenance, Degrade Faster, and Cost More to Operate

As we previously reported, to help meet the operational demands using its existing inventory of ships, the Navy has assigned more of its surface combatants and amphibious ships to overseas homeports. Since 2006, the Navy has doubled the percentage of the fleet assigned to overseas homeports. In 2006, 20 ships were homeported overseas (7 percent of the fleet); today, 40 ships are homeported overseas (14 percent of the fleet) in Japan, Spain, Bahrain, and Italy; and an additional destroyer will be homeported in Yokosuka, Japan in 2018 (see figure 2).

Figure 2: Navy Ships Homeported Overseas in Fiscal Years 2006 – 2018 by Location

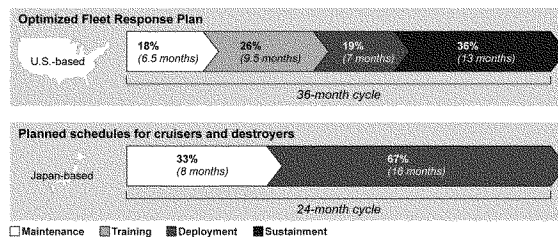


Source: GAO analysis of Navy data. | GAO-17-798T

According to the Navy, homeporting ships overseas is an efficient method for providing forward presence and rapid crisis response. Our prior work confirms that having ships homeported overseas provides additional presence, but it comes at a cost. For example, we found in May 2015 that

homeporting ships overseas results in higher operations and support costs than homeporting ships in the United States.<sup>9</sup> In addition, the operational schedules the Navy uses for overseas-homeported ships limit dedicated training and maintenance periods, resulting in difficulty keeping crews fully trained and ships maintained. In fact, the primary reason that Navy ships homeported overseas provide more deployed time than ships homeported in the United States is that the Navy reduces their training and maintenance periods in order to maximize their operational availability. Ships homeported overseas do not operate within the traditional fleet response plan cycles that apply to U.S.-based ships. Since the ships are in permanent deployment status during their time homeported overseas, they do not have designated ramp-up and ramp-down maintenance and training periods built into their operational schedules (see figure 3). Navy officials told us that because the Navy expects these ships to be operationally available for the maximum amount of time, their intermediate and depot-level maintenance are executed through more frequent, shorter maintenance periods or deferred until after they return to a U.S. homeport—generally after 7 to 10 years overseas.

**Figure 3: Percentage of Time Navy Allocates to Training, Maintenance, and Deployment in Planned Schedules for Cruisers and Destroyers Homeported in the United States and in Japan**



Source: GAO analysis of Navy data. | GAO-17-798T

Notes: Percentages do not add up to 100 due to rounding. Planned schedules are subject to change to meet operational requirements and have varied over time according to Navy officials.

<sup>9</sup>GAO, *Navy Force Structure: Sustainable Plan and Comprehensive Assessment Needed to Mitigate Long-Term Risks to Ships Assigned to Overseas Homeports*, GAO-15-329 (Washington, D.C.: May 29, 2015).

---

In May 2015, we also found that high operational tempo for ships homeported overseas limits the time for crew training when compared with training time for ships homeported in the United States. Navy officials told us that U.S.-based crews are completely qualified and certified prior to deploying from their U.S. homeports, with few exceptions. In contrast, the high operational tempo of ships homeported overseas had resulted in what Navy personnel called a “train on the margins” approach, a shorthand way to say there was no dedicated training time set aside for the ships so crews trained while underway or in the limited time between underway periods. We found that, at the time of our 2015 review, there were no dedicated training periods built into the operational schedules of the cruisers, destroyers, and amphibious ships homeported in Yokosuka and Sasebo, Japan. As a result, these crews did not have all of their needed training and certifications. We recommended that the Navy develop and implement a sustainable operational schedule for all ships homeported overseas. DOD concurred with this recommendation and reported in 2015 that it had developed revised operational schedules for all ships homeported overseas. However, when we contacted DOD to obtain updated information for this testimony, U.S. Pacific Fleet officials stated that the revised operational schedules for the cruisers and destroyers homeported in Japan were still under review and had not been employed. As of June 2017, 37 percent of the warfare certifications for cruiser and destroyer crews homeported in Japan had expired, and over two-thirds of the expired certifications—including mobility-seamanship and air warfare—had been expired for 5 months or more. This represents more than a fivefold increase in the percentage of expired warfare certifications for these ships since our May 2015 report.<sup>10</sup> The Navy’s *Surface Force Readiness Manual* states that the high operational tempo and frequent tasking of ships homeported overseas requires that these ships always be prepared to execute complex operations and notes that this demand for continuous readiness also means that ships homeported overseas should maintain maximum training, material condition, and manning readiness.<sup>11</sup>

With respect to the material condition of the ships, we found in May 2015 that casualty reports—incidents of degraded or out-of-service

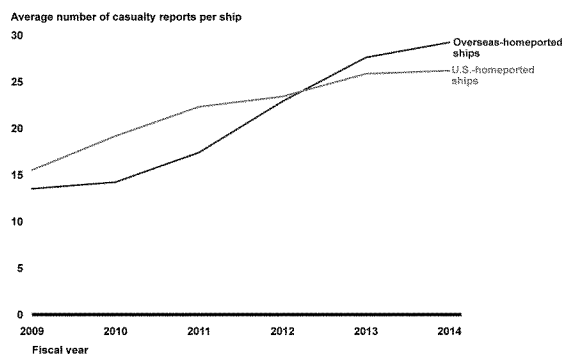
---

<sup>10</sup>As of January 2015, 7 percent of the warfare certifications for cruiser and destroyer crews homeported in Japan had expired. In updating data for this testimony, the level of expired warfare certifications had risen to 37 percent for these crews as of June 2017.

<sup>11</sup>See Commander, Naval Surface Force, U.S. Pacific Fleet/Commander, Naval Surface Force Atlantic Instruction 3502.3A, *Surface Force Readiness Manual* (Nov. 8, 2016).

equipment—nearly doubled over the 2009 through 2014 time frame, and the condition of overseas-homeported ships decreased even faster than that of U.S.-based ships (see figure 4). The Navy uses casualty reports to provide information on the material condition of ships in order to determine current readiness. For example, casualty report data provide information on equipment or systems that are degraded or out of service, the lack of which will affect a ship's ability to support required mission areas. In 2015, Navy officials acknowledged an increasing number of casualty reports on Navy ships and a worsening trend in material ship condition. They stated that equipment casualties require unscheduled maintenance and have a negative effect on fleet operations, because there is an associated capability or capacity loss.

