

[H.A.S.C. No. 115-15]

**THE EFFECT OF SEQUESTRATION  
AND CONTINUING RESOLUTIONS ON  
MARINE CORPS MODERNIZATION  
AND READINESS**

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HEARING

BEFORE THE

SUBCOMMITTEE ON TACTICAL  
AIR AND LAND FORCES

OF THE

COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTEENTH CONGRESS

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HOUSE OF REPRESENTATIVES,  
COMMITTEE ON ARMED SERVICES,  
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES,  
*Washington, DC, Friday, March 10, 2017.*

The subcommittee met, pursuant to call, at 9:04 a.m., in room 2118, Rayburn House Office Building, Hon. Michael R. Turner (chairman of the subcommittee) presiding.

**OPENING STATEMENT OF HON. MICHAEL R. TURNER, A REPRESENTATIVE FROM OHIO, CHAIRMAN, SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES**

Mr. TURNER. Good morning. This hearing will come to order.

The subcommittee meets today to continue informing our members and the public about the ongoing readiness crisis that all of our military services find themselves in. Readiness includes many things, such as end strength, training, and modernization.

Today, we will focus on how sequestration and years of continuing resolutions [CRs] in our budgetary process have impacted the Marine Corps' ability to modernize the current force to be ready and capable against current and emerging threats. We will have a similar hearing planned with the Army next week.

I would like to welcome our witness, Lieutenant General Gary L. Thomas, the Deputy Commandant for Programs and Resources, United States Marine Corps.

General Thomas, we thank you for your service, and we look forward to receiving your important testimony today.

Today's hearing will allow us for a much deeper review of the modernization and readiness challenges identified by the Assistant Commandant of the Marine Corps [ACMC] during last month's full committee hearing on the state of the military. Based on his testimony, we know that the Marine Corps is not only out of balance, but also lacks the necessary resources needed to rebalance itself. This is a dangerous trend that we must reverse for the Nation's expeditionary force in readiness.

As such, General Thomas has been asked to address and identify: one, the near- and long-term impacts that continuing resolutions and sequestrations are having on the Marine Corps' ability to modernize and ready its forces; two, the specific impacts to ground system and rotorcraft modernization programs; three, the processes the Marine Corps is utilizing to prioritize modernization requirements in order to address immediate and near-term capability gaps in a budget-constrained environment; four, where the Marine Corps

should be focusing its modernization strategies across the Future Years Defense Programs in order to address anticipated security environments; five, the potential resources that would be required to support these strategies.

To be clear about these resources, the top line is the issue. I support the President's commitment to rebuild the military, as well as his early directive to Secretary Mattis that, quote, "to pursue peace through strength, it shall be the policy of the United States to rebuild the United States Armed Forces," close quote.

However, early reports indicate that the administration's plan is to offer a budget of \$603 billion as a base for defense in fiscal year 2018. I agree with Chairman Thornberry that a 3 percent increase above President Obama's budget request from last year is not enough. While we cannot repair all of the damage done as a result of sequestration in a single year, we can and should do more than this level of funding will provide.

For national security reasons, we cannot afford to wait until 2019 to begin the process to rebuild our military. I look forward to working with the administration in order to increase the fiscal year 2018 budget to get as close as possible to the \$640 billion number referenced in Chairman Thornberry's views and estimates letter that was sent to the Budget Committee.

Before we begin, I would like to turn to my good friend and colleague from Massachusetts, Niki Tsongas, for any comments that she might want to make.

[The prepared statement of Mr. Turner can be found in the Appendix on page 27.]

**STATEMENT OF HON. NIKI TSONGAS, A REPRESENTATIVE FROM MASSACHUSETTS, RANKING MEMBER, SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES**

Ms. TSONGAS. Thank you, Mr. Chairman, and good morning.

And welcome, General Thomas. Thank you for making the time to be with us today. We appreciate it.

Before we begin, I would be remiss if I didn't mention the ongoing investigation into the unauthorized sharing of photographs by marines and former marines. Let me be clear: These actions are reprehensible, harmful to our military and our national security, and detrimental to not just service women, but to all service members and to the culture of our Armed Forces.

We must strongly support those who had their rights and privacy violated and make sure they have all the resources they need. But we must also fully investigate these acts and bring to justice those who violated the law and the rights of other service members.

I appreciate the fact that the Military Personnel Subcommittee will be receiving briefings from the Marine Corps next week, and I look forward to hearing what the service is doing to make sure that those responsible are held accountable.

