

[H.A.S.C. No. 112-25]

**AMPHIBIOUS OPERATIONS**

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HEARING

BEFORE THE

SUBCOMMITTEE ON SEAPOWER AND  
PROJECTION FORCES

OF THE

COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

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HEARING HELD  
MARCH 16, 2011



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SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

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### WEDNESDAY, MARCH 16, 2011

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##### DOCUMENTS SUBMITTED FOR THE RECORD:

[There were no Documents submitted.]

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[There were no Questions submitted during the hearing.]

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## AMPHIBIOUS OPERATIONS

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HOUSE OF REPRESENTATIVES,  
COMMITTEE ON ARMED SERVICES,  
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES,  
*Washington, DC, Wednesday, March 16, 2011.*

The subcommittee met, pursuant to call, at 2:07 p.m., in room 2118, Rayburn House Office Building, Hon. Todd Akin (chairman of the subcommittee) presiding.

### **OPENING STATEMENT OF HON. W. TODD AKIN, A REPRESENTATIVE FROM MISSOURI, CHAIRMAN, SUBCOMMITTEE ON SEAPOWER AND EXPEDITIONARY FORCES**

Mr. AKIN. The hearing will now come to order, and I have a brief opening statement. And I don't know if we will have maybe but one and just allow you gentlemen to proceed, I think, unless the minority leaders here—

Unless—do you have a statement, too?

Okay, you do that. Okay, fine, thank you.

The purpose of today's hearing is to receive testimony regarding the amphibious requirements and operational development plans necessary to effectively meet the U.S. combatant commanders' demands to engage forward, respond to crisis, and project power.

Today's witnesses include the Honorable Sean Stackley, Lieutenant General George Flynn, Vice Admiral John Blake.

And, gentlemen, thank you for being here. Thank you for your longstanding service to our country and the great job that I know that you all do.

First, I would appreciate at some point if Admiral Blake and General Flynn could give us an update on how the 7th Fleet is responding to the current crisis in Japan. That is kind of a little parenthesis, but I think everybody is interested. Our thoughts and prayers go out to all the victims, survivors and family members, who are trying to get through this terrible disaster.

Fortunately, we have the United States Navy and Marine Corps that can provide humanitarian assistance in cases such as this, and I know the subcommittee would appreciate a short update on how they are doing. This is, of course, relevant to today's hearing.

We know that Department of Navy officials agreed that a 38-ship amphibious force would more fully meet the Marine Corps 2.0 Expeditionary Brigade assault echelon lift requirement. We also know that a 33-ship amphibious force is the minimum number. And, in fact, that minimum number currently isn't planned to be reached until 2017. We need to fully understand what risk is associated with maintaining an amphibious ship inventory less than 38 ships.

Finally, it is no secret that I do not agree with the decision to terminate the EFV [Expeditionary Fighting Vehicle]. I fear that although there is a lot of talk about support for a new vehicle to replace EFV, history tells us that when all is said and done, the Marine Corps will probably only get an upgraded version of the current AAV [Amphibious Assault Vehicle]. It is important for the members of this committee to understand what the current status of the EFV contract is, how the \$3.3 billion dollars that has been spent on this program won't be for naught.

And, again, thank you for being here, and I look forward to your testimony. I would now yield to my friend, Mrs. Davis, for an opening statement.

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

**STATEMENT OF HON. SUSAN A. DAVIS, A REPRESENTATIVE  
FROM CALIFORNIA, SUBCOMMITTEE ON SEAPOWER AND EX-  
PEDITIONARY FORCES**

Mrs. DAVIS. Thank you, Mr. Chairman. And I am pleased to step in for Mr. McIntyre. I want to thank you and certainly thank Secretary Stackley and Admiral Blake, General Flynn for being here and for testifying before this committee once again.

Today, we will hear testimony from both the Navy and the Marine Corps on how they plan to execute amphibious operations and how we as Congress can best support that mission. The need for a forward-deployed amphibious force comprised of both Naval and Marine assets cannot be seen more clearly than now.

The tragic events that we have witnessed in the aftermath of the Japanese earthquake and subsequent tsunami only further highlight the need for a quick response force that can effectively move from the sea to shore in order to provide assistance.

I look forward to hearing any updates our witnesses can provide on how our forces are doing in support of the Japanese relief. Our thoughts and our prayers are with all those who have been affected.

The Marine Corps represents our Nation's 9/11 emergency response force, and that enables us to quickly respond to events anywhere in the world. There is no question that our marines have been a crucial part of our forces in both Iraq and Afghanistan, but it is essential that we transition the Marine Corps away from being a second land force and back to one that is an amphibious-based expeditionary force.

In doing so, it is essential that we carefully examine what that force should look like, whether that be the appropriate number of amphibious ships or the most capable platform for moving marines ashore.

After the recent decision to terminate the Expeditionary Fighting Vehicle, the EFV, I am particularly interested to hear our witnesses' views on what the current requirement is for an amphibious vehicle. I would also like to hear what the requirements will be for any new follow-on vehicle, such as speed, distance and plane requirements.

I would like to hear from the Navy on what the minimum ship-to-shore distance is for Navy amphibious ships to safely deliver ma-

rines ashore in a new vehicle. And I believe that these are important questions that should be carefully analyzed as we transition our force.

Whether it is crisis response, disaster and humanitarian relief or forward presence, our Navy and Marine Corps amphibious capability is a vital asset for the United States that we must maintain.

Thank you, gentlemen, for your service and for being here today, and we all look forward to your testimony.

[The prepared statement of Mr. McIntyre can be found in the Appendix on page 30.]

Mr. AKIN. Thank you.

And Secretary Stackley, why don't you start off, and I will let you determine your order, and then we have a bunch of people with a lot of questions.

**STATEMENT OF HON. SEAN STACKLEY, ASSISTANT SECRETARY OF THE NAVY FOR RESEARCH, DEVELOPMENT AND ACQUISITION**

Secretary STACKLEY. Yes, sir. Chairman Akin, Representative Davis, distinguished members of the subcommittee, thank you for the opportunity to appear before you today to discuss amphibious operations and, more importantly, for your steadfast support for our sailors and marines around the world.

I propose to keep my opening remarks brief and submit a formal statement for the record with your concurrence.

Mr. AKIN. I concur.

Secretary STACKLEY. Thank you, sir.

Mr. Chairman, your Navy, Marine Corps team is the Nation's force on the move—sea, air and land. About 90,000 sailors and marines are today deployed around the world, conducting missions that span the full spectrum of operations, from humanitarian assistance, disaster response, to maritime security, to combat operations.

Be it in response to the Nation's call in Iraq or Afghanistan or in response to events unplanned and unimagined in Libya or Japan, this team is first on the scene and remains on scene, prepared to serve in whatever capacity the Nation calls for.

It is our will to exercise our freedom of the seas in times of peace, our mission to exercise command of the seas in times of war, and our ability to project forces ashore in the most austere environments, every ocean, every continent that ensures our Nation's readiness to respond to crisis or conflict, wherever our interests are challenged.

In considering our investments and capabilities required for the force, our first priority is in addressing the fight we are in and in taking care of our sailors and marines in the fight. The Marine Corps, in particular, has been on point in key developments in rapid fielding of capabilities critical to this priority.

In addition to these priorities, the 2012 President's budget request continues the recapitalization of the Marine Corps' amphibious capabilities, an effort that has been sustained for over the past decade plus. The ships, aircraft and vehicles required to conduct amphibious operations are uniquely capable of conducting ship-to-

shore lift operations in environments ranging from austere to hostile.

And it is the fleet's ability to aggregate at sea a mix of type and number of ships, aircraft and landing craft that provides our ability to respond to a crisis or conflict at a scale appropriate to that crisis or conflict.

So, to this end, our amphibious force requirements have been shaped over the past decade to provide two Marine Expeditionary Brigade lift within an assault echelon of battle force amphibious ships in addition to equipment prepositioned within our Maritime Prepositioning Force to support an additional brigade.

As discussed at last week's shipbuilding hearing, 38 amphibious ships are required to meet the full extent of this requirement. In balancing the risk across our shipbuilding program, the department's plan builds a balanced mix of 33 amphibious ships, providing aviation and well deck facilities to support combined vertical and horizontal lift operations by embarked aircraft, landing craft and assault vehicles. And to this force, we are adding logistics lift capability with procurement of the Mobile Landing Platform and Joint High Speed Vessel.

The aviation component of amphibious forces is in the midst of total recapitalization. The President's budget request continues procurement of the MV-22 Osprey, remanufacture and new build of the utility and attack versions of the H-1 helicopter, development and limited re-procurement of the short takeoff vertical landing version of the Joint Strike Fighter, and new development programs for the heavy-lift helicopter and the Small Tactical Unmanned Air System.

These programs provide increased lift, air support and aerial surveillance capabilities today in the case of MV-22 and H-1 and within the future years' defense plan in the case of the Joint Strike Fighter, heavy-lift helo and unmanned air systems.

As well we are here today to address landing craft and ground combat tactical vehicles required for amphibious operations. In determining the force structure and capabilities required to respond to the wide range of environments and threats potentially confronting amphibious operations, the amphibious force must balance lift, mobility on water and land, range and speed, survivability, fire power, and command and control.

The key elements of horizontal lift for amphibious operations are the Landing Craft Utility, or LCU, which provides low-speed, high-volume ship-to-shore transfer of personnel and equipment; the Landing Craft Air Cushion Vehicle, or LCAC, which provides high-speed ship-to-shore transfer of equipment; and the Amphibious Assault Vehicle, or AAV, a tracked amphibious vehicle which provides lift over water and over land and limited protection and fire for a squadron of marines.

I would like to highlight two programs in particular. The LCAC fleet, whose service life has been extended through a SLEP [Service Life Extension Program] program requires recapitalization commencing later this decade. Accordingly, this year, we will be opening competition for a new ship-to-shore connector, a modern replacement for the LCAC to provide high-speed ship-to-shore transfer of Marine Corps ground vehicles.

The Amphibious Assault Vehicle was planned to be replaced by the Expeditionary Fighting Vehicle, or EFV. As announced by the Secretary of Defense in December, the Department has concluded that the cost of recapitalizing the AAV fleet with the EFV in terms of both procurement and sustainment costs is not affordable.

The reality is that the 573 vehicles planned for this program, which were projected to cost about \$17 million each in production, would alone consume the projected budget for Marine Corps tactical vehicles for a decade, crippling other critical recapitalization requirements within this portfolio.

The decision to terminate the EFV is accompanied with a decision to pursue an integrated vehicle modernization effort comprising investment in AAV upgrades to extend that vehicle's mission effectiveness, the development of a new amphibious combat vehicle to replace the AAV that will leverage investment made in the EFV and be defined and designed from inception with affordability as a key requirement, an acceleration of the procurement of a Marine personnel carrier, a low-risk capability that complements the assault vehicle program.

As we consider future development and recapitalization efforts for our ground combat tactical vehicles, increased emphasis on distributed command and control and vehicle survivability, armor and protection systems have introduced significant challenges to these vehicles' mobility and their affordability. The decision to restart our assault and vehicle program reflects the challenges posed to all of our future programs and the need to address affordability head on, early on.

In sum, the Department is committed to continuing its efforts to recapitalize the force of ships, aircraft and vehicles, which provide our Nation the forward-presence and the unique ability to rapidly deploy forces from ship to shore across a wide spectrum of environments and threats that challenge our operations. Added to these operational challenges, we have yet new affordability challenges which are causing us to revisit past decisions and acquisition strategies.

Mr. Chairman, thank you for the opportunity to appear before you today. I look forward to answering your questions.

[The joint prepared statement of Secretary Stackley, General Flynn, and Admiral Blake can be found in the Appendix on page 32.]

Mr. AKIN. Thank you, Mr. Secretary.

And General Flynn, were you next? Or have you guys picked an order?

Okay, why don't you go ahead, General Flynn?

**STATEMENT OF LT. GEN. GEORGE FLYNN, USMC, COMMANDING GENERAL, MARINE CORPS COMBAT DEVELOPMENT COMMAND**

General FLYNN. Mr. Chairman Akin, Representative Davis, and members of the committee, it is good to be here with you again today—this time to discuss amphibious operations. I am happy to join Secretary Stackley and Vice Admiral Blake. We have submitted a joint written statement, so like Mr. Stackley, I will be brief.