**Figure 4: Average Daily Casualty Reports for U.S.- and Overseas-Homeported Ships, January 2009 – July 2014**



Source: GAO analysis of Navy data. | GAO-17-798T

In our May 2015 report, we recommended that the Navy develop a comprehensive assessment of the long-term costs and risks to its fleet associated with the Navy's increasing reliance on overseas homeporting to meet presence requirements; make any necessary adjustments to its overseas presence based on this assessment; and reassess these risks when making future overseas homeporting decisions. DOD concurred with this recommendation, but, as of August 2017, it has not conducted

---

an assessment, even though it has continued to increase the number of ships homeported overseas.

---

### Size and Composition of Ship Crews May Contribute to Sailor Overwork and Create Readiness and Safety Risks

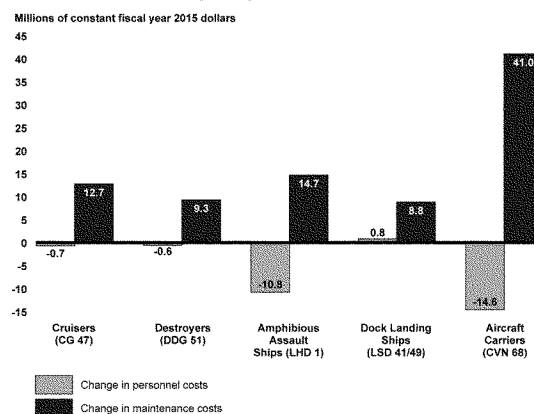
In the early 2000s, the Navy made several changes to its process for determining the size and composition of ship crews that may contribute to sailor overwork and create readiness and safety risks. These changes were intended to drive down crew sizes in order to save on personnel costs. However, as we reported in May 2017, these changes were not substantiated with analysis and may be creating readiness and safety risks.<sup>12</sup> With fewer sailors operating and maintaining surface ships, the material condition of the ships declined, and we found that this decline ultimately contributed to an increase in operating and support costs that outweighed any savings on personnel (see figure 5). The Navy eventually reassessed and reversed some of the changes it had made during this period—known as “optimal manning”—but it continued to use a workweek standard that does not reflect the actual time sailors spend working and does not account for in-port workload—both of which may be leading to sailors being overworked. Additionally, we found that heavy workload does not end after ships return to port. Crews typically operate with fewer sailors while in port, so those crew members remaining must cover the workload of multiple sailors, causing additional strain and potential overwork.

---

<sup>12</sup>GAO, *Navy Force Structure: Actions Needed to Ensure Proper Size and Composition of Ship Crews*, GAO-17-413 (Washington, D.C.: May 18, 2017).



**Figure 5: Changes in Average Annual per Ship Personnel and Maintenance Costs from Start of Optimal Manning through Fiscal Year 2015**

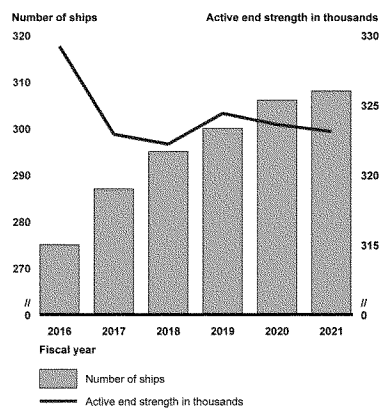


Source: GAO analysis of Navy data. | GAO-17-798T

In 2014, the Navy conducted a study of the standard workweek and identified significant issues that could negatively affect a crew's capabilities to accomplish tasks and maintain the material readiness of ships, as well as crew safety issues that might result if crews slept less to accommodate workload that was not accounted for. The Navy study found that sailors were on duty 108 hours a week, exceeding their weekly on-duty allocation of 81 hours. This on-duty time included 90 hours of productive work—20 hours per week more than the 70 hours that are allotted in the standard workweek. This, in turn, reduced the time available for rest and resulted in sailors spending less time sleeping than was allotted, a situation that the study noted could encourage a poor safety culture. Moving forward, the Navy will likely face manning challenges, especially given its current difficulty in filling authorized positions, as it seeks to increase the size of its fleet by as much as 30 percent over its current size. Navy officials stated that even with manpower requirements that accurately capture all workload, the Navy will be challenged to fund these positions and fill them with adequately

trained sailors at current personnel levels. Figure 6 shows the Navy's projected end strength and fleet size.

**Figure 6: Planned Number of Navy Ships and Projected Personnel End Strength**



Source: GAO analysis of Navy data. | GAO-17-798T

Note: Number of ships from 2017 to 2021 is based on the 308-ship fleet size in the Navy's Fiscal Year 2017 shipbuilding plan. The Navy has not yet updated its shipbuilding plan to reflect its new goal of 355 ships. Projected personnel end strength is the total number of active-duty personnel in the Navy.

In our May 2017 report, we found that the Navy's guidance does not require that the factors it uses to calculate manpower requirements be reassessed periodically or when conditions change, to ensure that these factors remain valid and that crews are appropriately sized. We made several recommendations to address this issue, including that the Navy should (1) reassess the standard workweek, (2) require examination of in-port workload, (3) develop criteria to reassess the factors used in its manpower requirements process, and (4) update its ship manpower requirements. DOD concurred with our recommendations, stating that it is committed to ensuring that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet. As of August 2017, DOD had not yet taken any

---

actions to implement these recommendations. We believe that, until the Navy makes the needed changes, its ships may not have the right number and skill mix of sailors to maintain readiness and prevent overworking its sailors.

---

### The Navy's Inability to Complete Ship Maintenance on Time Hampers Its Efforts to Rebuild Readiness

To address its persistently low readiness levels, the Navy began implementing a revised operational schedule in November 2014, which it referred to as the optimized fleet response plan. This plan seeks to maximize the employability of the existing fleet while preserving adequate time for maintenance and training, providing continuity in ship leadership and carrier strike group assignments, and restoring operational and personnel tempos to acceptable levels. The Navy's implementation of the optimized fleet response plan—and readiness recovery more broadly—is premised on adherence to deployment, training, and maintenance schedules.