Today's hearing on Marine Corps modernization provides this subcommittee with an opportunity to hear testimony on the effects of continuing resolutions and sequestration, an important topic, and also gives us a chance to review several major programs and consider how best to equip the Marine Corps of the future.

While I look forward to getting into the details on a few major programs, I would also like to discuss what seems like an imbalance in the Marine Corps budget and, in particular, its procurement accounts. Specifically, for many years, the Marine Corps has requested and received vastly more funding for procuring aircraft as compared to ground equipment. While the Marine Corps certainly has a need for aircraft of many types, the ratio of spending on aircraft compared to ground equipment is striking.

The fiscal year 2017 budget request was no exception to this trend. In it, the Marine Corps requested approximately \$1.5 billion for procurement of ground equipment and ammunition. However, in the same President's budget [PB], it requested \$5.3 billion for just five aircraft programs: the F-35B Joint Strike Fighter, the CH-53K King Stallion helicopter, the V-22 Osprey, the AH-1 attack helicopter, and the KC-130 refueler.

While the individual aircraft programs in question are likely very important when taken individually, the scale of the imbalance, more than 3-to-1 in just this fiscal year, suggests that upgrading aircraft is currently valued higher than upgrading ground equipment. I have some concerns about this ratio of spending on aircraft versus ground equipment, given the Marine Corps' mission to be the premier force in readiness, and the historical reliance that the Nation has placed on the Marine Corps' role in ground combat.

I look forward to hearing more about how the Marine Corps is making tradeoffs in its modernization efforts and what risks are associated with those choices.

And, with that, I yield back. And I look forward to hearing from you, General.

Mr. TURNER. Thank you, Ms. Tsongas.

While not the subject matter of this hearing, I share Ms. Tsongas' concern of the allegations of improper behavior from marines.

A part of the great working relationship that Ms. Tsongas and I have is the history of being the co-chairs of the Sexual Assault Prevention Caucus for over the last 5 years. We have been the major authors of every piece of legislation that has been in the National Defense Authorization Act concerning this issue.

It is one that is of grave concern to us, because no one—no one—should feel as if they are in a compromising position in serving their Nation. And we want to ensure that not just those who have been subject to sexual assault, but those who fear of the consequences and of the potential are protected.

We are beginning our work and our investigation today after this hearing in a series of meetings that we have requested with the Marines on a briefing on this matter. And I am certain that our Sexual Assault Prevention Caucus will be very active in looking not only, as Ms. Tsongas had said, for issues of justice and accountability, but also ways in which we can impact future actions and prevention.

With that, General, I turn to you on our subject matter.

**STATEMENT OF LTGEN GARY L. THOMAS, USMC, DEPUTY COMMANDANT FOR PROGRAMS AND RESOURCES, U.S. MARINE CORPS**

General THOMAS. Chairman Turner, Ranking Member Tsongas, and distinguished members of the subcommittee, thank you for the opportunity to appear before the subcommittee today. I am honored to represent your Marines and testify on the effect of sequestration and continuing resolutions on Marine Corps modernization and readiness.

Our role as America's naval expeditionary force in readiness informs how we man, train, and equip our force. It also drives how we prioritize and allocate the resources that we are provided by Congress.

As we have experienced budget cuts and fiscal uncertainty over the past several years, we have prioritized the readiness of our forward-deployed forces. But in order to maintain this readiness, we have assumed risk in our nondeployed forces, infrastructure sustainment, and, most critically, modernization.

Over time, this has resulted in maintaining older or obsolete equipment at higher cost and more operational risk. As we continue to spend limited resources to sustain legacy systems developed for threats of the past, we risked steadily losing our competitive advantage against potential adversaries.

The future operating environment is characterized by complex terrain, technology proliferation, information warfare, the need to shield and exploit signatures, and an increasingly nonpermissive maritime domain. The threats of the 21st century demand a modernized force with new capabilities that complement our traditional warfighting skills and equipment.

The Marine Corps has learned to live with less and to manage the instability brought about by continuing resolutions and sequestration. We will always strive to be good stewards of what we are given and will generate the maximum readiness possible with the resources provided. But to be prepared for crisis response and contingency now and in the future, we must invest to restore readiness and achieve the right balance of capability and capacity.