Today, your Marine Corps executes its role as America's expeditionary force in readiness and is operationally relevant, because it is enabled by the United States Navy and the ships they crew and maintain. The product of this partnership is the ability to conduct a variety of amphibious operations against the full range of military operations that prevent conflict, respond to crisis and, if necessary, prevail in conflict.

This operation flexibility is due in large part to this committee's continued support. I thank you for that, and I thank you for the support of all our marines and sailors.

During the Cold War, U.S. forces were largely based overseas, with access maintained through an extensive network of forward bases. In many ways, as the world and the operating environment have changed, we have also changed our approach.

Today, U.S. forces are largely based within the United States, and our ability to exert influence overseas is reliant on expeditionary operations and capabilities, both forward-postured and surged, that can overcome diplomatic, geographic and/or military impediments to access.

Amphibious capabilities remain critical enablers for overcoming access challenges and the key means to project power and influence events ashore. The military challenges we will face in the future will include state and, very possibly, non-state actors in possession of modern anti-access and aerial-denied weapons and technologies, meaning that amphibious operations, even those conducted for benign purposes like humanitarian assistance may be conducted in an uncertain or even hostile environment.

Overcoming these challenges requires innovative tactics and capabilities. This is why I believe Secretary Gates said in August that the Marines' unique ability to project combat forces from the sea under uncertain circumstances is the capability that America has needed in this past decade and will require in the future.

As current events have shown, this could not be more true. While some still question both the necessity and feasibility of amphibious operations, today, again, as recent events have shown, they are needed. These modern-day operations bear little resemblance to the operations and sacrifices made at places like Tarawa, Peleliu and Iwo Jima.

As you look to the future, we are not looking to replicate those battles or that level of self and courageous sacrifice. This is why we continue to evolve the tactics and capabilities to use the sea as maneuver space and as a base to conduct ship-to-objective maneuver, which allows us to avoid heavily defended areas where feasible and defeat likely adversaries.

In humanitarian operations, these same littoral maneuver capabilities allow us to deliver disaster relief supplies directly to the points needed ashore, rather than dropping them off on the beach where they would be dependent upon the devastated, austere or nonexistent infrastructure and transportation system for distribution.

Partnered with the United States Navy, marines are forward deployed today and responding today to crisis and still engaged in combat operations in Afghanistan.

This past year alone, our sea-based forces conducted humanitarian assistance missions in Japan, Pakistan, Haiti and the Philippines; recaptured the pirated ship *Magellan Star* and rescued its crew from Somali pirates; rapidly reinforced in Afghanistan by committing the battalion landing team from the forward-deployed 26th Marine Expeditionary Unit, and then reinforcing the 26th Marine Expeditionary Unit aboard the *Kearsarge* and USS *Ponce*, with another 400 marines flown in from United States in order to respond to crisis in North Africa.

History teaches us that preventing conflict is equally as important as responding to crisis. Amphibious capabilities that provide forward presence in a short access are a critical enabler for both. This is validated by the continuous increase in the geographic combatant commander demand signal for amphibious forces.

Since 2007, the geographic combatant commanders' cumulative requests for naval forces have grown 86 percent for amphibious-ready groups and Marine expeditionary units, and 53 percent for individually deployed amphibious ships. While our geographic combatant commanders are unconstrained in their requests, our job is to determine how best to meet their demand, given the resources available.

For the foreseeable future, we will continue to maintain a forward-based amphibious-unit and Marine expeditionary unit in the Western Pacific and maintain continuous presence in the Arabian, Indian Ocean as well. As recent events in North Africa and the Middle East demonstrate, it may also be necessary to maintain presence in the Mediterranean and along the coast of Africa.

In an era of declining access and strategic uncertainty, the operational value of amphibious forces for missions across a range of military operations cannot be overstated. Amphibious capabilities provide mobility, persistence and responsiveness without which our Nation would be disadvantaged in its ability to respond to crisis. If these capabilities are allowed to decline, the alternatives would likely involve higher operational risk and higher cost.

Again, thank you for the opportunity to provide an update to the Congress. I look forward to answering your questions.

[The joint prepared statement of General Flynn, Secretary Stackley, and Admiral Blake can be found in the Appendix on page 32.]

Mr. AKIN. Thank you, General.

And, Admiral.

**STATEMENT OF VADM TERRY BLAKE, USN, DEPUTY CHIEF OF NAVAL OPERATIONS FOR INTEGRATION OF CAPABILITIES AND RESOURCES**

Admiral BLAKE. Chairman Akin, Representative Davis, members of the committee, it is my honor to appear before you with Mr. Stackley and General Flynn to discuss amphibious operations.

Today, over 57,000 of our sailors are deployed with 26,000 on land or at sea in the Central Command area of operations. Fifty percent of our fleet is under way and roughly 40 percent of our ships are deployed.

Our sailors are on point throughout the world projecting power in Afghanistan, providing deterrence against North Korea, conducting counter-piracy operations in the Indian Ocean, maintaining global nuclear deterrence, providing ballistic missile defense in the Arabian Gulf, Western Pacific and Eastern Mediterranean, and building partnerships in Africa, South America and the Pacific.

Our sailors also answer the call to support humanitarian relief and disaster assistance when needed, as we did last year in Haiti and Pakistan. Even today, our sailors and marines are responding to world crises, maintaining stations off the coast of Libya and helping the people of Japan.

Our national security and economic prosperity depend upon a strong Navy that can keep the sea lanes free, deter aggression, safeguard our sources of energy, protect the interests of our citizens, and reassure our friends and allies. To do this, our Navy must maintain its global reach and persistent presence while delivering warfighting capability wherever and whenever it is needed.

In partnership with the Marine Corps, the Navy amphibious forces support the core capabilities of our maritime strategy, including power projection, deterrence, forward presence, maritime security, and humanitarian assistance and disaster relief.

With this budget, we will invest in our platforms that have proven to be consistently and effectively accomplishing these missions while expanding our capability to meet the most likely evolving threats.

Investment in the mid-life upgrades of the LSD-41 class dock landing ships and installation of the self-defense systems on the LHD-1 amphibious assault ships are vital to retain the Navy's capabilities for future conflicts and to keep our ships on track to reach their full service lives.

We will also advance our capabilities with the LPD-17 class of amphibious transport dock ships and the LHA-6 class, general purpose amphibious assault ships, the *Zumwalt* Class, DDG-1000 class destroyers, the mobile landing platforms and the Littoral Combat Ships with their mission packages.

Looking to the future, we are working to reintroduce a well deck into LHA-8 to define the requirements for replacements and to define requirements for the replacement of the dock landing ship, the LSD(X), while continuing progress towards procurement of a ship-to-shore connector replacement for our landing craft air cushion vehicles.

As we build the Navy's future, I am very concerned about the long-term impact of the current continuing resolution. In addition to the delays in procuring the lead mobile landing platform and cancellation of several important ship availabilities, including the USS *Peleliu*, if the CR [continuing resolution] continues to the end of March, the lack of authorization for the fiscal year 2011 budget will very likely lead to significant cost growth in many of our Navy's programs.

I ask for your support for our 2012 budget request for our programs and to address those programs and capabilities being impacted by the continuing resolution.

Thank you for all your support to the United States Navy and the Marine Corps and our ability to answer our Nation's call when needed in conflict and disaster. I look forward to your questions.

[The joint prepared statement of Admiral Blake, Secretary Stackley, and General Flynn can be found in the Appendix on page 32.]

Mr. AKIN. Thank you, Admiral.

As we were talking just briefly before the beginning of the hearing, one of the concerns I have had all way along is the fact that, particularly on the Marine expeditionary vehicle—that was the thing that was my number one interest for our hearing today—that I haven't just seen a simple "here are the different alternatives, here is how much each one costs, and this is why we think this one is the best."

And so that line of—and it doesn't have to be something that is documented with 200 pages of notes after each one, but just rough in some numbers on that and just say, "Hey, what do they look like?" And I don't know that each of us taking 5 minutes in asking questions produces that product.

So as we discussed, just starting out, what I would like to do is to schedule a hearing that specifically looks at EFV. And I would like to look at whatever four or five good alternatives, or at least logical alternatives to investigate and say, "What is the cost? What are the capabilities of each package?" And when you take a look at cost and performance, what is probably the thing that we are going to need, which way we are going to need to go.

And so that is going to require some homework to be done. I think it might have been good to have the homework done before we set anything in concrete, and I hope we haven't set anything in concrete.

So that is just a request and a note to the other members of the committee here that I think this structure, the way the committee hearing is set up, isn't going to get to that question probably.

And you weren't prepared to have that, am I correct, Secretary? You don't have that data right now.

Secretary STACKLEY. Sir, what I would propose is a briefing as opposed to a hearing.

Mr. AKIN. Okay.

Secretary STACKLEY. We would go through the current state of I call it the termination of the EFV and the process and the analysis to date leading up to the amphibious combat vehicle, which is the terminology being used for the replacement to the AAV.

Mr. AKIN. Did you answer my request to have, let us take a look at different ways to do this thing? I mean, it sounded to me like what you just said you have already assumed the EFV is dead on arrival. Maybe that is your decision.

My concern is, did we look at half the number? Do you have a hard number from the manufacturer how much each one would cost? And have you run the numbers to say, what are these different alternatives, what is the performance we get for each one and the price performance? And has all of that been done? If it has, we would really like to know that even right now.

It seemed to me that there are several assumptions built into some of what I am hearing the Marine Corps say. The first one is,

is that we don't need a higher rate of speed for plane. It might be nice but we don't have to have it.

The second one is the Navy is comfortable coming in to 12 instead of 24 miles. I understand that maybe there is some technology that gives you some comfort to do that for the time being, but is that assumption 20 years from now a good distance to be 12 miles off the shore or not? That is a big assumption.

The assumption, it appears to me was, is that 500—what was it—573 is too expensive. Does that mean 286 is also too expensive, as we talked about?

Those are the kinds of things that—and I am okay if it is a briefing. That is okay. But what I really want is I want some great big old pieces of paper, and I want to have this is alternative one, alternative two, alternative three. Here is what you get for each one, here is how much it costs, and this is why we think this one is the best alternative. And that is what I am not seeing.

Secretary STACKLEY. Yes, sir.

Mr. AKIN. And what I have seen is what I believe are some pretty good size assumptions built into the direction you are going. I am not sure those assumptions—you know, everything depends on assumptions, and I am not sure those assumptions are—first of all, the standoff distance from the Navy from the shore, what is that like now, what it is going to be like 5 years, 10 years out, because as you guys say, the enemy has a vote, too. And they are going to be developing cheaper weapons that maybe can try to still hit our ships at closer distances. A little more distance is a lot of safety.

And the smaller number. And then the other question is I think the idea was eventually we are going to develop a new replacement for the EFV which is—maybe go a little slower, we have got maybe a V-shaped hull, and we are going to have to develop that, and then build it and fund it. How long is that going to take and how much does that development cost? Is it going to be another \$3.3 billion or not?

And those are the kinds of things, I think, probably some of my colleagues are interested in. And we need to get in—if that is a brief, that is okay. But, Secretary, I think we want an analysis of a whole series of whatever more or less logical alternative so we can see which one is the right path for us to go. Is that what you meant?

Secretary STACKLEY. Yes, sir. I would like to schedule a briefing at your convenience, and we will go through those details. There are several things that are mixed here. One is the requirements. Another is when we talked about alternatives, I think when you described alternatives, you are including a mix of EFVs, plus some other vehicle.

Mr. AKIN. It could be. I don't know.

Secretary STACKLEY. And then separately, there are alternatives where the alternatives would be different versions, like an AOA [Analysis of Alternatives], to come in and meet the requirements that we defined on the front end for this amphibious combat vehicle. And then we will walk through the analysis that we have to date.

Mr. AKIN. I think where I have been coming from, and this is all the way along, but just to restate. I am unwilling and un-negoti-

ating. To me, it is nonnegotiable that we have to get marines from the ocean to the shore. That is not—how you do it and the most effective way to do it, that is both of our business, and we all need to be comfortable with that decision.