However, in May 2016, we found that the Navy was having difficulty in implementing its new schedule as intended.<sup>13</sup> Both the public and private shipyards were having difficulty completing maintenance on time, owing primarily to the poor condition of the ships after more than a decade of heavy use, deferred maintenance, and the Navy's inability to accurately predict how much maintenance they would need.<sup>14</sup> We reported that in 2011 through 2014 only 28 percent of scheduled maintenance for surface combatants was completed on time and just 11 percent was completed on time for aircraft carriers. We updated these data for the purposes of this testimony to include maintenance availabilities completed through the end of fiscal year 2016 and found continued difficulty completing maintenance on time for key portions of the Navy fleet (see figure 7):

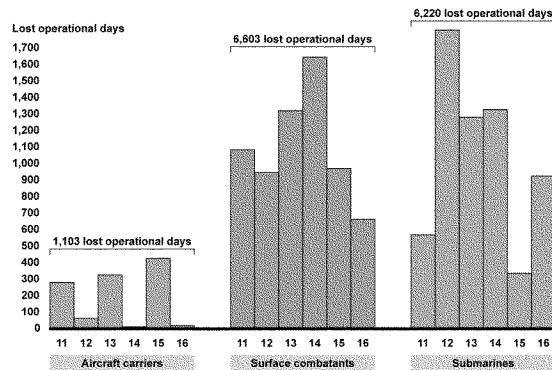
---

<sup>13</sup>GAO, *Military Readiness: Progress and Challenges in Implementing the Navy's Optimized Fleet Response Plan*, GAO-16-466R (Washington, D.C.: May 2, 2016).

<sup>14</sup>The Navy generally contracts with private shipyards and other firms for the repair, maintenance, and modernization of non-nuclear surface ships. Although the Navy operates several government-owned shipyards, those shipyards are used primarily to support the repair, maintenance, and modernization of nuclear-powered ships, such as submarines and aircraft carriers.

- *Aircraft Carriers (CVNs)*: In fiscal years 2011 through 2016, maintenance overruns on 18 of 21 (86 percent) aircraft carriers resulted in a total of 1,103 lost operational days—days that ships were not available for operations—the equivalent of losing the use of 0.5 aircraft carriers each year.<sup>15</sup>
- *Surface Combatants (DDGs and CGs)*: In fiscal years 2011 through 2016, maintenance overruns on 107 of 169 (63 percent) surface combatants resulted in a total of 6,603 lost operational days—the equivalent of losing the use of 3.0 surface combatants each year.
- *Submarines (SSNs, SSBNs, and SSGNs)*: In fiscal years 2011 through 2016, maintenance overruns on 39 of 47 (83 percent) submarines resulted in a total of 6,220 lost operational days—the equivalent of losing the use of 2.8 submarines each year.

**Figure 7: Aircraft Carrier, Surface Combatant, and Submarine Lost Operational Days Resulting from Maintenance Overruns, Fiscal Years 2011 – 2016**



Source: GAO analysis of Navy data. | GAO-17-798T

<sup>15</sup>This does not necessarily mean that the Navy is missing presence in a given area, because the Navy has other options to mitigate maintenance delays—such as extending another ship's deployment.

---

Note: The Navy tracks maintenance availabilities by the fiscal year in which they begin. Figure data showing lost operational days for aircraft carriers and submarines are as of March 2017; and for surface combatants, as of July 2017. Data on the number of lost operational days for fiscal year 2016 for aircraft carriers and fiscal years 2014 through 2016 for submarines are incomplete, because there were still maintenance availabilities being executed as of March 2017. Total lost operational days will not be known until all aircraft carriers and submarines that started a maintenance availability complete that availability.

Navy officials are aware of the challenges faced by both the public and private shipyards and have taken steps to address the risks these pose to maintenance schedules, including hiring additional shipyard workers and improving their maintenance planning processes. However, Navy officials have told us that it will take time for these changes to bring about a positive effect. For example, as of May 2016, data on the public shipyards' workforce showed that 32 percent of all employees had fewer than 5 years of experience. According to Navy officials, this workforce inexperience negatively affects the productivity of the shipyards, and it will take several years for them to attain full productivity.

---

## Navy Readiness Rebuilding is Part of a Broader DOD Effort

In September 2016, we found that although DOD has stated that readiness rebuilding is a priority, implementation and oversight of department-wide readiness rebuilding efforts did not fully include key elements of sound planning, and the lack of these elements puts the overall rebuilding efforts at risk.<sup>16</sup> The Navy states that its overall goal for readiness recovery is to reach a predictable and sustainable level of global presence and surge capacity from year to year. The Navy identified carrier strike groups and amphibious ready groups as key force elements in its plan for readiness recovery and had set 2020 for reaching a predictable and sustainable level of global presence and surge capacity by implementing the optimized fleet response plan. However, we found in 2016 that the Navy faced significant challenges, such as delays in completing maintenance and emerging demands, in achieving its readiness recovery goals for carrier strike groups and amphibious ready groups, and projections show that the Navy will not meet its time frames for achieving readiness recovery.<sup>17</sup>

---

<sup>16</sup>GAO, *Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan*, GAO-16-841 (Washington, D.C.: Sept. 7, 2016).

<sup>17</sup>GAO, *Navy and Marine Corps: Services Face Challenges to Rebuilding Readiness*, GAO-16-481RC (Washington, D.C.: May 25, 2016).

---

As a result, we recommended that DOD and the services establish comprehensive readiness goals, strategies for implementing them, and associated metrics that can be used to evaluate whether readiness recovery efforts are achieving intended outcomes. DOD generally concurred with our recommendations and, in November 2016, issued limited guidance to the military services on rebuilding readiness; it has also started to design a framework to guide the military services in achieving readiness recovery but has not yet implemented our recommendations. The Navy has since extended its time frame for readiness recovery to at least 2021, but it still has not developed specific benchmarks or interim goals for tracking and reporting on readiness recovery. Navy officials cited several challenges to rebuilding readiness, chief among them the continued high demand for its forces, the unpredictability of funding, and the current difficulty with beginning and completing ship maintenance on time.