The Marine Corps is short of the resources required to effectively modernize, and we do not have the budget predictability that would allow us to optimize the resources entrusted to us by Congress. The uncertainty of the current fiscal year and looming threat of BCA [Budget Control Act] caps continue to disrupt our planning and directly challenge our current and future readiness. With your help, we can begin to overcome these challenges and ensure that the Marine Corps is postured for the 21st century.

Again, thank you for the opportunity to appear before the subcommittee, and I look forward to your questions.

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

Mr. TURNER. General Thomas, I understand that the Marine Corps has conducted a bottom-up review entitled "Marine Corps Force 2025." It has identified several capability and capacity gaps which need to be addressed. Would you please elaborate on some of those findings? And, specifically, what levels of additional funding would be required to begin addressing these gaps?

And I want to emphasize the word “required.” We can’t wish our way into filling those gaps. And it is obviously an issue of resources and not just the Marine Corps deciding to undertake addressing them.

General Thomas.

General THOMAS. Thank you, Congressman.

I would just begin by saying, you know, that we feel that we are not optimized in our organization, training, and equipment for the new operational environment——

Mr. TURNER. I am sorry, General. Could you move closer to the microphone? Because it is not registering you very well.

General THOMAS. I am sorry.

The first thing I would say is that we feel that we are not optimally organized, trained, or equipped to meet the emerging operational environment.

One of the things that has occurred over the past 15 years is the change in threat capabilities. And while we have overmatch in most areas, we are seeing in some cases that our potential adversaries are developing capabilities that rival and in a few cases exceed our own.

The capability gaps that we have seen are largely in terms of force protection first. If you look at some of our current vehicles, they no longer are adequate for the types of threats that they face in terms of protecting our marines. Programs like the Joint Light Tactical Vehicle begins to get at that threat, and new technologies like active protection systems will assist us in going up against counter-armor capability.

The other challenge that we face in terms of capability gaps is an emerging UAS [unmanned aircraft systems] threat, and we have to be able to counter that capability. One of the ways that we have to counter that is be able to find it, to ID [identify] it. Again, we have a program in place with the G/ATOR [Ground/Air Task Oriented Radar] radar that performs an important piece of that kill chain function.

In terms of maneuver, our current amphibious vehicle is 40 years old. With the Amphibious Combat Vehicle [ACV], that addresses that need.

And then, in terms of capacity, we have several shortages in terms of munitions and then just numbers of ready aircraft on the flight line. Many of our aircraft have met or even exceeded their planned service life, and so, as a result, many of those aircraft, much more than we would like, are in depot maintenance, and that means less on the flight line. Again, we have programs in place, in the JSF [Joint Strike Fighter] and CH-53K in particular, to address those challenges.

In terms of additional resources that we need, we need additional funds above the PB 2017 request. The ACMC, in his testimony, talked about \$4 billion, top line. But regardless of the top line, what we are seeking to do is to modernize, and then whatever is required to modernize, we would address other areas appropriately.

Mr. TURNER. General, I have stood in front of a bunch of F-18s that were disassembled. Would you please speak as to how your readiness in aircraft affects training and, therefore, affects readiness in pilots? And also talk about the need for growth in the Ma-

rine Corps and how that is accomplished and measured as we look to increasing the size of the force.

General THOMAS. Congressman, with the help of Congress over the past few years, we have actually seen an uptick in readiness. But, overall, the readiness of our aviation forces as well as the number of pilot hours per month is still much lower than we would like.

The readiness that we desire for aviation is about 75 percent of our fleet. Nominally, across the entire fleet, we are down around 45 percent. And then the average flight hours per pilot per month is, you know, about 10 hours or less. That has—

Mr. TURNER. Sorry. Could we go back for a second? You just said you want to be at 75. You are at 40-what?

General THOMAS. Forty-five percent.

Mr. TURNER. Okay. But you began by saying we have been improving. So, I mean, that is pretty abysmal. To have that be closing the gap, we must have been in dire straits.

General THOMAS. So, Congressman, I just wanted to acknowledge that, you know, we have received some assistance over the past few years from the Congress, and that has helped some, but you are right, the gap is still very wide.

I think a lot of it just has to do with, you know, old metal. You were talking about F-18s. That is the community that I come from. A year ago, I was back in Beaufort walking the flight line, similar to what you did. And I noticed an airplane, a bureau number that I recognized that I had flown as a first lieutenant—

Mr. TURNER. Just one question. Still, I am struggling with this. At 75, is that a reduced goal? I mean, because that is still one in four, right?