And anything goes as far as I am concerned. Top speed and performance at lowest cost, you know. What is the best deal we can get? And I think anything should be on the table, and if that means some smaller number of EFV fits in there, that is okay. If it doesn't work, if they are way too expensive when you get the order quantity smaller and the price goes through the roof, okay, it doesn't work. But I want to look at everything and, you know, keep everything on the table in order to meet that requirement.

Secretary STACKLEY. Yes, sir.

Mr. AKIN. Okay. I have used up a lot of time, so I am going to just go ahead and go to—let us see. The first question would be for Mr. McIntyre.

Mr. MCINTYRE. Thank you. Thank you very much. And my thanks to Mrs. Davis for sharing my opening statement, my being tied up on another matter.

General Flynn and Admiral Blake, thank you for your service. We heard last year that the Department was looking at different weapons and projectiles and ways to mitigate gaps in the naval surface fire support plan. With DDG-1000 line truncated and the electromagnetic railguns still years away, are there any weapons or projectiles or other capabilities currently fielded or planned, which will serve to cover these gaps?

And the question is also has that requirement changed? And can you tell me if there are any plans for a 5-inch long-range land attack projectile for the current destroyers and cruisers?

Mr. Admiral, yes.

Admiral BLAKE. Yes, sir. As you are aware, the triad of fires, which supports the amphibious landing, is made up of three distinct pieces—the naval surface fire support, organic fires and tactical air. And it is these three, if you will, intricate pieces which make up the entire requirement in order to be met.

What we have done is with the DDG-1000, we have the 155-millimeter gun onboard. That will be onboard that ship with a long-range land attack projectile. That round will be in excess of—the requirement is for an excess of 60 miles for that. In addition, we also have the tactical Tomahawk, which is available on both the DDGs and the CGs, as well as the 5-inch/54 and the 5-inch/62 guns onboard the destroyers and the cruisers.

At this time, we do not currently have in the program of record a program for a long-range 5-inch round. However, that said, we are open to all options and are looking at all options. In particular, we are looking at the railgun, which you mentioned, which with a 32-megajoule capability would be able to reach out to ranges around 100 miles. So that is the one of the leg triangle, which are, well, the triads of fires, which we are also working on.

In addition, the Marines have the organic fires pieces, which would be their artillery when they were able to get it ashore. And then the third piece, which we have also invested heavily in, is tactical air. We have invested in smart weapons for all of our attack aircraft so that in combination with these three systems or these

three legs of the triad, we would be able to shape the battlefield as we were going in.

Mr. MCINTYRE. Okay. Thank you.

Thank you, Mr. Chairman.

Mr. AKIN. Thank you.

One thing I forgot to add. What is a reasonable timeframe that we could have that brief?

Secretary STACKLEY. Sir, we work around your convenience. I think your schedule is—

Mr. AKIN. I think we are gone next week. Would it be the following week? Would that be—

Secretary STACKLEY. Week after next? We will arrange that.

Mr. AKIN. Is that doable? Well, we are not asking for a whole lot of super details, but just a rough analysis of each category.

Secretary STACKLEY. Yes, sir.

Mr. AKIN. Is that too fast? Would 3 weeks be better?

Secretary STACKLEY. Well, 3 weeks would be 1 week smarter. But we can—I would rather work around your schedule, recognizing what you have pressing you all, and—

Mr. AKIN. We have a slot on April 7th available to the committee. Is that alright?

Secretary STACKLEY. We will work it, sir.

Mr. AKIN. Okay. We will talk.

Secretary STACKLEY. Yes, sir.

Mr. AKIN. There is some markup going on afterwards, and we are going to deal with that a little bit.

Okay.

Congressman Hunter.

Mr. HUNTER. Okay. Thanks, Mr. Chairman.

I am going to wait for the EFV hearing on April 7th, or whenever we decide to do it. And Mr. Coffman has got a great question about amphibs and construction, so I am going to yield my time to Mr. Wittman.

Mr. WITTMAN. Thank you, Mr. Chairman.

I want to thank Secretary Stackley, General Flynn, Admiral Blake. Thank you so much for your service.

I did want to talk specifically about amphibs. As you know, we are currently at 29 amphibs, and both yourself, the commandant and the CNO [Chief of Naval Operations] have said that the requirement is at 38. The Navy says they can live with 33. That is an acceptable risk. We don't get to 33, though, until 2016. A little bit of gap there, I think, that concerns all of us.

And we see what is happening around the world. We see humanitarian missions being performed in Haiti, the flooding in Pakistan, now looking at a situation in Japan. We are continuing to be spread further and further.

We see ourselves in a situation in the Mediterranean of potentially deploying a MEU [Marine Expeditionary Unit] there. So we see a scenario of a MEU being attached to the 5th Fleet, the 6th Fleet, and then a continuing presence there in the Pacific Command. So we are seeing a heightening of need across a variety of different areas for our amphibs.

And if you look in the past years, as we placed emphasis on our more advanced ships, the *Arleigh Burke*-class destroyer, the *Vir-*

*ginia*-class submarine, the LCS [Littoral Combat Ship], and I like to go back to what General Amos said and that is, you know, the Ford F-150s of the fleet are our amphibious ships, and they are the ones that are out there each and every day and where the most immediate need many times exists.

And I wanted to get your thoughts. If you look at where we are with this shortfall and if you look at the scenario where we see the older *Whidbey Island*-class LSDs [Landing Ship, Dock] approaching 26 years of service, we see we are approaching some challenges there.

Can you give me a timeline about when you see LSD(X) coming online? And can you give us a little clarification on the situation with the USS *Peleliu* LHA-5? It is pending decommissioning. And also where we are with the delivery of USS *America* LHA-6.

So either Secretary Stackley or General Flynn, whichever of you there, or Admiral Blake, whichever of you would like to answer those questions, I think having that clarity on the overall vision about our amphibious fleet and then some specifics about some of our aging portions of the fleet.

Secretary STACKLEY. Yes, sir. Let me propose to split the response here. I will start with—let me just start with the plan right now for shipbuilding in terms of amphibs.

You highlighted LHA-6, the *America*. She is under construction right now at Ingalls. She is about a year—our projected delivery date for the LHA-6 is about a year later than what we had contracted for. And as a result of that, we have decided to extend the service line for the *Peleliu* to minimize the gap in terms of big deck amphibs. So she is about 30 percent complete, and 2015 timeframe she will be in service.

The follow-on ships to the *America* class, LHA-7, is in the 2011 budget request. And so that is one of the ships that is caught up inside the continuing resolution, but we are continuing to work with Northrop Grumman Shipbuilding in terms of planning and advance procurement of materials to try to keep that ship's schedule preserved as much as possible while we work through the balance of the budget and the negotiations associated with that ship.

Its next follow-on is the LHA-8, and that is when we return to a well deck in our big decks. So today while we build the LHA-6, negotiating, working around the budget associated with the LHA-7, we are going through a mini analysis of alternatives for the best method for restoring a well deck to our big decks to support that 2016 ship, and then as well you see the advance procurement preceding that in the 2012 FYDP [Future Years Defense Program].

The LSD class, as Admiral Blake referred, we are conducting a midlife upgrade, and that is high priority inside of our budget to ensure that we are able to not just sustain them to their service life, but ensure that they are both mission-effective and affordable in terms of upkeep and maintenance through the balance of their service life.

And the LSD(X), which is the planned replacement for the LSD-41 class, today sits in 2017. So we are in fact looking at the total force lift requirements in terms of lift capabilities by platform. And as we complete the LHA-8, where we restore the well deck, and

we look at the capability assessment that the Marine Corps is completing for future force requirements, when we look at the balance of force, that then defines what lift capability LSD(X) has to have.

So the sequence of events is, complete the LHA-8 in terms of its upfront mini analysis of alternatives, get the balance of the lift capability required by the LSD(X), conduct that analysis of alternatives, and then get in to the—we call it the TD [Technology Development] phase for LSD(X). But we are firm in the 2017 requirement for a start of procurement for LSD(X).

Mr. AKIN. We have got now Mrs. Davis with a question, I believe.

Mrs. DAVIS. Thank you, Mr. Chairman.

And thank you, all of you, for your service to the country.

I wanted to ask about our operations in Japan right now and the disaster relief there and to have a better understanding of how our amphibious assets are being used there and what you see as the importance of those assets in these kinds of activities.

I know strategic shaping, looking at environments and how we can better position ourselves for noncombatant evacuations, other activities. What role is that playing now and how critical really is that?

Admiral BLAKE. Mrs. Davis, right now, the forces, it is a combination of forces over there. It is not only the amphibious—it is not only the ESG [Expeditionary Strike Group], the *Essex* ESG in particular, because as you are aware, they are part of our permanently forward-deployed forces that are over there. They are in the process of supporting events in Japan.

In addition, the *Ronald Reagan* Strike Group was redirected and is now in position off the northern part of the island where the bulk of the events are taking place, and they are in support of events on the ground. In fact, they are using their helo support in order to move both food and supplies ashore.

Additionally, you have ships from the *George Washington* Battle Group, which is home ported in Yokosuka, supporting events, and they are being tasked as needed to go out, as well as the flagship for the 7th Fleet, the USS *Blue Ridge*.

So the 7th Fleet commander at this time has the *Essex* ARG [Amphibious Ready Group], ships from the GW Battle Group, as well as the *Ronald Reagan* underway supporting that. And what our primary is to get the helo decks over there in order to be able to move stuff from the ship-to-shore in order to support the people on the ground, which is one of our primary functions in any humanitarian assistance, disaster relief event.

Mrs. DAVIS. So looking at that area, at least, of response is not a critical issue in terms of losing any of the amphibious-related platforms. That is not the issue—

Admiral BLAKE. No, ma'am.

Mrs. DAVIS [continuing]. That we would be facing. Can you talk a little bit more about how that effort is organized generally? I think I have been asked are the commanders in the field at that time in control? I mean, who is in charge? And is there confusion sometimes about who should be in control, who should be in charge?

Admiral BLAKE. No, ma'am. Basically, you have got the PACOM [U.S. Pacific Command], the Pacific commander, the combatant

commander in that theater. Underneath the Pacific commander, you have got the fleet commander. Both of them are at Pearl Harbor.

Then, when you walk it down, you come to the 7th Fleet commander who has his flagship in Yokosuka. And then you also have the commander of naval forces Japan, a two-star who is on, if you will, the shore side. And so they all work in conjunction, and then they all work for the PACOM commander.

Mrs. DAVIS. Is that same level of expertise really available in all the commands across the globe?

Admiral BLAKE. Yes, ma'am. Yes, ma'am. And I can only speak for the Navy, but that is the way we are organized in order to be able to operate.

In addition, we have also got the Marine Corps elements, which are participating, because as you are aware, the *Essex* ARG has marines assigned to them, as well as you have also got the third MEF [Marine Expeditionary Force] down at Okinawa, which is available to support. And they can, of course, shift forces and they will all be following under Pacific command there.

Mrs. DAVIS. And everybody is trained in those efforts. I think we are obviously doing a substantial job, and I appreciate that. I think that it is very important.

Admiral BLAKE. Yes, ma'am. In fact, one of our greatest skills is we are an expeditionary force, and then we are able to go forward and perform a full spectrum of operations, as I mentioned in the opening remarks. We can do everything from power projection to deterrence to what we are currently doing, which is humanitarian assistance and disaster relief.

Mrs. DAVIS. Where is the need in that arena that we are not able to meet right now?

Admiral BLAKE. I am not sure I understand your question, ma'am.

Mrs. DAVIS. In all the operations that are being done now, the use of the carrier groups, et cetera, is there, I mean, is there anything that we are lacking in the ability to help and support in that region?

Admiral BLAKE. No, ma'am. The way the Pacific commander, the combatant commander in theater would be requesting forces and they would be working through Pacific, the fleet commander, and then it would go right on down.

And if you needed assets to be shifted from the continental United States, then they would go back to the 3rd Fleet commander, pull those forces. They would then "chop" to 7th Fleet, if you will. "Chop" is a term we use when you go from one commander to another.