In January 2017, the President directed the Secretary of Defense to conduct a readiness review and identify actions that can be implemented in fiscal year 2017 to improve readiness.<sup>18</sup> DOD and Navy officials told us that, as part of this readiness review, the Navy prioritized immediate readiness gaps and shortfalls. These officials added that this review would guide the Navy's investment decisions in future budget cycles, with the intention to rebuild readiness and prepare the force for future conflicts. However, high demand for naval presence will continue to put pressure on a fleet that is already stretched thin across the globe. Looking to the future, the Navy has plans to grow its fleet by as much as 30 percent, but it has not yet shown the ability to adequately man, maintain, and operate the current fleet. These readiness problems need to be addressed and will require the Navy to implement our recommendations—particularly in the areas of assessing the risks associated with overseas basing, reassessing sailor workload and the factors used to size ship crews, and applying sound planning and sustained management attention to its readiness rebuilding efforts. In addition, continued congressional oversight will be needed to ensure that the Navy demonstrates progress in addressing its maintenance, training, and other challenges.

---

<sup>18</sup>National Security Presidential Memorandum, Rebuilding the U.S. Armed Forces, 82 Fed. Reg. 8,983 (Jan. 27, 2017).

---

Chairmen Wilson and Wittman, Ranking Members Bordallo and Courtney, and Members of the Subcommittees, this concludes my prepared statement. I would be pleased to respond to any questions you may have at this time.

---

**GAO Contact and  
Staff  
Acknowledgements**

If you or your staff have questions about this testimony, please contact John Pendleton, Director, Defense Capabilities and Management at (202) 512-3489 or [pendletonj@gao.gov](mailto:pendletonj@gao.gov).

Contact points for our offices of Congressional Relations and Public Affairs may be found on the last page of this statement. GAO staff who made key contributions to this testimony are Suzanne Wren, Assistant Director; Steven Banovac, Chris Cronin, Kerri Eisenbach, Joanne Landesman, Amie Lesser, Tobin McMurdie, Shari Nikoo, Cody Raysinger, Michael Silver, Grant Sutton, and Chris Watson.



## Appendix I: Implementation Status of Prior GAO Recommendations Cited in this Testimony

Over the past three years, we issued several reports related to Navy readiness cited in this statement. Table 1 summarizes the status of recommendations made in these reports, which contained a total of 11 recommendations. The Department of Defense generally concurred with all of these recommendations but has implemented only one of them to date. For each of the reports, the specific recommendations and their implementation status are summarized in tables 2 through 4.

**Table 1: Status of GAO Recommendations on Navy Readiness Since 2015**

Product date	Product title and number	Number of recommendations	
		Open	Implemented
May 18, 2017	<i>Navy Force Structure: Actions Needed to Ensure Proper Size and Composition of Ship Crews</i> (GAO-17-413)	4	0
September 7, 2016	<i>Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan</i> (GAO-16-841)	5	0
May 29, 2015	<i>Navy Force Structure: Sustainable Plan and Comprehensive Assessment Needed to Mitigate Long-Term Risks to Ships Assigned to Overseas Homeports</i> (GAO-15-329)	1	1
<b>Total</b>		<b>10</b>	<b>1</b>

Source: GAO analysis. | GAO-17-798T

Note: The two other reports cited in this testimony, *Military Readiness: Progress and Challenges in Implementing the Navy's Optimized Fleet Response Plan* (GAO-16-466R) and *Navy and Marine Corps: Services Face Challenges to Rebuilding Readiness* (GAO-16-481RC), did not contain recommendations.

**Table 2: Status of Recommendations from *Navy Force Structure: Actions Needed to Ensure Proper Size and Composition of Ship Crews* (GAO-17-413)**

Recommendation #1:	
To ensure that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet, the Under Secretary of Defense for Personnel and Readiness should direct the Secretary of the Navy to have the Navy conduct a comprehensive reassessment of the Navy standard workweek and make any necessary adjustments.	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> DOD did not provide a specific response to this recommendation. Instead, DOD reiterated its commitment to ensuring that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet. As of August 2017, no specific action on this recommendation has been taken.</p>

Appendix I: Implementation Status of Prior  
GAO Recommendations Cited in this  
Testimony

**Recommendation #2:**

To ensure that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet, the Under Secretary of Defense for Personnel and Readiness should direct the Secretary of the Navy to have the Navy update guidance to require examination of in-port workload and identify the manpower necessary to execute in-port workload for all surface ship classes.

**Status:** Open

**Concurrence:** Yes

**Comments:** DOD did not provide a specific response to this recommendation. Instead, DOD reiterated its commitment to ensuring that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet. As of August 2017, no specific action on this recommendation has been taken.

**Recommendation #3:**

To ensure that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet, the Under Secretary of Defense for Personnel and Readiness should direct the Secretary of the Navy to have the Navy develop criteria and update guidance for reassessing the factors used to calculate manpower requirements periodically or when conditions change.

**Status:** Open

**Concurrence:** Yes

**Comments:** DOD did not provide a specific response to this recommendation. Instead, DOD reiterated its commitment to ensuring that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet. As of August 2017, no specific action on this recommendation has been taken.

**Recommendation #4:**

To ensure that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet, the Under Secretary of Defense for Personnel and Readiness should direct the Secretary of the Navy to have the Navy identify personnel needs and costs associated with the planned larger Navy fleet size, including consideration of the updated manpower factors and requirements.

**Status:** Open

**Concurrence:** Yes

**Comments:** DOD did not provide a specific response to this recommendation. Instead, DOD reiterated its commitment to ensuring that the Navy's manpower requirements are current and analytically based and will meet the needs of the existing and future surface fleet. As of August 2017, no specific action on this recommendation has been taken.