General THOMAS. No. Seventy-five percent readiness is a reasonable readiness of, you know, aircraft across a fly line. You are always going to have, you know, routine maintenance that you are going to take airplanes off the fly line. So if you have a 75 percent readiness rate, you can perform all of your missions. Obviously, we are well below that.

Mr. TURNER. Yeah, we are currently below half.

General THOMAS. Correct.

Mr. TURNER. Thank you.

Ms. Tsongas.

Ms. TSONGAS. Thank you, Mr. Chairman.

General, I would like to circle back to the question I posed in my opening statement, and that is just how you are thinking through the priority that the Corps has placed on aviation assets in comparison to ground capabilities and just get your take on what risks you see for the Marine Corps, given that 3-to-1 ratio.

Do you believe these risks are manageable? And do you see in the future the Marine Corps shifting the other way to focus more modernization dollars on ground capabilities in the future? Do you have a plan, you know, whatever, looking out, so that you are covering all the necessary bases in order to meet the challenges you have to confront?

General THOMAS. Congresswoman, I would characterize how we have allocated our modernization portfolio is balanced. We are not balanced across the Marine Corps because we haven't been able to

put as much into modernization as we like because we have been applying our resources writ large to near-term readiness. But in terms of the resources that we have been able to apply towards modernization, we do feel like we are balanced.

We have several needs, both on the aviation side and on the ground side. It is true that we have, you know, a 3-to-1 ratio in terms of aviation versus ground, but a lot of that is just the nature of aviation platforms and the relative expense to ground equipment.

But if I could paint a picture, I would just say, on the aviation side, you know, our CH-53Es are over 30 years old; our F-18s are over 30 years old. On the ground side, you know, our Amphibious Assault Vehicle, 40 years old; our LAVs [Light Armored Vehicles], over 30 years old.

So we have programs in place to address all of those. We haven't been able to, you know, modernize as quickly as we could to get out of the old metal. But in terms of balance, we feel that we have got it about right.

When we spoke, you know, the other day—you know, we are a light, general-purpose force. One of the things that gives the Marine Corps an advantage on the battlefield is its mobility and its fires. Much of that comes from aviation. The ground side in terms of fires, mobility, those are equally as important. But if we were just to look, relatively, how we are investing across aviation and ground, not looking at the cost, although there are significant differences there, but in terms of capability and capacity, we think we are balanced in that area.

Ms. TSONGAS. Well, do you foresee a time in which that balance will have to shift a bit?

And, actually, in that context, I would just like to ask a question about the CH-53K helicopter program related to cost.

So the original unit cost for this program in current-year dollars was about \$95 million. Last year's Selected Acquisition Report for this program showed that its average unit cost had increased 14 percent above the baseline estimate to \$116 million. This week, the Marine Corps provided information to the committee indicating that it is now projected to be 22 percent above the baseline estimate, which would be about \$122 million a copy.

The Marine Corps intends to buy 200 of these aircraft. So that cost growth multiplied by 200 is a heck of a lot of money. And even if there is no additional cost growth, it seems worth pointing out that \$122 million per aircraft in 2006 dollars exceeds the current cost of an F-35A aircraft for the Air Force by a significant margin.

So, while I know this helicopter will provide the Marine Corps a very unique and useful capability, I would like to ask you two things. First, can the Marine Corps really afford 200 of such an expensive helicopter? And, second, in comparison to how little the Marine Corps is spending on upgrading ground combat equipment, does the scale of this investment in niche aircraft capability make sense for the Marine Corps?

And, again, it gets back to that 3-to-1 ratio. And, again, you know, given this helicopter, this aircraft, just the extreme cost of one unit, at some point it seems to me there might be an imbalance.

General THOMAS. Congresswoman, we are always paying very close attention to the cost. You mentioned the \$122 million price point. We anticipate that the unit recurring flyaway when the aircraft begins full rate production will shrink below \$89 million. That is still very expensive, and we are working very hard with the program office and the vendor to keep the cost down and to drive value for the taxpayer.

In terms of, you know, can we afford it, we do have a plan within our top line that would account for the purchases of the new aircraft that we desire.

In terms of getting back to your question about the balance, we intend to address all of the concerns on the ground side that I am sure we are going to discuss here in just a moment. We have good programs in place, we believe, that meet the capability requirements at reasonable cost to the taxpayer. But we have found, both on the ground side and the aviation side, is we simply don't have the resources to do, you know, either one at the rate that we desire.