And that is exactly what we do. It is how we always operate. And they would also, if necessary, be able to pull forces from Pearl Harbor or from any of the West Coast ports. You could even go to the East Coast ports, if you needed to.

Mrs. DAVIS. Thank you.

Mr. AKIN. Congressman Coffman.

Mr. COFFMAN. Thank you, Mr. Chairman.

First of all, Mr. Secretary, I thank you so much for your service. Admiral, General, your service to this country as well.

I do have one question on EFV, and then I want to talk about some of our shipping requirements.

But that is that, Mr. Secretary, my concern is that, to meet our requirements—ship-to-shore requirement, we are just going to use a service life extension program for the AAV. Do you plan on simply modernizing the AAV and say it meets the requirements? Or is a new vehicle needed? And what is really your position on this?

Secretary STACKLEY. Yes, sir. I am going to share this response with General Flynn. In terms of the AAV and meeting requirements, when we move from EFV to this amphibious combat vehicle, we are in the stage of actually defining what is the limit of capability that we can bring to this vehicle and still have it be an effective fighting vehicle for the Marine Corps.

And the capabilities that we are looking at that that were cost drivers on the EFV that we are trying to scale back into the range of affordability, speed is a major driver. So we are looking at the speed, distance, time equation, which comes back to the issue that Chairman Akin raised, which is how far from shore do you plan to deploy the force. And speed is the critical element there.

So speed was a major cost driver on EFV. Speed is, frankly, a—I call it deficiency on AAV today. We have to do better in terms of the speed that the AAV brings to the force. So we have got to increase our capability that the AAV has today in speed or mobility.

Another area that we had already planned on upgrading the AAV for is survivability. So it is an old vehicle. The survivability requirements have increased, driven a lot by experience in Iraq and Afghanistan. And so we had planned on increasing the survivability of the AAV. We are going to continue with that, and any future vehicle that replaces the AAV will likewise have an emphasis on increased survivability.

Mr. COFFMAN. Sure.

General Flynn.

General FLYNN. Sir, I think one of the key things when we take a look at affordability, it is not just the affordability of the EFV. It is the affordability of what we have to do across all our ground vehicles. The reality is largely driven by protection requirements and also the need to increase our network mobility.

The cost of ground procurement has not only increased. It has increased exponentially. So, first of all, when we looked at affordability of the program, we looked at affordability in the context of the overall requirements for the Marine Corps.

A key part of that is, we were always thinking, you know, even in October, when we released the request from industry to take a look at a survivability upgrade for the AAV, we had to upgrade that anyway, because the IOC [Initial Operating Capability] for the EFV was not going to occur until 2016, and it would take us 10 years to get to. Because we tried to spread out the program so much to make it affordable, it would have taken us 10 years to get to full operating capability.

So we were looking at a survivability upgrade anyway. I think the key thing as we move forward, now that we have the request for industry out there, is to take a look what industry is going to come back with. We are going to have an industry day towards the

end of March, and by the end of April, we will have a better idea of what is going to be capable.

And one of the key things we are going to have to trade off between what we do to the AAV is what opportunity cost do you invest in the AAV at the expense of creating a new vehicle and the minimum capabilities that we need to be able to execute the amphibious mission.

Mr. COFFMAN. Thank you.

Admiral Blake, due to the continuing resolution, the amphibious ship, the USS *Peleliu's* maintenance availability was recently cancelled. Furthermore, the Navy plans to extend the *Peleliu's* decommissioning date by 1 year in 2014. What impact will this missed maintenance availability have on keeping her operationally available to meet amphibious lift requirements? What options are being planned to mitigate missed yard times across the fleet?

Admiral BLAKE. Sir, first of all, *Peleliu* is only one of five ships that are—as the result of the continuing resolution as of 30 March, we will be required to cancel five avails. That would be the *Peleliu*, which you mentioned. We have also got to cancel a LSD-41 class availability. We are also going to have to look at canceling two DDG-51 class availabilities and one FFG-7 class availability.

So that is just the extent, so it is not just the *Peleliu*. It is five ships total, and that is as of the 30th of March. As the continuing resolution continues to move on, we will, of course, have to look at additional availabilities in order to cancel, which we will be required to cancel.

That is one of the challenges we are having right now, because as was mentioned earlier by Representative Wittman, the *Peleliu*, we have decided that because of the delay in the delivery of *America*, we are going to now delay the decommissioning of *Peleliu* from 2013 to 2014. So with the fleet commander, we are required to do now is to look at his options in order to determine how to be able to support the global requirements and at the same time get the *Peleliu* into an avail.

There is a double-edged sword to that when you extend a ship like the *Peleliu*, because there are unexpected manpower costs, there are unexpected operational costs, and then as you extend that, we are probably going to have to look at doing an additional maintenance period for that ship in order to get it to go to that.

So those are all the factors, if you will, that the fleet commander will have to look at as he is meeting the global commitments based on what the combatant commanders come in with.

Mr. AKIN. Mr. Critz.

Mr. CRITZ. Thank you, Mr. Chairman.

Thank you, gentlemen, for being here.

Although we are going to have a briefing on EFV, I have some issues that I wanted to ask about, because I am a little confused about how we got to where we are still. Because I am reading through the Nunn-McCurdy certification, and the analysis—and this is only less than 4 years ago. And the analysis came up. It said the lowest program acquisition unit cost, PAUC, was associated with upgrading the AAV alternative. Okay, that is lowest cost.

Next lowest was estimated for the fix, the EFV alternative, and the new start alternative had the highest cost. So we are ending

the EFV as we know it, and we are really going to a new start, which, according to the Nunn-McCurdy, was the highest cost alternative. And I am just curious as to what has changed that either makes this a false statement or makes what we are doing actually going to cost more?

And I am not trying to beat a dead horse here, but what I am trying to figure out is that there is a level of confidence that we have to have in the information that we are getting, and this was the best information we had at the time, which predates me, of course, but I am trying to figure out where are we going.

Now I know that the RFI [Request for Information] just went out. What was that, about a month ago? And the request was asking for a new start, an upgraded AAV, and I am going to go to the AAV, which does, what, on a good day about 8 knots?

General FLYNN. Yes, sir, that is correct.

Mr. CRITZ. Okay. So—and now the drop-in distance is changed. So we have got an issue, because initially it was 25 nautical miles. Now it is 12, is that correct?

General FLYNN. Sir, the launch distance, what we have put out in the RFI, is at a minimum launch distance of 12 nautical miles, minimum launch distance of 12 nautical miles. And when the Nunn-McCurdy was done, sir, the launch distance was—that was part of Nunn-McCurdy—was 10 to 20 miles.

Mr. CRITZ. Oh, so we are still within that range.

General FLYNN. Yes, sir.

Mr. CRITZ. Okay. Now, as I understand it, we tried to make the EFV do 25 knots, too, so that it could plane and travel up to 25 nautical miles, is that correct?

General FLYNN. Sir, what drove it to plane was the ability to get up to be able to do, I guess, around the 25-knot requirement, because it all goes back to this speed, distance, habitability requirement on the vehicle to get ashore. That is where the trade would be.

If you say what changed, what changed a little bit is how we are looking—what changed is how we are looking at the requirement. So how long can you—what distance do you have to traverse, what is the speed that you are going to traverse, and what is the habitability in the vehicle. And if you can be comfortable in the vehicle, we can do some trades there, and that is where the trade is.

And then what also changed since the Nunn-McCurdy breach is all the other things that are affecting the affordability of this program, and not just this program, but the other things that we need to do around it. That is what changed, sir.

Mr. CRITZ. Okay. Now, it is my understanding that you don't want your marines in the vehicle on the sea more than maybe 40 minutes, or they are going to get beat up so badly that they are not going to be as effective when they hit the shore.

General FLYNN. It depends on the vehicle, sir. And I would say that is true for the AAV. Again, it is the quality of the ride. Is it cool? Are you sucking in diesel fumes? Are you bobbing up and down? That is what you do in the AAV.

On the EFV, when it was up on plane, it was a relatively smooth ride. The climate was pretty good. So as we look at a future design, the key part that we are going to be is what is the habitability, if

you will, or the quality of life in the back of the vehicle. And that is a key thing we are going to have to look at in the new alternative.

Mr. CRITZ. And one of the cost drivers was it having to plane, which was what drove the cost up so much because it was, I don't know, if it was new technology, it was pretty forward-thinking technology, is that correct?

General FLYNN. Yes, sir. The size of the engine to move it, to bring it up on plane and also the complexity of the technology to configure the vehicle to plane.

Mr. CRITZ. So we are probably going to—if we are still looking at 12 nautical miles, you are still going to have to plane.

General FLYNN. Sir, we are not saying right now that we think we are going to have to plane. There may be an option to get that far that would not require planing.

Mr. CRITZ. Okay. Well, I just figure, 12 nautical miles, you got to be going 18 knots to do 40 minutes. So that is pretty fast.

Okay. And one thing I was unclear with, as my time runs out, is that when the Nunn-McCurdy hit, the 1993 dollars for the EFV was 13.3 million. Is it now 17.3 or something like that? Is that in 1993 dollars or is that current problem?

General FLYNN. In fiscal year 2007 dollars, it was about \$17 million, sir, in fiscal year 2007 dollars.

Mr. CRITZ. Okay. All right, thank you.

Thank you, Mr. Chairman.

Mr. AKIN. Mr. Rigell.

Mr. RIGELL. Thank you, Mr. Chairman.

And Secretary Stackley, General Flynn, and Admiral Blake, thank you very much for your testimony today.

And I just want to pick up a bit on this discussion of speed and hull design. I know from, frankly, a lifetime of adult boating and reading all the magazines, there is just some profound physics taking place between a planing hull and a non-planing hull, when moving at displacement speeds.

So, General, would you just comment, please, on—you mentioned, I believe, that the speed which you want the new vehicle to be able to approach the shore has not yet been determined. Is that correct?

General FLYNN. That is correct, sir, until we have a better idea of what the alternatives are.

Mr. RIGELL. Okay. Well, we are going to be—you know, as we look at this balance between speed and a V-shaped hull design, let me ask you this. Is part of what we are trying to accomplish as well the ability of this vehicle once on land to withstand an IED [Improvised Explosive Device]?

General FLYNN. Sir, that is one of the things that has changed since the initial development of the EFV is we have learned a lot more about protection. We have learned a lot more about underbelly blast protection than we knew in the past. You know, we in some cases went even beyond V-shaped hulls. We may be inserting chimneys in vehicles now to mitigate blast.

So we have learned a lot about blast, and that is one of the things if we start this anew, that we are going to be able to take

a fresh look at it. How do you get the better blast protection that we would like to see in this vehicle?

Mr. RIGELL. So, but wouldn't you say that you would probably start out with a bias in favor of a V-shaped hull?

General FLYNN. Sir, I wouldn't be biased towards a V-shaped hull, because what I am seeing now is there are some things that maybe even better than a V-shaped hull just because of everything that we are learning about blast effects.

Mr. RIGELL. Okay. Very good. And I know the whole committee would be looking forward to seeing exactly what your requirements are going to be of the new vehicle.

Looking over the cost that was spent on the EFV, 3.7 billion, and I know for all of us, for all of us, that is just painful, given our fiscal crisis. And with the chairman's indulgence, I would like to ask for a moment, if we could talk just a moment about the Marine personnel carrier.

I know it is not amphibious, of course, but could you describe, General, what the unique mission requirements for the Marine Corps might be that would cause us to need to develop a new vehicle? Because that's the information I am—my understanding is we are also going to pursue development of a Marine personnel carrier.

General FLYNN. Sir, when the expeditionary fighting vehicle went through the Nunn-McCurdy effort in 2007, one of the ways that we attempted to deal with affordability back there was we had a requirement for 12 battalions worth of armored or mobile lift. To make it affordable, what we then went down the road for is eight battalions worth of EFV lift and four battalions of Marine personnel carrier lift.

So that was when we first started looking at the Marine personnel carrier. It was a part of the effort. That is when we reduced the quantity of the EFV requirement from a little over 1,000 vehicles down to about 571.

So that is where the origin of the MPC [Marine Personnel Carrier] program was. It was, if you will, the partner program to the expeditionary fighting vehicle program.