Source: GAO analysis. | GAO-17-798T

Appendix I: Implementation Status of Prior  
GAO Recommendations Cited in this  
Testimony

**Table 3: Status of Recommendations from *Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan* (GAO-16-841)**

<b>Recommendation #1:</b>	
To ensure that the department can implement readiness rebuilding efforts, the Secretary of Defense should direct the Secretaries of the Departments of the Army, the Navy, and the Air Force to establish comprehensive readiness rebuilding goals to guide readiness rebuilding efforts and a strategy for implementing identified goals, to include resources needed to implement the strategy.	<b>Status:</b> Open <b>Concurrence:</b> Partial <b>Comments:</b> As of August 2017, DOD had not established comprehensive readiness rebuilding goals to guide readiness rebuilding efforts and a strategy for implementing identified goals, to include resources needed to implement the strategy.
<b>Recommendation #2:</b>	
To ensure that the department can implement readiness rebuilding efforts, the Secretary of Defense should direct the Secretaries of the Departments of the Army, the Navy, and the Air Force to develop metrics for measuring interim progress at specific milestones against identified goals for all services.	<b>Status:</b> Open <b>Concurrence:</b> Partial <b>Comments:</b> As of August 2017, DOD had not developed metrics for measuring interim progress at specific milestones against identified readiness rebuilding goals for each of the military services.
<b>Recommendation #3:</b>	
To ensure that the department can implement readiness rebuilding efforts, the Secretary of Defense should direct the Secretaries of the Departments of the Army, the Navy, and the Air Force to identify external factors that may impact readiness recovery plans, including how they influence the underlying assumptions, to ensure that readiness rebuilding goals are achievable within established time frames. This should include, but not be limited to, an evaluation of the impact of assumptions about budget, maintenance time frames, and training that underpin the services' readiness recovery plans.	<b>Status:</b> Open <b>Concurrence:</b> Partial <b>Comments:</b> As of August 2017, DOD had not identified external factors that may impact readiness recovery plans.
<b>Recommendation #4:</b>	
To ensure that the department has adequate oversight of service readiness rebuilding efforts and that these efforts reflect the department's priorities, the Secretary of Defense should validate the service-established readiness rebuilding goals, strategies for achieving the goals, and metrics for measuring progress, and revise as appropriate.	<b>Status:</b> Open <b>Concurrence:</b> Yes <b>Comments:</b> As of August 2017, DOD had not validated the service-established readiness rebuilding goals, strategies for achieving the goals, and metrics for measuring progress, and revise as appropriate.
<b>Recommendation #5:</b>	
To ensure that the department has adequate oversight of service readiness rebuilding efforts and that these efforts reflect the department's priorities, the Secretary of Defense should develop a method to evaluate the department's readiness recovery efforts against the agreed-upon goals through objective measurement and systematic analysis.	<b>Status:</b> Open <b>Concurrence:</b> Yes <b>Comments:</b> As of August 2017, DOD had not developed a method to evaluate the department's readiness recovery efforts against the agreed-upon goals through objective measurement and systematic analysis.

Source: GAO analysis. | GAO-17-796T

Appendix I: Implementation Status of Prior  
GAO Recommendations Cited in this  
Testimony

**Table 4: Status of Recommendations from Navy Force Structure: Sustainable Plan and Comprehensive Assessment Needed to Mitigate Long-Term Risks to Ships Assigned to Overseas Homeports (GAO-15-329)**

**Recommendation #1:**

To balance combatant commanders' demands for forward presence with the Navy's needs to sustain a ready force over the long term and identify and mitigate risks consistent with Federal Standards for Internal Control, the Secretary of Defense should direct the Secretary of the Navy to fully implement its optimized fleet response plan and develop and implement a sustainable operational schedule for all ships homeported overseas.

**Status:** Implemented

**Concurrence:** Yes

**Comments:** In August 2015, the Navy reported that it had approved and implemented revised optimized fleet response plan schedules for all ships homeported overseas with six different operational schedules for various naval forces homeported in different overseas locations. However, when updating data for this testimony, U.S. Pacific Fleet officials stated that the revised operational schedules for the cruisers and destroyers homeported in Japan were still under review and had not yet been employed.

**Recommendation #2:**

To balance combatant commanders' demands for forward presence with the Navy's needs to sustain a ready force over the long term and identify and mitigate risks consistent with Federal Standards for Internal Control, the Secretary of Defense should direct the Secretary of the Navy to develop a comprehensive assessment of the long-term costs and risks to the Navy's surface and amphibious fleet associated with its increasing reliance on overseas homeporting to meet presence requirements, make any necessary adjustments to its overseas presence based on this assessment, and reassess these risks when making future overseas homeporting decisions and developing future strategic laydown plans.

**Status:** Open

**Concurrence:** Yes

**Comments:** As of August 2017, the Navy had not completed its assessment of the long-term costs and risks to the Navy's surface and amphibious fleet associated with its increasing reliance on overseas homeporting to meet presence requirements.

Source: GAO analysis. | GAO-17-798T

## Appendix II: Summary of Major Mishaps for Navy Ships at Sea for Fiscal Years 2009 Through 2017, as of August 2017

The Navy defines a class A mishap as one that results in \$2 million or more in damages to government or other property, or a mishap that resulted in a fatality or permanent total disability.<sup>1</sup> We analyzed data compiled by the Naval Safety Center for fiscal years 2009 through 2017 to provide a summary of major Navy mishaps at sea (see table 5).

**Table 5: Navy Class A Collisions, Allisions,<sup>a</sup> and Groundings, Fiscal Years 2009 – 2017, as of August 2017<sup>b</sup>**