Ms. TSONGAS. Well, I think it is worth bearing in mind that this is a very costly aircraft, that you have large numbers in mind. And while, yes, the impacts of sequestration have been great, continuing resolutions great—and we will debate how many much more investment we need to make in defending our country—as a country, we also have many other needs. And we have to bear that in mind as each service makes its commitments.

So I thank you for your testimony, and I yield back.

Mr. TURNER. Thank you.

In looking at the members who are currently in attendance and the fact that we have votes at about 10:30, we have just enough time for everyone to get a question in, as long as everybody complies with the 5 minutes. So I am going to ask people to be diligent in that.

And we will start first with Mr. LoBiondo.

Mr. LOBIONDO. Thank you, Mr. Chairman.

General, thank you and all the members of the Corps for their service.

You started to tell us you were walking a flight line and you spotted the plane that you flew or a model that you flew?

General THOMAS. Congressman, you know, as aviators, when you are in a squadron, you become familiar with the bureau numbers of the airplanes that you have flown. So it was just a bureau number that I recognized and had flown over many years early in my career, and it was still in active service. So, again, a good capability for the Nation; it is just that the fact is the bones are old on some of these machines.

Mr. LOBIONDO. So what plane was that?

General THOMAS. It was an F-18.

Mr. LOBIONDO. And how old was it?

General THOMAS. It was 30-plus years old. I am not sure exactly the age.

Mr. LOBIONDO. Okay.

Can you tell us what the current state of readiness is for the Marine Corps rotorcraft?

General THOMAS. Congressman, as I mentioned, we have seen some improvement over the past few years with some help from Congress, but our readiness is still below where we would like it to be.

Our number-one degrader, if you will, has been supply—essentially, parts and the funding for that. We still take aggressive steps to help recover that readiness. We have conducted what we are calling independent readiness reviews for all of the rotorcraft that we have. And we are also taking steps to making sure that we are doing everything we can to lower lifecycle costs.

An example of that would be what we are doing with the MV-22. We have several different configurations of the airplane, just as over time they roll off the line. They have different parts. And we are seeking to drive that down to a common configuration, which will drive down lifecycle costs over the long term.

But in terms of certain airplanes, with Congressman Tsongas we have already talked about the CH-53. Again, those airplanes are greater than 30 years old, and we have flown them pretty hard over the past 15 years in Afghanistan.

Mr. LOBIONDO. General, what would you say would be the top two or three unfunded readiness priorities that you have?

General THOMAS. Our top three priorities, I would say, on the ground side would be our Amphibious Combat Vehicle, it would be the G/ATOR radar, and the Joint Light Tactical Vehicle.

Mr. LOBIONDO. Are we likely to make any progress with that with what we are looking at here in the near future?

General THOMAS. Congressman, we are making progress. Again, we have programs in place—vehicles like the Joint Light Tactical Vehicle, we have requested a number in 2017, and that number will ramp up as we go out.

The challenge that we face is not having programs in place that provide the capabilities that we need. The challenge that we have is we simply don't have enough resources to buy them at the rates that we desire. So the transition to new equipment is very slow.

Mr. LOBIONDO. Very slow. Okay. Thank you.

I yield back.

Mr. TURNER. Ms. Rosen.

Ms. ROSEN. Thank you, Mr. Chairman.

Thank you, Ranking Member Tsongas.

And I really appreciate your being here today and explaining all this to us.

What I would really like to ask on another question is this. The Trump administration has suggested that we go from 24 infantry battalions to 36. What are the challenges to create over a dozen—potentially a dozen new battalions? And how do you see that fitting in with what you are going to ask for?

General THOMAS. Congresswoman, I would characterize that question this way—or the answer to that question is, as the Commandant says, we do need to grow, because we need additional capabilities primarily in areas such as cyber, EW [electronic warfare], and additional intel [intelligence] capacity. Those are the capabilities that we would grow as a part of growing to, for example, the 185,000 that was approved through the NDAA [National Defense Authorization Act].

We also have capacity challenges. Our deployment-to-dwell ratio still remains very high. Prior to 9/11, I would say for every deployment you had three times that period, you know, at home. Our average, you know, dep-to-dwell is, you know, around 1 to 2.2 to 2.3. So growth would provide capacity as well.

But, to your question, you have to balance any growth with the equipment that you need for those new people, the training and infrastructure that is required to get those marines ready for their particular mission, and then, of course, modernization.

So the plan to grow in this year to 185K will give us additional capability, primarily in those areas—cyber, EW, and intel—that I mentioned, as well as some relief on capacity. However, we will not grow any more—or we will only grow relative to the additional resources that are provided.