Mr. RIGELL. Sure.

General FLYNN. So the approach on the MPC is going to be a little bit different than the other vehicles. There are, we believe, right now, six potential off-the-shelf or commercial alternatives available right now.

In addition, we have already built one technology demonstrator. So we have a pretty good idea what this vehicle would look like. And again, the requirement is not new. The requirement goes back to 2007, and it was part then of the effort to make the EFV more affordable and to provide the 12 total battalions worth of armored lift that we were looking for on the battlefield.

Mr. RIGELL. Well, I am encouraged and I applaud your effort at really looking at off-the-shelf. I know each one of us wants to squeeze every dollar of efficiency that we can. To the extent that we use something that is presently out there, we are going to leverage our money that much more.

In the few seconds that are remaining, General, could you just for my benefit help me to understand how the Stryker vehicle may

or may not play into this. I know it is a sophisticated family of vehicles with tremendous amount of capability.

General FLYNN. Sir, one of the key requirements that we will be looking for in a Marine personnel carrier is the ability to swim across rivers.

Mr. RIGELL. Okay, that is it right there.

General FLYNN. So that is one of the key things. And plus, I think, you know, it has to—what underbelly armoring is the best? And that is the second part of what we are really going to be looking at in the future, sir.

Mr. RIGELL. Very good. Thank you.

I yield back.

Mr. AKIN. Mr. Chairman.

Mr. BARTLETT. Thank you. Thank you very much.

I want to continue with the line of comments and the questions that our chairman asked. And my first question has to do with the process.

You obviously go through a very rigorous process in deciding what new platform what you want to develop. We are not privy of that process at all. And so you come to us with an already-made decision as to what that ought to be. And we are then placed in kind of an adversarial role, because you have pride of authorship, and you are in kind of a defensive role defending what you are proposing, and we are kind of in an adversarial role with you.

This is not a productive way to proceed. I would like, and I am sure a number of our members would like, to be involved in the process that you go through to make these decisions.

You seek the advice of a lot of experts. You do war gaming. You look at the limits of technology. You look at the rate at which technologies are developing and could be developed, because many of these platforms are going to be with us for 30, 40, 50 years. So we need to be looking down the road, which I know it was one of the concerns of our chairman. And he is talking about standoff is what we do today, relative to standoff appropriate for what we need to be doing 10 or 20 years from now.

Can we be involved in that process?

Secretary STACKLEY. Yes, sir. I would describe—and this goes a little bit back to your discussion about briefing in a couple of weeks in terms of where we are today. I am, frankly, not aware of anything right now in our process that would be—let us put it this way. I believe that the process we are executing right now, we have the ability to be fully transparent with you all to share with you the analysis that we are doing, the trades that we are considering—

Mr. BARTLETT. This is after the fact. I would like to be involved before the fact so that we are involved in the—yes, I am sure you go through a very rigorous program before you decide what new platform you want to bring out. There is no fundamental reason we couldn't be involved with that, is there?

Secretary STACKLEY. Fundamentally, I think the decision to terminate the EFV program that was announced by the Secretary was not a traditional program new start process. This was a case of in the course of, frankly, the budget process and taking a look at the

challenges in POM 12 associated with continuation of that program and that budget process, that is where the affordability issue—

Mr. BARTLETT. But there was some internal discussion. I think our chairman would have been very much more comfortable if he had had the opportunity of potentially being involved in there.

Let me go to a specific question about this process. Technologies mature at various rates, and there are some physical limits to the asymptote for many technology advancements.

In looking to the future for a mechanism of getting our Marines to the shore, with the access denial capabilities that our enemies are developing or could develop, I am not comfortable that we have done an adequate analysis of alternatives and have adequately competed the missions to decide that this amphib ship-to-shore is exactly the right thing to do.

I do not know the rate at which these technologies will develop, but it is conceivable to me that access denial in the future will be so robust that we are not going to be able to get anywhere near 12 miles to the coast, in which case, don't you think we need another alternative for getting our marines ashore?

What we have got now, sir, is more than we need for most of our activities. Going aboard to Haiti or to Libya or any of these places, you know, they don't have much access denial. But one day we will be in a war with a peer that will have a lot of access denial.

I am not comfortable that 12-mile standoff will be the right standoff 20 years from now. Are you?

Secretary STACKLEY. So I am going to turn the requirements officer to talk about the derivation of the requirement that establishes the—

Mr. BARTLETT. We have only 18 seconds. We can't do that. What I would like to do, sir, is to be involved in the process of how you got there. Our chairman is an engineer. I am a scientist. We have very good professional staff that could benefit by—

Secretary STACKLEY. Let me, in the time remaining, just describe the approach that was taken. The requirement to deploy marines from 20-odd miles from shore was driven principally by anti-ship cruise missiles. And at the time that requirement was established, we really had limited defense against anti-ship cruise missiles, particularly if they are coming from over the horizon.

So when we go after that threat through Navy Integrated Fire Control-Counter Air capability in the past couple of years, in fact, particularly this past year, we have been able to successfully demonstrate that capability coming forward on the maturity of technology timeline that enables the Navy to determine that they in fact can go closer to shore in the face of that threat.

Now, that doesn't cover all threats. And the bottom line is that that becomes a limiting factor in terms of whether it is an anti-ship cruise missile. In your defense against that or other threats, you are going to consider that threat in determining how you deploy your forces.

Mr. BARTLETT. Thank you. Thank you very much.

Look forward to working with you in the future.

Thank you, Mr. Chairman.

Mr. AKIN. Mr. Young, did you have a question or an inquiry at this point?

Mr. YOUNG. Thank you so much for being with us, gentlemen.

I think I will pivot off of my esteemed colleague from Maryland's line of questioning there and just follow up a bit on the EFV.

It is my understanding that this ship-to-shore capability power projection that has really defined the Marine Corps, at least in the 20th century, we are seeking to continue it here. And I would just like to step away and ask kind of a larger question as a marine myself here.

It has been some time since we have had a contested amphibious landing, and this question may have already been asked, but with the prospect of access denial weapons out there being developed by so many countries, would it make more sense perhaps to invest our resources in capabilities from the air, redefining the Marine Corps' amphibious capabilities perhaps.

Or, instead, is the justification behind the EFV and other similarly equipped vehicles that we need to have redundancy, if for some reason we were encounter an enemy that could defeat us from ground-to-air as we insert our marines into a given area? Is that the reason why we need our amphibious vehicles?

I am not sure I have seen this tested out in any robust way, at least in the literature I have read in recent months, so perhaps one of you gentlemen or more could address that.

General FLYNN. I think at the heart of your question is when and where do you need the capability. And I think the question on that is you are needed across the full range of military operations.

At the high end, if you say that we are going to do a two-brigade forcible entry operation, we are going to have in conjunction with marshalling the forces to do that probably anywhere from 45 to 60 days of shaping operations to do it. So that is one end of the spectrum that will influence, you know, the threat that you would have to launch in there is how much time you would have to shape your environment.

Then the other part is—and some would say at the high end is the least likely chance that you would have. But as you said there, there has to be redundancy.

And when was the last forcible entry operation? Well, the one that I come to mind when we talk about an air-only option is the amphibious withdrawal from Somalia. I would not have wanted been the last person getting on the last helicopter in a collapsing perimeter. I like the fact that I had that ability to be able to withdraw back to the sea base and fight as you withdraw. So that is one part.

So at the lower end of the range of military operations, you may not have the shaping time. You may have to respond today just like forces responded the same day the crisis was in Japan. We responded that day. So what capability do you need? And I think you do have to have the balance.

And then the key question is, you know, under that threat environment, how closer are we going to be able to get. And we do believe that we are not going to get any closer than 12 nautical miles, but we are not going to plan ourselves at 12 nautical miles. That could be the launch point for the vehicle to go. And then the launching platform then pulls away from the 12 nautical miles. It

is very similar now to how we do high-speed launches even closer right now.

So I do think you need to balance capability of having both an air and a surface option, because on the surface is the only way you can rapidly build combat power up and get off the beach quickly. So that is how I—when I looked at the requirement that's as I see it, but I don't just focus on the high end. I also look at all the variables that would take us down to a lower threat level or a more likely area of employment.

Mr. YOUNG. By way of follow-up in our remaining 50 seconds here, your point that only on the ground is where you could build up a fairly robust combat power, is that to say that—maybe you could tease that out. Explain exactly what you mean by that, why that cannot be done by inserting your marines from air and—?

General FLYNN. I think it is just to be able to get the volume of combat power that you need to be decisive. In the future environment, we are going to spread out over the battlefield, but still the reality of pushing things across, the volume really comes from the surface. And initially, you have to establish the beachhead, and then you have to push off the beach, and then that is where the robust supplies come in.

Mr. YOUNG. You mean the volume of personnel, the volume of marines, or are you referring to our ability to place equipment?

General FLYNN. I think all of the above, sir. I think it is not only to get the combat forces in, but to get the sustainment in as well.

Mr. YOUNG. All right. Thanks, General.

Mr. AKIN. We have a vote before too long here. I thank you all for coming in. I think just from the questions, it says that in a couple of weeks we will be able to have a probably interesting briefing. And we will look forward to that. And thank you so much for your time.

[Whereupon, at 3:22 p.m., the subcommittee was adjourned.]

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

MARCH 16, 2011

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**PREPARED STATEMENTS SUBMITTED FOR THE RECORD**

MARCH 16, 2011

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**Statement of Chairman W. Todd Akin (R-Missouri)**  
**House Subcommittee on Seapower and Projection Forces**  
**Hearing on**  
**Amphibious Operations**  
**March 16, 2011**

First, I'd appreciate at some point if Admiral Blake and General Flynn could give us a short update on how the 7<sup>th</sup> Fleet is responding to the current crisis in Japan. Our thoughts and prayers go out to all of the victims, survivors and family members who are trying to get through this terrible disaster. Fortunately we have a United States Navy and Marine Corps that can provide humanitarian assistance in cases such as this and I know the subcommittee would appreciate a short update on how our Navy and Marine Corps personnel are responding.

This is of course very relevant to today's hearing. We know that Department of Navy officials agree that a 38-ship amphibious force would more fully meet the Marine Corps' 2.0 Marine Expeditionary Brigade (MEB) assault echelon lift requirement. We also know that a 33-ship amphibious force is the minimum number. And in fact that minimum number currently isn't planned to be reached until 2017. We need to fully understand what risk is associated with maintaining an amphibious ship inventory less than 38 ships?

Finally, it is no secret that I do not agree with the decision to terminate the Expeditionary Fighting Vehicle (EFV). I fear that although there is a lot of talk about support for a new vehicle to replace the EFV, history tells us that when it is all said and done, the Marine Corps will probably only get an upgraded version of the current Amphibious Assault Vehicle (AAV). It is important for the members of this committee to understand what the current status of the EFV contract is and how the \$3.3 billion dollars that has been spent on this program won't be for naught.

**Statement of Ranking Member Mike McIntyre (D-North Carolina)**  
**House Subcommittee on Seapower and Projection Forces**  
**Hearing on**  
**Amphibious Operations**  
**March 16, 2011**

I would like to thank the Chairman and my good friend, Secretary Stackley, Admiral Blake, and General Flynn, it is good to see you and I want to thank you for coming back to testify before us once again.

Today we will hear testimony from both the Navy and the Marine Corps on how they plan to execute amphibious operations and how we as Congress can best support that mission.

The need for a forward-deployed amphibious force comprised of both Naval and Marine assets cannot be seen more clearly than now. The tragic events that we have witnessed in the aftermath of the Japanese earthquake and subsequent tsunami, only further highlight the need for a quick response force that can effectively move from the sea to shore in order to provide assistance. I look forward to hearing any updates our witnesses can provide on how our forces are doing in support of the Japanese relief. Our thoughts and prayers are with all those who have been affected.

The Marine Corps represents our nation's 911 emergency response force that enables us to quickly respond to events anywhere in the world. There is no question that our Marines have been a crucial part of our forces in both Iraq and Afghanistan, but it is essential that we transition the Marine Corps away from being a second land force and back to one that is an amphibious-based expeditionary force. In doing so, it is essential that we carefully examine what that force should look like, whether that be the appropriate number of amphibious ships or the most capable platform for moving Marines ashore.