Date	Incident Description	Location	Loss of Life
August 21, 2017	A guided missile destroyer collided with a civilian oil tanker, resulting in extensive damage to the destroyer and 10 Navy sailors killed.	South China Sea	10
June 17, 2017	A guided missile destroyer collided with a civilian container ship, resulting in extensive damage to the destroyer and 7 Navy sailors killed.	Southwest of Yokosuka, Japan	7
January 31, 2017	A guided missile cruiser ran aground while anchoring, damaging its propeller. No injuries were reported, but the cruiser required repairs.	Near Yokosuka, Japan	0
September 4, 2016	An unmanned undersea vehicle sank after a collision with a Military Sealift Command support vessel.	Atlantic Ocean	0
August 18, 2016	Following a routine strategic deterrence mission, a nuclear ballistic missile submarine and a Military Sealift Command support vessel collided.	Strait of Juan de Fuca, Washington	0
October 6, 2014	While proceeding outbound via Thimble Shoals Channel, a dock landing ship allided with a buoy.	Virginia Capes, Virginia	0
February 12, 2014	A guided missile frigate ran aground while entering Samsun, Turkey, causing damage to the ship's propeller.	Samsun, Turkey	0
November 16, 2013	An aerial target drone hit a guided missile cruiser during a training exercise.	Southern California	0
January 17, 2013	A mine countermeasure ship ran aground while operating in the Sulu Sea, near Tubbataha Reef.	Sulu Sea, Philippines	0
October 13, 2012	A cruiser collided with a submarine off the coast of Jacksonville, Florida.	Near Jacksonville, Florida	0
August 12, 2012	A guided missile destroyer entering the Arabian Gulf collided with an outbound civilian tanker.	Arabian Gulf	0
May 16, 2012	An amphibious assault ship collided with a Military Sealift Command oiler during replenishment.	Southern California	0
April 18, 2012	A Special Operations Craft collided with a civilian fishing boat, killing a local fisherman.	Philippines	1
June 21, 2011	A submarine tender sustained loss of rudder control, resulting in an allision with a channel buoy.	Bahrain	0

<sup>1</sup>Office of the Chief of Naval Operations Instruction 5102.1D, Marine Corps Order P5102.1B, *Navy and Marine Corps Mishap and Safety Investigation, Reporting, and Record Keeping Manual* (Jan. 7, 2005) (Oct. 5, 2010, change transmittal 2). A class A mishap also includes the destruction of a DOD aircraft.

**Appendix II: Summary of Major Mishaps for  
Navy Ships at Sea for Fiscal Years 2009  
Through 2017, as of August 2017**

<b>Date</b>	<b>Incident Description</b>	<b>Location</b>	<b>Loss of Life</b>
December 18, 2010	A submarine was involved in an underwater allision with a range sonar array. The submarine was not damaged.	Not specified	0
March 20, 2009	A submarine collided with an amphibious ship.	Strait of Hormuz	0

Source: GAO analysis of Navy data. | GAO-17-798T

<sup>a</sup>The Navy refers to incidents where a ship collides with a stationary object, such as a buoy or pier, as an allision.

<sup>b</sup>The Navy defines a class A mishap as one that results in \$2 million or more in damages to government or other property, or a mishap that resulted in a fatality or permanent total disability.

Note: The USS *Lake Champlain* collision with a South Korean fishing boat on May 9, 2017 is not classified as a class A mishap.

---

## Appendix III: Related GAO Products

---

Report numbers with a C or RC suffix are Classified. Classified reports are available to personnel with the proper clearances and need to know, upon request.

*Department of Defense: Actions Needed to Address Five Key Mission Challenges.* GAO-17-369. Washington, D.C.: June 13, 2017.

*Military Readiness: Coastal Riverine Force Challenges.* GAO-17-462C. Washington, D.C.: June 13, 2017. (SECRET)

*Navy Force Structure: Actions Needed to Ensure Proper Size and Composition of Ship Crews.* GAO-17-413. Washington, D.C.: May 18, 2017.

*Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan.* GAO-16-841. Washington, D.C.: September 7, 2016.

*Navy and Marine Corps: Services Face Challenges to Rebuilding Readiness.* GAO-16-481RC. Washington, D.C.: May 25, 2016. (SECRET//NOFORN)

*Military Readiness: Progress and Challenges in Implementing the Navy's Optimized Fleet Response Plan.* GAO-16-466R. Washington, D.C.: May 2, 2016.

*Navy Force Structure: Sustainable Plan and Comprehensive Assessment Needed to Mitigate Long-Term Risks to Ships Assigned to Overseas Homeports.* GAO-15-329. Washington, D.C.: May 29, 2015.

*Military Readiness: Navy Needs to Assess Risks to Its Strategy to Improve Ship Readiness.* GAO-12-887. Washington, D.C.: September 21, 2012.

*Force Structure: Improved Cost Information and Analysis Needed to Guide Overseas Military Posture Decisions.* GAO-12-711. Washington, D.C.: June 6, 2012.

*Military Readiness: Navy Needs to Reassess Its Metrics and Assumptions for Ship Crewing Requirements and Training.* GAO-10-592. Washington, D.C.: June 9, 2010.





---

**GAO's Mission**

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

---

**Obtaining Copies of  
GAO Reports and  
Testimony**

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (<http://www.gao.gov>). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to <http://www.gao.gov> and select "E-mail Updates."

---

**Order by Phone**

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

---

**Connect with GAO**

Connect with GAO on Facebook, Flickr, LinkedIn, Twitter, and YouTube. Subscribe to our RSS Feeds or E-mail Updates. Listen to our Podcasts. Visit GAO on the web at [www.gao.gov](http://www.gao.gov) and read The Watchblog.

---

**To Report Fraud,  
Waste, and Abuse in  
Federal Programs**
**Contact:**

Website: <http://www.gao.gov/fraudnet/fraudnet.htm>

E-mail: [fraudnet@gao.gov](mailto:fraudnet@gao.gov)

Automated answering system: (800) 424-5454 or (202) 512-7470

---

**Congressional  
Relations**

Katherine Siggerud, Managing Director, [siggerudk@gao.gov](mailto:siggerudk@gao.gov), (202) 512-4400,  
U.S. Government Accountability Office, 441 G Street NW, Room 7125,  
Washington, DC 20548

---

**Public Affairs**

Chuck Young, Managing Director, [youngc1@gao.gov](mailto:youngc1@gao.gov), (202) 512-4800  
U.S. Government Accountability Office, 441 G Street NW, Room 7149  
Washington, DC 20548

---

**Strategic Planning and  
External Liaison**

James-Christian Blockwood, Managing Director, [spel@gao.gov](mailto:spel@gao.gov), (202) 512-4707  
U.S. Government Accountability Office, 441 G Street NW, Room 7814,  
Washington, DC 20548



Please Print on Recycled Paper.