One of the things that we are trying to do, getting back to Congresswoman Tsongas' question, is we are trying to protect our modernization accounts. Over the past, you know, several years, with the BCA and sequestration, our investment in modernization has been as low as 7 percent. In our request for 2018, we are going to raise it to 10 percent, and our goal is to get to 15 percent of our portfolio in modernization.

All of those things impact our ability to grow. So we will stay in balance, and then we will only grow as additional resources become available.

Ms. ROSEN. I have one more quick question. And you talked about drones, the unmanned aerial flying. How does that reduce the number of manned flights? And how do you work—I know it is not a short answer, but doesn't it reduce the number of manned flights, therefore reducing the amount of stress on the aircraft?

General THOMAS. It can. But, you know, whether you have an unmanned, a UAS, or a manned aircraft, you are still putting, you know, hours on that particular—so if it is a new unmanned system, it is going to do fine. If it is an old unmanned system, you are going to have some of the same challenges.

But, to your question, you know, we are always looking for the right capabilities, and if that right capability is in an unmanned system, then we are going to pursue that.

Ms. ROSEN. Thank you.

Mr. TURNER. Mr. Cook.

Mr. COOK. Thank you very much, Mr. Chairman.

General, it is good to see you again. Thanks for answering a lot of my questions that I brought up about reactive armor.

Part of the problem, at least from my perspective, is the tempo of ops [operations]. And this has been around as long as I can remember in the Marine Corps, when I was in there, and that op plan—umpty ump, umpty ump, umpty ump, umpty ump. It keeps going on and on and on.

You can only so do so much. And I always thought, when I was a captain many years ago, that we were overly committed, because we are going to do NEO [noncombatant evacuation operation] ops, we are going to do this, this, and this. And Congress is going to ask you and all the armed services to continue to do that, because you do it well. But do we have to be more realistic in terms of the

impact of the sequester and the fact that a lot of this equipment is aging and we have to fix that stuff?

General THOMAS. Congressman, you know, you brought up an important point. In any equation, you know, we talk about resources, but the other side of the equation is demand signal. And the higher that demand signal is, you know, the greater—you are going to use up your resources at a greater rate.

So that is clearly something that, you know, the Nation has to consider. Where we, the Marine Corps, bases its requirements on is based on what we have been asked to do and the missions that we have been given by senior leadership.

Mr. COOK. Well, you know, many years ago, in 1966, I was at Francis Marion. And we had an exercise where we actually went over the side in the nets. Now, I know I am old, but this was a ship that, basically, it was 11 years since World War II. But now we are talking about aircraft and items that are around 30, 40 years. It is just almost incomprehensible, with the changes.

Anyway, readiness indicators. I think at least in my short time on this committee, I think there has been more attention to readiness indicators. I think congressional Members are going to be asking more and more about why is it unit C-4 or C-3; how come more units aren't C-1 and C-2?

And I think that pressure is going to continue, unless I am wrong, because I say to myself, just like the previous question, where the money should go. How are we going to bring these units up to speed? Is it just money or—I think you answered the question already—is it the supply block, maintenance, everything else which had been overlooked?

And I know we had talked about this a little bit. How are we going to correct that maintenance—General Dunford had talked about this earlier. How are we going to fix—do we just have to say “time out”? We have to have our maintenance game in play, or we are never going to get there?

General THOMAS. Congressman, you alluded to it, but, I mean, there are several factors that come into bear. A lot of it is resources. Some of it is time. That is, you know, you use your equipment and your people up—you know, there is a period of time that is required to get the equipment and the people back up into fighting standard.

And then the third aspect of it is just—it is recapitalization. That is, we can apply resources to many of our old pieces of equipment. And in many cases, we can continue to use them for many years to come, but in some cases, there is a diminishing return. That is, you are spending resources to keep old equipment going, but you are getting less and less return on investment.

Mr. COOK. Yeah.

Is the IG [inspector general] specifically looking at units that are C-4 or C-3 on how to best solve that problem, with a report to the Commandant?

General THOMAS. I think there are a number of looks within the naval aviation enterprise, the DOD IG. Many people are looking at the areas that you describe in an attempt to provide more clarity to the discussion and what would be required to address those.

We feel like we have a good understanding of what is required to address it, and you have alluded to some of those.

Mr. COOK. Thank you very much. Thank you for being here.

I yield back.

Mr. TURNER. Mr. Carbajal.