After the recent decision to terminate the Expeditionary Fighting Vehicle (EFV), I am particularly interested to hear our witnesses' views on what the current requirement is for an amphibious vehicle. I would also like to hear what the requirements will be for any new follow-on vehicle such as speed, distance and plane requirement. I would like to hear from the Navy on what the minimum ship-to-shore distance is for Navy amphibious ships to safely deliver Marines ashore in a new vehicle. I believe these are important questions that should be carefully analyzed as we transition our force.

Whether it is crisis response, disaster and humanitarian relief or forward presence, our Navy and Marine Corps amphibious capability is a vital asset for the United States that we must maintain.

I want to thank the gentlemen for their service and for being here today. I look forward to hearing your testimony.

NOT FOR PUBLICATION UNTIL RELEASED  
BY THE HOUSE ARMED SERVICES  
COMMITTEE SUBCOMMITTEE ON  
SEAPOWER AND PROJECTION FORCES

STATEMENT

OF

THE HONORABLE SEAN J. STACKLEY  
ASSISTANT SECRETARY OF THE NAVY  
(RESEARCH, DEVELOPMENT AND ACQUISITION)

AND

LIEUTENANT GENERAL GEORGE J. FLYNN  
DEPUTY COMMANDANT  
COMBAT DEVELOPMENT AND INTEGRATION &  
COMMANDING GENERAL, MARINE CORPS COMBAT DEVELOPMENT COMMAND

AND

VICE ADMIRAL JOHN TERENCE BLAKE  
DEPUTY CHIEF OF NAVAL OPERATIONS  
FOR INTEGRATION OF CAPABILITIES AND RESOURCES

BEFORE THE

SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

AMPHIBIOUS OPERATIONS

DATE: MARCH 16, 2011

NOT FOR PUBLICATION UNTIL RELEASED BY THE  
HOUSE ARMED SERVICES COMMITTEE  
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

*"...American history, recent as well as remote, has fully demonstrated the vital need for the existence of a strong force-in-readiness. Such a force, versatile, fast moving, and hard-hitting... can prevent the growth of potentially large conflagrations by prompt and vigorous action during their incipient stages. The nation's shock troops must be the most ready when the nation is least ready... to provide a balanced force-in-readiness for a naval campaign and, at the same time, a ground and air striking force ready to suppress or contain international disturbances short of large scale war...."*

*-82nd Congress (1952)*

### **Introduction**

Chairman Akin, Representative McIntyre, and distinguished members of this Subcommittee, we are honored to appear here today. We want to thank you for your continued support to our Sailors, Marines, and their families and appreciate the opportunity to address amphibious operations. The Department is committed to meeting the vital and enduring requirement for the amphibious capabilities that support our National Security Strategy and enable us to engage forward, to prevent conflict, to protect citizens and interests, and to prevail in conflict. Amphibious operations enabling capabilities include: amphibious ships, amphibious combat vehicles, connectors such as the landing craft, air cushion (LCAC) and landing craft, utility (LCU), naval surface fire support assets, vertical lift platforms, and fixed wing short take off and vertical landing (STOVL) aircraft. Finally, we will describe the approach to replace the Expeditionary Fighting Vehicle (EFV). Our intent is to promote a common understanding of the utility of amphibious capabilities and the necessity for the Navy-Marine Corps team's role as the Nation's expeditionary force in readiness.

### **Overview**

We are a maritime nation with global interests and responsibilities. With the majority of the world's population living within 200 miles of the sea, assured access to these littoral areas is critical in promoting and protecting our wide range of national interests. Whether it is responding to crisis or assuring littoral access, the Navy-Marine Corps team is the only force that can rapidly provide a versatile, scalable, and self-sustaining capability operating from the sea to conduct a wide range of military operations ashore.

Forward-deployed amphibious forces provide the capability to: conduct security cooperation and engagement activities to build partnership capacity; respond to natural and man-made crises; and overcome access challenges to gain entry. In times of international crises the ability to position amphibious forces offshore allows policy makers to signal U.S. concerns or intentions without prematurely committing forces ashore, providing an invaluable means of deterring potential foes. Most recently the 26th Marine Expeditionary Unit, embarked aboard the USS KEARSARGE (LHD 3) and the USS PONCE (LPD 15) were repositioned in the Mediterranean to provide the President flexibility on a full range of options responding the dynamic situation in Libya.

In cases where policy makers decide intervention is necessary, amphibious forces provide the most robust sustainable means of entering hostile territory. In addition to its deterrence and combat value, the capability to overcome access challenges and project self-sustaining forces from the sea, at a time and place of our choosing, also provides the means to assist our friends when disasters strike. All of these applications have significant "strategic value."

Failure to maintain adequate amphibious capability and capacity presents a grave risk to our national security. Without it the United States: loses credibility among both friends and foes; forfeits opportunities to establish and maintain influence; relinquishes the ability to operate in austere environments or overcome damaged infrastructure; divests itself of a critical means of responding to crises and protecting our citizens and interests; and ultimately surrenders its only sustainable entry capability, becoming reliant on the willingness of others to grant overseas access. It is imperative that the Navy-Marine Corps team maintains its amphibious capabilities, forward-deployed and globally postured, so that it remains focused on being the "most ready" when the nation is "least ready."

### **The Operating Environment**

The adversaries we face are diverse and not easy to characterize into a monolithic threat. They learn and adapt quickly to counter our actions and target our vulnerabilities simultaneously across multiple domains. Surprise is a reality that cannot be eliminated; it must be mitigated by properly training, equipping, and employing our forces. In a dramatic shift, we can no longer assume dominance in the maritime, air, cyber, land, or space domains. We will likely have to fight to gain and maintain access in the future.

The enduring characteristic of conflict is that it is, at its core, a human endeavor. Therefore relationships are important and access must be guaranteed at all phases of conflict. We face a number of challenges to access that must be overcome. The American Association for the Advancement of Science concluded in 1995 that within 30 years "75 percent of humanity...will reside in coastal areas" (defined as 150 km inland). That prediction appears to be coming to fruition as densely populated urban centers become increasingly common in the littorals—precisely where access is required. **Environmental challenges** caused by major disasters not only inflict intense human suffering and loss of life, the resultant damage to roads, buildings, fresh water resources, communications systems, and electrical power distribution impede first responder actions and can quickly overwhelm local governments. Therefore, the execution of disaster relief operations and restoration of basic governmental services present a high degree of danger and uncertainty. The **military challenges** we face span the full spectrum from improvised explosive devices through high-tech weaponry, to include precision munitions that target our vulnerabilities both on land and at sea. Additionally, growing sensitivities to U.S. and coalition presence on, near, or in the air over sovereign boundaries present increasing **political challenges**.

The Nation has a strategic need for an expeditionary force-in-readiness that can overcome impediments to access and immediately respond to a crisis anywhere in the world. Naval forces, operating from international waters, provide the ability to proactively influence events ashore without the unintended consequences that often accompany more permanent basing arrangements. Further, this provides the joint force commanders, geographic combatant commanders and the National Command Authority a credible and immediate response that allows time and space to pursue an emerging diplomatic option or a decisive joint force solution.

### Amphibious Flexibility

In the early 20<sup>th</sup> century, military historian Sir B.H. Liddell Hart accurately described amphibious flexibility as the greatest strategic asset that a sea based power possesses. However, in the early 21<sup>st</sup> century the inherent flexibility and utility of amphibious forces are not widely understood, as evidenced by the frequent and mistaken direct correlation between the term amphibious operations and mental images of World War II Marines assaulting Tarawa or Iwo Jima. In fact, in the last 20 years the Navy-Marine Corps team has conducted well over 100 amphibious operations of various types. The majority of these involved humanitarian assistance/disaster response (HA/DR) or noncombatant evacuations and defense of U.S. diplomatic posts during periods of host nation unrest occurring in permissive or uncertain environments. A smaller number involved operations in openly hostile environments to project or withdraw U.S. or partner-nation forces. Not included in the last 20 year tally—because they were only recently codified as a type of amphibious operation within joint doctrine—are the numerous military engagement and security cooperation activities routinely conducted by amphibious forces. Given the National Security Strategy's emphasis on engagement, these operations are becoming increasingly prominent.

### Types of Amphibious Operations

Amphibious operations are categorized by five distinct types: assaults, raids, demonstrations, withdrawals, and amphibious support to other operations. An *Amphibious Assault* occurs when a force is projected onto a hostile or potentially hostile shore to accomplish a single mission, to gain entry and secure a lodgment for the introduction of additional forces, or to support an ongoing campaign. A contemporary amphibious assault took place on November 25, 2001, when two Amphibious Ready Groups with embarked Marine Expeditionary Units—ARG/MEUs in naval parlance—combined on short notice to form Task Force 58 which projected Marines from amphibious ships 441 miles inland into southern Afghanistan to open a lodgment near Kandahar.

*Amphibious Raid* is a swift incursion into, or temporary occupation of, hostile territory - followed by a planned withdrawal. For example, on September 9, 2010, the USS PELELIU ARG/15<sup>th</sup> MEU recovered the MV Magellan Star and rescued its crew from armed pirates.

*Amphibious Demonstration* is a military deception operation conducted to deceive the enemy into a course of action unfavorable to him. For example, prior to the ground war in Operation DESERT STORM, the two Marine Expeditionary Brigades afloat presented the Iraqis with such a credible offshore threat that the Iraqis diverted an estimated 6 infantry and 2 mechanized divisions away from the US and coalition ground advances and toward the Kuwaiti coastline to defend against a potential amphibious assault.

*Amphibious Withdrawal* is the extraction of land forces by sea in naval ships or craft from a hostile or potentially hostile shore. An example of this can be seen in the 73 hour operation that took place in early May 1995, when a U.S. Marine-led combined task force operating from amphibious ships evacuated more than 6,200 United Nations troops from a decaying security situation in Somalia.

*Amphibious Support to Other Operations* describe a type of amphibious operation which contributes to conflict prevention or crisis mitigation. Amphibious forces routinely conduct amphibious support to other operations such as: security cooperation, foreign humanitarian assistance (FHA), civil support, non-combatant evacuation operations (NEO), peace operations, recovery operations, or disaster relief. Recent examples of these operations include: The 2005 HA/DR missions to ease human suffering caused by Hurricane Katrina in New Orleans, Louisiana; the 2006 NEO of 14,000 American citizens from Lebanon; the 2010 humanitarian relief provided to the Haitian people following the January 2010 earthquake, and responding to the needs of the Pakistani people ravaged by the August 2010 floods. Note that these examples all involved rapid response to natural or man-made crises. In 2009 joint doctrine added security cooperation and FHA activities to the “other” category, recognizing the strategic importance of these efforts in the current era.

The remarkable flexibility of our amphibious forces is demonstrated by the myriad additional operations conducted simultaneously with the rescue of the MV Magellan Star, to include conducting HA/DR operations in Pakistan and strike operations in Afghanistan. During the same deployment, the MEU also conducted a wide variety of security cooperation activities with forces from Australia, Indonesia, the Maldives, New Zealand, Sri Lanka, Timor-Leste, Turkey, and Pakistan in addition to supporting to the US Secret Service during the Presidential visit to India. As stated by the Secretary of the Navy, the Navy’s amphibious ships are the fleet’s most “flexible” asset.

#### **Importance of Amphibious Operations**

Regardless of the type of amphibious operation conducted, they generally involve overcoming diplomatic, geographic, and/or military challenges to access. Regular employment of amphibious forces in uncertain and austere environments where access is challenged is chronicled by over 50 amphibious operations conducted since Sept 11, 2001.

Rapid action is the critical enabler in these operations requiring immediate response regardless of access afforded. Organic capabilities such as well decks and flight decks, billeting, communications, medical, dental, messing, and command and control all combine to increase the utility of amphibious forces. More importantly, an amphibious force can loiter off shore indefinitely providing valuable time for diplomatic efforts to unfold; complementing diplomacy with demonstrated resolve. Amphibious forces can be task organized to the mission and threat, and scaled to bring only those capabilities ashore necessary for mission accomplishment. In a security environment characterized by uncertainty, operating from the sea provides a degree of flexibility, force protection, and freedom of action not realized by traditional ground force lay-down.