**John H. Pendleton**

Mr. John H. Pendleton is Director, Force Structure and Readiness Issues, in the Defense Capabilities and Management Team at the U.S. Government Accountability Office (GAO). His portfolio examines how defense strategy is translated into force structure, how forces are kept ready, and how the military is postured around the world. Recent projects have included assessments of: DOD's readiness-rebuilding efforts and efforts to reduce headquarters; the Army's processes to determine its force structure; Air Force plans to divest the A-10 and shift structure to the reserve component; and the Navy's increased forward-deployment of ships and evolving fleet-response plans, among many others. His portfolio has also included regionally-focused efforts to address challenges posed by anti-access environments in China and Iran; plans for Arctic capabilities; and military posture in Europe, Africa, and the Middle East. Mr. Pendleton hosts a speaker series on behalf of GAO that brings in experts from government and industry. He also leads planning efforts for GAO's defense team and teaches training courses related to leadership and report development.

Mr. Pendleton assumed his current position in 2008 when he was appointed to the Senior Executive Service. He graduated from the University of Kentucky in 1987 and joined GAO that same year. He was posted to GAO's European Office from 1991-1995 where he focused on the post-Cold War drawdown of forces from Europe. Over his career, he has completed coursework at the Naval Postgraduate School, Army Command and General Staff College, and the National Defense University. He also has completed coursework at the Syracuse-Maxwell School, Harvard, Center for Creative Leadership, Aspen Institute and MIT's Seminar XXI. Mr. Pendleton has received numerous GAO awards including the Distinguished Service Award, Client Service Award, and the John Henry Luke Mentoring Award.

---

---

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

SEPTEMBER 7, 2017

---

---



#### **RESPONSE TO QUESTION SUBMITTED BY MR. HUNTER**

Admiral MORAN. Commander Naval Surface Forces (CNSF) is currently evaluating the plan to replace these assets and ensure long-term multi mission capability across the Fleet. In the interim, GFM allocation will ensure we maintain the same capability and meet operational requirements within the Seventh Fleet AOR. The long term laydown of FDNF-J forces will be incorporated into the 2018 Strategic Laydown and Dispersal Plan (SLD 18). SLD18 is currently in development and is expected to be presented to Congress in March 2018. [See page 27.]

---

#### **RESPONSE TO QUESTION SUBMITTED BY MR. GALLAGHER**

Admiral MORAN. In recent years, the Navy's ability to meet COCOM demand has fluctuated between 40% and 45% of their requests for naval forces. For FY18, Navy will meet 44% of COCOM demand. While COCOM demands fluctuate from year to year, both overall and for class of ship, the trend over the last few years has been an increasing one. The Navy's 2016 Force Structure Assessment determined a requirement for 355 ships, when measured with today's platforms, as an acceptable level of risk. A larger fleet would be needed in order to fully meet all COCOM demands. [See page 39.]

---

#### **RESPONSE TO QUESTIONS SUBMITTED BY MR. NORCROSS**

Admiral MORAN. In the immediate aftermath of the collisions, the CNO directed the Navy to take an "operational pause" in all of its fleets around the world, to allow fleet commanders to assess and review with their commands the fundamental practice of safe and effective operations and to correct any areas that require immediate attention. This pause has been completed, with commanders incorporating deliberate processes in their operations to better manage risk. The following immediate actions are being undertaken to prevent another mishap. We have commenced Readiness for Sea Assessments (RFSA) for all ship assigned to Japan, to inspect and assess watchstander proficiency and material readiness to ensure ships are able to safely navigate, communicate and operate. Immediate remediation will be conducted for ships found deficient, and they will not be assigned for operational tasking until they are certified to be ready.

- We have taken measures to ensure our Sailors get sufficient sleep in all ship-board routines to address fatigue concerns.
- All material problems involving ship control have been given increased priority for repair.
- To ensure SEVENTH Fleet ships are properly certified, the Pacific Fleet Commander is standing up Naval Surface Group Western Pacific (NSGWP) to consolidate authorities to oversee the training and certification of forward-deployed ships based in Japan.
- We have commenced a review of certifications of each ship, to include developing a plan for each to regain currency and proficiency across all certification areas. All waivers for ships whose certification has expired will now be approved by the Pacific Fleet Commander.
- We have increased focus across the force on open communication and thorough debriefing and assessment of operations and evolutions through instilling the practice of "Plan, Brief, Execute, Debrief" across commands. Other cultural changes include increasing unit-level operational pauses, increasing access to lessons learned, and encouraging time for repercussion free self-assessments.

[See page 29.]



---

---

**QUESTIONS SUBMITTED BY MEMBERS POST HEARING**

SEPTEMBER 7, 2017

---

---





#### QUESTIONS SUBMITTED BY MR. WILSON

Mr. WILSON. Admiral Boxall, I understand that the U.S. Navy is developing advanced radar capabilities under a research, development, test, and evaluation program called “Next Generation Surface Search Radar”. Such advanced capabilities would improve situational awareness for piloting and surface contact management, as well as for combat operations. As the Navy, the Committee on Armed Services in the House of Representatives, and other entities strive to address training and other requirements highlighted by the recent catastrophic collisions, it’s equally important that we provide our sailors and Marines with the best available radar technology to reduce watch team workload and the likelihood of human error; they need to be equipped with more integrated radar, navigation, and contact information for better situational awareness and decision-making. Therefore, please share with us the status of this Next Generation Surface Search Radar RDT&E program, including but not limited to considerations regarding future RDT&E requirements and funding. In addition, how will the Navy use this program to address radar upgrade requirements going forward? Please describe the U.S. Navy’s acquisition approach to this capability, as well as the status of any plans to field this capability within the surface fleet.