Mr. CARBAJAL. Thank you, Mr. Chair and Ranking Member Tsongas.

Thank you, Lieutenant General Thomas, for being here. It is always a good day when marines are in the room, being a marine myself.

You know, I also share what Ranking Member Tsongas shared, her concerns about the denigration, the allegations that we heard of the circulation of photographs regarding women marines. It is very concerning. And I do hope that there is an expeditious adjudication of the perpetrators and that they are brought to justice as soon as possible.

To that end, General Thomas—Lieutenant General Thomas—it is my understanding the Marine Corps has been working on developing body armor that provide better fit and coverage for female marines. There were some concerns that the Marine Corps was just developing more sizes rather than developing female-specific body armor.

Can you update this subcommittee on what approach the Marine Corps is taking and where we are in terms of getting these body armors to our female marines?

General THOMAS. Thank you, Congressman.

The Marine Corps is committed to providing high-quality force protection for all of its service members in terms of form, fit, and function and regardless of gender.

One of the policy changes that have been made in terms of—previously made in terms of how we, you know, build our force protection equipment, we used to have sizes that would only be from the 5 percentile to the 95 percentile of marines writ large. The new policy is down to the 2 percentile female on one end of the spectrum, all the way up to the 98 percentile male. And the reason I highlight the male in this case is because we have actually had, you know, males who were very, very large and they didn't have adequate protection as well.

We think that we have two pieces of gear, primarily. We have the plate carrier and the IMTV [Improved Modular Tactical Vest]. The plate carrier, we think, is in a good position for females and males. It is 2 pounds lighter. And we believe that we have the right sizes for females as well as some of the larger males.

The IMTV is an area that we have also added additional sizes. One of the things that we found was that they were too long, in some cases, in the small, medium, and large sizes. So we have added, you know, a small short, a medium short, and a large short, much like we do with our camouflage utilities.

And, if I could, you know, one of the things that Congresswoman Tsongas and I discussed the other day, she had a question about, you know, fit, specifically for females, and one of the things I did learn is that the Army, you know, has—in their particular sets, they have included some features that will help fit a female. We continue to look at those, and we are closely aligned with the

Army, but we don't have those specific features incorporated into our equipment yet.

Mr. CARBAJAL. Well, Lieutenant General Thomas, I would say we should be, at the very least, at the same standards that the Army has for adapting our armor for women. And I don't think it bodes well for us to not be at least on par in appreciating our female marines as the Army seems to be appreciating their women soldiers.

So I just want to encourage us to get going, because it just doesn't bode well. Especially when you consider incidents that we are dealing with, the allegations that we are dealing with, it just doesn't bode well for the type of institution we want to portray to our country and women marines and females in general.

So thank you.

Mr. TURNER. Mr. Kelly.

Mr. KELLY. Thank you, Mr. Chairman and Ranking Member.

And thank you, Lieutenant General Thomas. And just for shortness, I am just going to say "General Thomas." I understand you are a lieutenant general.

One of the things that Ms. Tsongas talked about was the cost of the aircraft versus the ground stuff. Is some of that just not the cost and procurement and research for a F-35 versus a Joint Light Tactical Vehicle?

I mean, the costs associated with those things on the ground are just much cheaper whether you buy them on bulk. The cost of an asset on the ground is generally cheaper than that in the air. Is that correct or incorrect?

General THOMAS. That is correct. I mean, you know, buying a car as opposed to a 737, I mean, there is that difference that you are going to have. So anything that flies nominally is going to be more expensive.

But, you know, the question is a good one. That is, you know, are we balanced across, you know, the very important needs on the ground side as well as the aviation side.

Mr. KELLY. And I think we need to be very conscious to make sure we keep those costs low, but it is just going to cost more.

And then, once you have and procure that equipment, it costs more to maintain an F-18 or an F-35 than it does those ground vehicles also. Would that be correct?

General THOMAS. That is correct.

Mr. KELLY. Now, going back, on the parts thing. And I have served in the Army, so I understand parts stockage and a lot of those things. Is our shortage of parts to keep our current fleets, whether it be aircraft or ground vehicles, is it a shortage of supply and not being able to get the parts? Is it a shortage of dollars?

And how much do things like having OCO [Overseas Contingency Operations] funding, as opposed to top-line funding, affect your getting the correct stockage of parts to fix it when it breaks, as opposed to having to have it on order for 90 days?