#### **Geographic Combatant Commander Demand**

Since 2007, the geographic combatant commanders' cumulative requests for naval forces have grown 29 percent for carrier strike groups, 76 percent for surface combatants, 86 percent for ARG/MEUs, and 53 percent for individually deployed amphibious ships. While our Combatant Commanders are unconstrained in their requests, our job is to determine how to best

meet their demand given the resources available. For the foreseeable future, we will continue to maintain a forward based ARG/MEU in the Western Pacific and maintain continuous ARG/MEU presence in the Arabian Gulf/Indian Ocean. As recent events in North Africa and the Middle East demonstrate, we may need to consider temporarily increasing ARG/MEU presence in the Mediterranean and along the coast of Africa.

#### **Meeting the Demand**

The Chief of Naval Operations and Commandant of the Marine Corps have determined that the force structure requirement to support a two Marine Expeditionary Brigade (MEB) lift is 38 total amphibious assault ships. Understanding this requirement, and in light of the fiscal constraints with which the Navy is faced, the Department of the Navy will sustain a minimum of 33 total amphibious ships in the assault echelon. This 33 ship force accepts risk in the arrival of combat support and combat service support elements of the MEB, but has been adjudged to be adequate in meeting the needs of the naval service within today's fiscal limitations.

In order to meet this inventory, the following priorities are essential:

#### **LSD/LSD(X)**

A fully funded LSD mid-life program, to include repairs, will ensure these ships meet their expected service life. Material readiness in regards to LSD's readiness for tasking will be enhanced by a fully funded program. LSD(X) will replace 12 of the aging LSD 41/49 WHIDBEY ISLAND/HARPERS FERRY Class vessels and will perform an array of amphibious missions. Eleven LSD(X) platforms will provide one third of the total amphibious ships necessary to meet USMC mission requirements. LSD(X) Initial Capabilities Document (ICD) is currently under review; the Analysis of Alternatives (AoA) will be conducted in FY 2012 with a planned FY 2017 procurement. Affordability remains the key factor in acquiring the needed future capacity and operational capabilities of this highly flexible multifaceted ship.

#### **LPD 17**

The SAN ANTONIO Class LPD (LPD 17) has a 40-year expected service life and serves as the replacement for four classes of older ships: the LKA, LST, LSD 36, and the LPD 4. Lessons learned from the effort to resolve material reliability concerns identified in the early ships of the class are being applied to ships currently under construction. Quality continues to improve with each ship delivered as the Navy continues to work closely with the shipbuilder to address cost, schedule, and performance issues. Current challenges with the operational availability of the in-service LPD 17 Class ships are being addressed by a NAVSEA led Strike Team. Five ships have been delivered, and three of those five have completed their initial deployment. The eleventh and final LPD is planned for procurement in FY 2012.

#### **LHD/LHA**

The LHA Class will provide flexible, multi-mission amphibious capabilities that span the range of military operations from forcible entry to HA/DR. AMERICA (LHA 6), and her sister

ships, will replace our TARAWA Class ships that reach the end of their already extended service lives between 2011 and 2015. The AMERICA (LHA 6) is now more than 30 percent complete and is scheduled for delivery in FY 2014. The decommissioning of USS PELELIU (LHA 5) has already been extended to accommodate the late delivery of AMERICA and to mitigate any possible gaps in future deployment cycles. However, given PELELIU's age and material condition, further extensions are unlikely. In support of the Navy's commitment to advancing our energy security, the hybrid propulsion drive in use on USS MAKIN ISLAND (LHD 8) is being installed in AMERICA. The second increment of full funding for LHA 7 is requested in FY 2012. Beginning with LHA 8, the Navy will reintegrate the well deck into this class of large deck amphibious assault ships. Our budget for FY 2012 requests funding for research and development to support reintegration of the well deck into the design of the large deck amphibious ship and the construction of LHA 8 in FY 2016. Funding has been added to install a critical self defense capability for LHD 2-6 during their Mid-Life Upgrades. The Capstone Ships Self Defense System is essential to ensure these ships remain survivable in any environment.

#### **Posturing for the Future**

While supporting operations in Afghanistan remains the Commandant's top priority, the Marine Corps Service Campaign Plan directs the Marine Expeditionary Force (MEF) commanders to exercise amphibious operations as they are able. In 2010, the Navy-Marine Corps team returned to conducting large-scale Marine Expeditionary Brigade / Expeditionary Strike Group exercises in order to hone these critical amphibious skills. On the west coast, I Marine Expeditionary Force and Expeditionary Strike Group-3 commenced their annual Marine Expeditionary Brigade-level amphibious exercises DAWN BLITZ and PACIFIC HORIZON. On the east coast, II Marine Expeditionary Force and Expeditionary Strike Group-2 conducted the first in a series of Marine Expeditionary Brigade-level exercises titled BOLD ALLIGATOR. While these exercises are critical to enhancing our proficiency in large-scale amphibious operations, they also serve as a valuable platform from which new concepts can be tested that lead to the development of updated joint operating doctrine.

Future amphibious operations will require improvements in mobility, command and control, intelligence, fires, sea-based logistics, organization, doctrine, training, and education. The landing force requires surface and vertical assault systems with the speed, range, precision location and navigational capabilities, protection, and firepower to launch from over-the-horizon positions, maneuver through tactical points of entry, and achieve the objective regardless of whether it is on the low or high end of the spectrum of conflict. The technologies required to enhance these capabilities are under development, and the combat systems implementing these technologies are the highest priority in the Marine Corps.

#### **Priorities**

In order to adapt to the future operating environment and address access challenges, the Navy and Marine Corps are pursuing a number of viable options that leverage operational lessons learned and adopt acquisition best practices.

**Amphibious Combat Vehicles.** The production and operating costs of the EFV were the principal factors leading to the recommendation to cancel the program. We are facing competing demands across all elements of our warfighting capabilities to reset war-weary equipment and to modernize capabilities. Funding identified for EFV will be used to address overall modernization and plan to pursue an integrated vehicle program with three components; crafted from inception for affordability and leveraging the investment made in the EFV. We intend to maximize value and mitigate the risks associated with a new vehicle program through the use of an integrated acquisition portfolio approach in addressing our requirements. This approach will have three integrated efforts: an acceleration of the procurement of **Marine Personnel Carriers**, investment in a service life extension program and upgrades for a portion of the existing amphibious assault vehicles (**AAV upgrade**), and the development of a **new amphibious combat vehicle**. Utilizing best practices in systems engineering, cost estimating and government/industry teaming during concept refinement and technology development, we intend to develop operationally relevant and technically achievable requirements as the basis for the most affordable programs possible. Our FY 2012 Budget request was based on early cost estimates for the three vehicle programs. We have since refined our program management approach and our cost estimates necessitating a shift in appropriation categories by year while maintaining a zero-sum profile.

**Connectors.** The Navy's landing craft, air cushion (LCAC) and landing craft, utility (LCU) form the backbone of our heavy-lift surface ship-to-shore movement capability from amphibious ships. The speed of the LCAC combined with the LCU's inherent capability to perform independent operations provides flexibility across the range of military operations. Designed for a 20 year average service life, the current inventory of LCAC are undergoing upgrades to improve capabilities and readiness through a service life extension program (SLEP) which will extend the service life to a total of 30 years. However, with the projected number of LCAC and LCAC (SLEP) dropping below that desired to support fleet operations by 2014, a replacement craft is required. The **ship-to-shore connector (SSC)** is the Navy's program to recapitalize the LCAC capability. The SSC has achieved Milestone A and a draft Request for Proposal (RFP) has been released to industry. Milestone B and contract award of the lead craft detail design and construction contract is planned for Fiscal Year 2011. The SSC will incorporate several improvements over the LCAC (SLEP) by increasing payload, decreasing operating and maintenance costs, and incorporating systems enhancements to increase crew efficiency. The **LCU-1600** is a displacement craft designed to transport personnel (up to 400), supplies, and heavy equipment (180 ton capacity) from amphibious ships. It can also interface with maritime prepositioning ships squadrons' roll-on/roll-off discharge facility to support in-stream off-loads and logistics over-the-shore operations. Similar to the LCAC, the LCU-1600 craft have been in service for decades (ranging from 30 to 50 years old) and are experiencing maintenance and availability issues. The Navy initiated an LCU sustainment program and recently has completed a study that confirmed the LCU's ability to operate independently for short periods of time (range 1200 nm or 10 days).

**LHD CAPSTONE Upgrade to Ship Self Defense System (SSDS) Mk 2.** This capability is vital to protecting amphibious ships against a classified set of anti-surface cruise missiles to the level required by the governing 1996 ASCM Self Defense CAPSTONE Requirements Document. This capability upgrade consists of the SSDS Mk-2 combat system, the Evolved Sea Sparrow Missile (ESSM), Cooperative Engagement Capability (CEC), ,

AN/SPQ-9B, electronic warfare countermeasure rockets, and Common Data Link Management System (CDLMS [which includes LINK-16]). Without the SSDS Mk-2 upgrade, our amphibious ships would continue to be unacceptably vulnerable to ASCM attack as they operate in an ever increasingly complex, compressed and dangerous littoral battle space. Currently, two of eight LHDs (LHD-7, LHD-8) have SSDS Mk-2 installed; these ships will receive ESSM during a future maintenance availability. One of the six remaining LHDs (LHD-1) is planned to receive SSDS Mk2 (no ESSM until a future maintenance availability) in FY 2013 in support of Joint Strike Fighter Developmental / Operational Testing. The five remaining LHDs (LHDs 2-6) are scheduled to begin receiving the SSDS-Mk2 upgrade during LHD mid-life availabilities starting in FY 2016.

**Naval Surface Fire Support.** Accurate, timely, lethal, persistent, all-weather, long-range fires from U.S. Navy surface ships and aircraft are essential for conducting amphibious operations. Along with organic Marine Corps ground fires and Close Air Support, **Naval Surface Fire Support (NSFS)** completes the “triad of fires.” This integrated triad is required to ensure that adequate fire support available to the joint force commander when and where needed. The Joint Expeditionary Fires AoA identifies several promising

NSFS technology options, to include the complementary development of an extended range 5” guided projectile and extended range precision attack missiles. These enhancements will augment the 155mm Advanced Gun System (AGS) and Long Range Land Attack Projectiles (LRLAP) of the DDG-1000 program and will help fulfill the Marine Corps’ 41-63 nautical mile range, volume, and responsiveness requirements for NSFS. The Marine Corps also endorses continued technology development of the Electro-Magnetic Rail Gun (EMRG) as a future NSFS capability.

**Vertical Lift in Support of Amphibious Operations.** With the **MV-22 Osprey** on its third at-sea deployment with MEUs and six deployments in desert combat, the quantum leap in technology we envisioned thirty years ago is reality, and so is the extraordinary vertical lift range and speed we need to drive expeditionary operations from ship to shore. Ospreys are designed by and for Marines and they allow the MAGTF commander to dictate tempo in a fast lethal fight in an austere environment. This aircraft provides ground forces with speed, range and altitude no helicopter can match, and its swift, quiet vertical insertion capability is changing the modern amphibious battlespace. The new-build **CH-53K** will transport 27,000 pounds of external cargo out to a range of 110 nautical miles, nearly tripling our workhorse CH-53E's lift capability while fitting into the same shipboard footprint. Our H-1 helicopters, the UH-1N Huey and the AH-1W SuperCobra, are being replaced by a total of 349 **UN-1Y** and **AH-1Z** models (160 Y and 189 Z), which share an 84 percent parts commonality and are thus far easier to support and maintain compared to their predecessors. These new H-1 helicopters will add lift, range, speed, durability, weaponry and critical tactical flexibility to the amphibious task force. The UH-1Y has deployed aboard ship and demonstrated its superior lift and range, and the AH-1Z is developing swiftly and smoothly into what will be the world's dominant attack helicopter. We will deploy the first "all-upgrades MEU" this fall, with the Y and Z models deploying at sea together for the first time.