Admiral BOXALL. The AN/SPS-73(X) Next Generation Surface Search Radar (NGSSR) upgrade leverages RDT&E work performed for a classified shore based system, as well as previous investments in Small Business Innovative Research (SBIR) technology for both the AN/SPS-74 periscope detection radar and AN/BPS-17 submarine navigation radar. The AN/SPS-73(X) NGSSR will update eighty-one AN/SPS-73(V)12 and sixty-seven AN/SPS-73A(V)12 systems to provide situational awareness and contact management, supporting ship self-defense, gun fire support, periscope detection and discrimination, remotely operated vehicle management, navigation, search and rescue, and electromagnetic maneuverability evolutions. Eliminating reliance on militarized commercial off the shelf transmitters, the NGSSR will be an all-digital multi-function high resolution radar with a solid state transmitter, which includes Automated Radar Plotting Aids (ARPA), fully programmable waveforms, and performance improvements over AN/SPS-73(V)12 and A(V)12, AN/SPS-67(V) variants and commercial navigation radars. The NGSSR acquisition approach (Items Less Than \$5 Million; BLI 2980) leverages existing SBIR contracts with Ultra/3 Phoenix, Wake Forrest, NC, for NRE and follow-on initial production. PB18 includes funding for the procurement of 3 upgrade kits for qualification testing (land based, shock, vibration, environmental, etc.) in FY19. In FY20, 12 production kits are planned to be procured for initial shipboard installation beginning in FY21. The initial units will support new construction installations as well as start to replace AN/SPS-73(V)12/A(V)12 systems on in-service surface combatants. PB18 supports continued procurement and installation of NGSSR throughout the FYDP.

---

#### QUESTIONS SUBMITTED BY MR. COURTNEY

Mr. COURTNEY. Can you please provide us the total number of certifications that were expired on the USS *Fitzgerald* and USS *McCain* and what those specific certifications were?

Admiral MORAN. USS *Fitzgerald*: At the time of the collision, expired certifications (14) included: Communications, Mobility-Air, Mobility-Engineering, Mobility-Seamanship, Supply, Air Warfare, Ballistic Missile Defense, Cryptology, Electronic Warfare, Intelligence, Strike-Cruise Missile Tactical Qualification (CMTQ), Strike-Naval Surface Fire Support (NSFS), Surface Warfare, Undersea Warfare, Visit Board Search and Seizure. USS *John S. McCain*: At the time of the collision, expired certifications (10) included: Maintenance and Material Management (3M), Anti-terrorism, Fleet Support-Medical, Search and Rescue, Air Warfare, Strike-CMTQ, Strike-NSFS, Surface Warfare, Undersea Warfare, Visit Board Search and Seizure.

---

#### QUESTIONS SUBMITTED BY MR. McEACHIN

Mr. McEACHIN. How much discretion do current policies afford individual ship commanders with respect to the kind of choices that may have contributed to the

recent collisions? Are there best practices that are implemented on certain vessels, but not widely—for instance, requirements that watch bills reflect a) the biological reality of sailors' circadian rhythms, and b) fact that human beings work best with the benefit of consistent sleep schedules?

Admiral BOXALL. The Navy recognizes that its sailors, the men and women who crew our ships, are the critical enabler to warfighting. Ensuring they are healthy, fit and rested will make them more productive and effective during training and in combat. Over the past three years, (starting in May 13) CNSF promulgated guidance on Circadian Rhythm (CR) Watchbills intended to encourage the implementation of innovative shipboard watch rotations and daily routines that maximize the effectiveness of our watchstanders. In Jun 2016, CNSF promulgated Warfighting Serial Ten, focusing on warfighting—our people: ensuring they are healthy, fit and rested. CNSF has sponsored a series of interrelated studies on crew endurance and Sailor resilience undertaken by the Naval Postgraduate School (NPS) which are receiving widespread attention throughout the Fleet. Since CNSF began promoting circadian rhythm in 2013, commanding officers have had the latitude to determine the most effective watchbills and shipboard routines to employ onboard their ships—circadian rhythm was a best practice shared with waterfront leaders and strongly encouraged. In the spring of 2017, CNSF queried the surface force regarding fatigue management, sleep and resilience and circadian rhythm watchbills to get feedback on how CNSF could help with fatigue management. The large majority of responses agreed that circadian rhythm was the best way to combat fatigue. Lessons were collected and shared. CNSF's recent circadian rhythm direction, informed by NPS studies and fleet feedback, is an order and will be implemented by 20 Dec 2017. However, commanding officers have flexibility in how they execute circadian rhythm. Additionally, CNSF, working with NPS, is providing tools to the fleet to train leaders and Sailors on how to properly implement circadian rhythm best practices on their ships. The proper use of these shipboard routines and watchbills will provide watchstanders with a repetitive watch schedule that allows the body to establish a sleep pattern resulting in adequate rest and greater alertness on watch.

Mr. MCEACHIN. How much discretion do current policies afford individual ship commanders with respect to the kind of choices that may have contributed to the recent collisions? Are there best practices that are implemented on certain vessels, but not widely—for instance, requirements that watch bills reflect a) the biological reality of sailors' circadian rhythms, and b) fact that human beings work best with the benefit of consistent sleep schedules?

Admiral MORAN. The Navy recognizes that its sailors, the men and women who crew our ships, are the critical enabler to warfighting. Ensuring they are healthy, fit and rested will make them more productive and effective during training and in combat. Over the past three years, (starting in May 13) CNSF promulgated guidance on Circadian Rhythm (CR) Watchbills intended to encourage the implementation of innovative shipboard watch rotations and daily routines that maximize the effectiveness of our watchstanders. In Jun 2016, CNSF promulgated Warfighting Serial Ten, focusing on warfighting—our people: ensuring they are healthy, fit and rested. CNSF has sponsored a series of interrelated studies on crew endurance and Sailor resilience undertaken by the Naval Postgraduate School (NPS) which are receiving widespread attention throughout the Fleet. Since CNSF began promoting circadian rhythm in 2013, commanding officers have had the latitude to determine the most effective watchbills and shipboard routines to employ onboard their ships—circadian rhythm was a best practice shared with waterfront leaders and strongly encouraged. In the spring of 2017, CNSF queried the surface force regarding fatigue management, sleep and resilience and circadian rhythm watchbills to get feedback on how CNSF could help with fatigue management. The large majority of responses agreed that circadian rhythm was the best way to combat fatigue. Lessons were collected and shared. CNSF's recent circadian rhythm direction, informed by NPS studies and fleet feedback, is an order and will be implemented by 20 Dec 2017. However, commanding officers have flexibility in how they execute circadian rhythm. Additionally, CNSF, working with NPS, is providing tools to the fleet to train leaders and Sailors on how to properly implement circadian rhythm best practices on their ships. The proper use of these shipboard routines and watchbills will provide watchstanders with a repetitive watch schedule that allows the body to establish a sleep pattern resulting in adequate rest and greater alertness on watch.