**Neutralizing Mines and Obstacles.** Our forces remain challenged in our ability to conduct amphibious operations within acceptable timelines when mines and obstacles are

present. The greatest shortfall exists within our capacities to conduct stand-off detection, mapping, and neutralization and in our capacity to conduct mine clearance operations in-stride across a dispersed sea echelon area containing multiple littoral penetration points and objectives. A key enabler is the development and fielding of sensors to find mines and obstacles in order for joint forces to avoid them.

### Conclusion

In order to contribute to the stability of the global system and thrive in the 21st Century, amphibious forces must: *engage forward* to forge partnerships, prevent crises, promote diplomatic access, reassure allies and friends of our commitment, build partner capacity, and facilitate the security and stability of our allies; *respond* rapidly and effectively to protect national interests, contain disruptions to global stability, overcome access challenges by operating from the sea base, reinforce U.S. credibility, solidify relationships with international partners and forge new ones; and *project* power in order to assure access allowing us to prevail when conflict arises by rapidly transitioning from the open hand of engagement to the closed fist of power projection that can impose our nation's will and defeat our adversaries.

The ability to overcome diplomatic, geographic, and military impediments to access has emerged as a critical enabler for extending U.S. influence, responding to crises, and projecting power overseas. The sea is a vast maneuver space—one that can be used to our advantage provided we maintain the capability and capacity to conduct amphibious operations. It is for that reason the Marine Corps force structure review proposed the re-establishment of standing Marine expeditionary brigade (MEB) headquarters, each under the command of a brigadier general. These command elements will increase responsiveness to Geographic Combatant Commander needs and align with the Navy's Expeditionary strike group (ESG) headquarters. The goal of this alignment is to provide a more integrated naval approach for amphibious training and innovation, while also establishing headquarters capable of commanding and controlling larger amphibious operations. The naval services have implemented an annual amphibious exercise program as seen this last year in exercises BOLD ALLIGATOR and DAWN BLITZ.

In this age of uncertainty, the demand for adaptable forces—capable of immediately responding to crises—is certain. It is true that all things are not equally important or affordable...and thus as the nation resources its future national security, it will be forced to make tough choices between capabilities, capacities, and levels of readiness in and among the Services. Although it is impossible to know where the next flare up will be, it is clear that well trained and equipped amphibious forces will be ready to respond and protect interests or prevent undesired effects. With the support of the Congress and the American people we can ensure amphibious forces are well prepared to secure our national interests in an uncertain future. Thank you for the opportunity and we look forward to answering further questions.

**Assistant Secretary of the Navy  
(Research, Development and Acquisition)**

**7/28/2008 - Present**

**The Honorable Sean J. Stackley**

Sean J. Stackley assumed the duties of assistant secretary of the Navy (ASN) (Research, Development & Acquisition (RDA)) following his confirmation by the Senate in July 2008. As the Navy's acquisition executive, Mr. Stackley is responsible for the research, development and acquisition of Navy and Marine Corps platforms and warfare systems which includes oversight of more than 100,000 people and an annual budget in excess of \$50 billion.

Prior to his appointment to ASN (RDA), Mr. Stackley served as a professional staff member of the Senate Armed Services Committee. During his tenure with the Committee, he was responsible for overseeing Navy and Marine Corps programs, U.S. Transportation Command matters and related policy for the Seapower Subcommittee. He also advised on Navy and Marine Corps operations & maintenance, science & technology and acquisition policy.

Mr. Stackley began his career as a Navy surface warfare officer, serving in engineering and combat systems assignments aboard USS *John Young* (DD 973). Upon completing his warfare qualifications, he was designated as an engineering duty officer and served in a series of industrial, fleet, program office and headquarters assignments in ship design and construction, maintenance, logistics and acquisition policy.

From 2001 to 2005, Mr. Stackley served as the Navy's LPD 17 program manager, with responsibility for all aspects of procurement for this major ship program. Having served earlier in his career as production officer for the USS *Arleigh Burke* (DDG 51) and project Naval architect overseeing structural design for the Canadian Patrol Frigate, HMCS Halifax (FFH 330), he had the unique experience of having performed a principal role in the design, construction, test and delivery of three first-of-class warships.

Mr. Stackley was commissioned and graduated with distinction from the United States Naval Academy in 1979, with a Bachelor of Science in Mechanical Engineering. He holds the degrees of Ocean Engineer and Master of Science, Mechanical Engineering from the Massachusetts Institute of Technology. Mr. Stackley earned certification as professional engineer, Commonwealth of Virginia, in 1994.

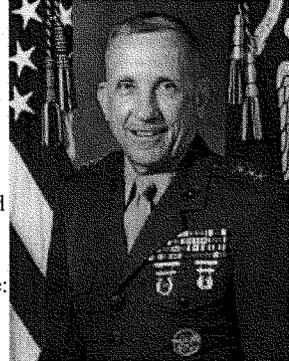


## Lieutenant General George J. Flynn

### Deputy Commandant, Combat Development and Integration

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Lieutenant General Flynn graduated from the United States Naval Academy in 1975. He holds a Master of Arts Degree in International Relations from Salve Regina College, a Master of Arts Degree in National Security and Strategic Studies from the Naval War College, and a Master of Science Degree in National Security and Strategy from the National War College. He is a Distinguished Graduate of the College of Naval Command and Staff and the National War College.



Lieutenant General Flynn's command assignments include: Commanding Officer, HQ Battery, 2nd Battalion, 12th Marines; (1979-1980); Commanding Officer, L Battery, 2nd Battalion, 12th Marines (1980); Commanding Officer, P Battery, 5th Battalion, 10th Marines (1984-1985); Commanding Officer, 5th Battalion, 10th Marines (1992-1993); Commanding Officer, Officer Candidates School (1999-2001), Commanding General, Training Command (2002-2004), Commanding General, Training and Education Command (2006-2007). Commanding General, Marine Corps Combat Development Command (2008- ).

Lieutenant General Flynn's staff assignments include: Forward Observer, Fire Direction Officer, Battery Executive Officer and S-4 A, 2nd Battalion, 11th Marines (1976-1979); Officer Selection Officer, Manchester, New Hampshire, (1981-1984), Operations Officer, 5th Battalion, 10th Marines (1985-1986), Plans Officer, Plans Policies and Operations Department, Headquarters Marine Corps (1987-1989); Junior Aide-de-Camp to the Commandant of the Marine Corps (1989-1991); Assistant Fire Support Coordinator, 2d Marine Division (1991-1992); Future Operations Officer, III Marine Expeditionary Force (1994-1995); Military Assistant to the Executive Secretary to the Secretary of Defense (1995-1997); Military Fellow, Council on Foreign Relations (1997-1998); Head, Strategic Initiatives Group, Headquarters Marine Corps (1998-1999); Military Secretary to the Commandant of the Marine Corps (2001-2002); Deputy Commanding General, Training and Education Command (2002-2004). Chief of Staff and Director, Command Support Center, United States Special Operations Command (2004-2006). Deputy Commanding General Multi-National Corps-Iraq (2008).



# United States Navy Biography

## Vice Admiral John Terence Blake Deputy Chief of Naval Operations, Integration of Capabilities and Resources (N8)

Vice Admiral John Terence Blake was appointed to the United States Naval Academy from the state of New York, he graduated in 1975. His sea duty assignments include: USS *New* (DD 818), USS *Sarfield* (DD 837), USS *Joseph Strauss* (DDG 16), USS *John Young* (DD 973), USS *Chandler* (DDG 996), USS *Leahy* (CG 16), and USS *Blue Ridge* (LCC 19).

Blake commanded the destroyer USS *O'Brien* (DD 975), served on the 7th Fleet Staff as current operations and assistant chief of staff for Operations, commanded the guided-missile cruiser USS *Normandy* (CG 60) and served as commander, Carrier Strike Group 11.



His shore duty assignments include: flag lieutenant to commander, Navy Recruiting Command; Naval Post Graduate School where he earned a masters degree in Finance; Navy Staff (N80) head, Sea Control Section and program manager for the Navy Shipbuilding account; National War College where he earned a masters degree in National Security; Joint Staff (J8) division chief and head of the Combat Identification Joint Warfare Capability Assessment Team; director, Programming Division (N80); director, Operations Division, Office of Budget in the Office of the Assistant Secretary of the Navy (Financial Management/Comptroller); director, Operations Division, Fiscal Management Division in the Office of the Chief of Naval Operations; deputy director for Resources and Acquisition on the Joint Chiefs of Staff (J8) and deputy assistant secretary of the Navy for Budget.

Blake is currently assigned as deputy chief of Naval Operations, Integration of Capabilities and Resources in Washington.

He is authorized to wear the Navy Distinguished Service Medal, Defense Superior Service Medal with oak leaf cluster, the Legion of Merit with four gold stars, the Meritorious Service Medal with two gold stars, the Navy and Marine Corps Commendation Medal with two gold stars and various service and campaign medals.

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**QUESTIONS SUBMITTED BY MEMBERS POST HEARING**

MARCH 16, 2011

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#### QUESTION SUBMITTED BY MR. SMITH

Mr. SMITH. The USMC LAV Program Manager met with HASC staff in January 2010 and reported significant benefits associated with side and wheel-well armor kits added to the USMC fleet of LAV's. These kits were developed by Armatec and installed at the Barstow and Albany USMC Depots. The Committee was informed that these kits added needed survivability to the LAV's, while also extending LAV service life. The HASC also understands that several allied countries are incorporating, into their vehicle fleets, additional technologies developed by this company such as Mine Blast Floor and Underbelly Protection Kits, Roof Mounted Blast Attenuating Seats, and Armored Fuel Tanks. Are there plans to evaluate the technologies from recent LAV survivability upgrades for possible use in upgrade programs for the AAV or HUMMWV fleets?

General FLYNN. Yes. CD&I manages the capabilities included in the Ground Combat and Tactical Vehicle Strategy as a portfolio. AAV will benefit from the lessons learned from LAV and all other USMC vehicles in the portfolio, plus some Army vehicles such as the Bradley with its Urban Survival Kit and Stryker with its new Double Vee Hull. CD&I is actively connected to relevant intelligence from the National Ground Intelligence Center and the Marine Corps Intelligence Activity, and it communicates with protection experts from Army Research Labs and TARDEC to stay current on best practices with respect to Force Protection and Survivability.

The AAV upgrade initiative is planned to improve protection against roadside and underbelly IEDs by upgrading protective armor and modifying the interior of the vehicle to mitigate blast and fragmentation effects while maintaining current water and land mobility capabilities.

Analyses are ongoing to underpin AAV protection requirements, and to ensure these requirements are balanced against others such as swim capability, land mobility, etc. For instance, CD&I, PM AAVS, and MCOTEA are assessing the feasibility of protecting the occupants of the AAV during underbelly attacks through a deliberate study performed by Army Research Labs. In this study, ARL is estimating the potential benefit afforded by all-external appliqué, all-internal appliqué, and some combination of the two, using 3D modeling and simulation. Given that AAV has stricter swim mobility requirements than LAV, more attention is being paid to the second order effects of adding heavy protection to the belly of the AAV. CD&I anticipates leveraging Government (Naval Surface Warfare Center) and academia (Stevens Institute of Technology) to assess the effects of heavy upgrades on swim performance, and Nevada Automotive Test Center to assess the effects on land mobility, reliability, and ride quality.

Likewise, future HMMWV upgrade initiatives will benefit from the lessons learned from past initiatives, to include recent LAV upgrades, experimentation on the SCTVC (also known as "Capsule"), ongoing experimentation on DARPA's Blast Mitigation System (also known as Structural Blast Channel or Chimney), plus the ongoing technical development of the new-start Joint Light Tactical Vehicle systems. The USMC is actively pursuing better protection for a portion of the HMMWV fleet, and anticipates a recapitalization initiative that will likely replace older cabs with more protected ones, while improving off-road mobility in order to expand maneuver space, within established cost and transportability constraints. Knowing that protected mobility for the light fleet is an extremely difficult task within the USMC's unique transportability requirements, it will continue to leverage the experience of Science and Technology activities such as the Office of Naval Research and DARPA, from Industry through our Materiel Developers at Marine Corps Systems Command, and from Research and Development Activities such as TARDEC and ARL, to ensure a balanced and effective set of capabilities is fielded.

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