General THOMAS. I think, to your last question, you know, we are very appreciative for OCO, and it helps us in many ways. As you may well be aware, there are sometimes limitations depending on the type of money that you get in terms of how you can actually spend it. And then there is also the issue of lead time for, you know, parts.

But I would just say, broadly speaking, we know what our parts requirement is, and we know what the resources required to get those parts. We just haven't been able to afford the quantity that we have needed.

Mr. KELLY. So it is a dollars, not a production, it is a dollars—in order to get the right stockage and to maintain that to fix the vehicles when they—

General THOMAS. By and large, that is correct.

Mr. KELLY. Okay.

And, I guess, during this period of reduced funding but not reduced missions or OPTEMPO [operations tempo], what types of investments has the Marine Corps sacrificed to sustain the deployable readiness level of operational forces?

General THOMAS. Congressman, we have, you know, sacrificed several areas in terms of modernization. You know, our end strength was kept down.

One area where we have particularly felt—and I expect the other services have, as well—is in terms of home station readiness. That is important, because your home station readiness is your ready bench that is going to respond to crisis as well as major contingency. And the effect of having lesser home station readiness is that, when they do need to go forward, there is going to be a delay, because they are not going to either have the equipment or they are not going to have the readiness that they need.

We have also seen sacrifices in terms of infrastructure sustainment, some quality of life. But as we, you know, have discussed already, I would say that the biggest sacrifices have been in terms of modernization, whether it is our long-range precision fires capabilities, some of the things we are trying to do to counter UAS.

And then there is the aspect of maintaining older equipment at a higher cost with a lesser return on investment. So there is that aspect of it. You know, we didn't get that way overnight. We are not going to get out of it overnight.

And, again, I would just emphasize what has changed, also, in addition to the resource environment, is the threat environment has changed. And that is just something that we are going to have to deal with going forward.

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

Mr. TURNER. Thank you.

The order of the list is Bacon, Banks, Wittman, McSally.

Going to Mr. Bacon.

Mr. BACON. Thank you, Chairman Turner.

I really appreciate General Thomas being here today. I have to say for the record we have known each other since 2003, classmates. And I happen to know him as a humble leader with great character and morals, treats people great.

So it is an honor to see you here today.

I wanted to ask you a little more about the readiness levels and the spending cuts that we have had, you know, in recent years. And you have already mentioned the top priorities, so I will move to my next one. What would you like to do with electronic warfare if you were properly resourced? What areas would you want to expand in?

General THOMAS. I think, you know, we have—Congressman, first of all, it is good to see you again, sir.

And in terms of electronic warfare, we have a pretty good understanding and a plan for where we need to get on the aviation side, you know, as part of the joint force and how we fit into that and working with our joint partners.

Where we are seeing areas of growth is on the ground side. And we are also seeing the nexus of cyber and EW. And it is about providing the equipment that allows to you do that, but also now the organization that gives you that capability as well. As part of the 185K growth, the Commandant is growing what he calls a MEF [Marine expeditionary force] information group, and it will incorporate all the critical aspects of information warfare, to include additional intel capacity, cyber capacity, and, yes, the EW capability.

We do have, you know, some very good EW capability on the ground side in terms of protection, you know, against IEDs [improvised explosive devices] and so forth. But our perspective is now broadening in terms of additional capabilities that we would need when you are going force-on-force and being able to counter some of the EW capabilities that our adversaries are developing as well.

Mr. BACON. So if I understand right, with a little more resourcing, you are going to put a focus on cyber, intelligence, EW.

And one other question for you. I was going to ask you a little more about ISR [intelligence, surveillance, and reconnaissance], but I think you just did that, to a degree. With our readiness levels being where they are at, what I found with all the services, and I believe the Marines too, we are focused on responding to Syria, Iraq, the Middle East right now. And that is what our focus area is for the folks back home getting ready to deploy, focused on that direction.

How able are we to respond if we have a second trouble spot blow up in the world, say, like North Korea? With your readiness levels today, how are we positioned and what would be the roadblocks you are going to have to cross to get a force there quickly?

General THOMAS. Congressman, I will keep my comments, you know, more general in nature, but to paint a picture—and you correctly described. You know, the units that we are sending out the door today are trained to a high level, they are equipped, they have got what they need. But we are seeing, as you point out, a slow degradation of that ready bench. And that has been going on for several years now.

The way that manifests itself, if you are talking a major contingency operation, plans call for certain units at certain times within so many days of a conflict beginning, and what we are seeing is delays at which those particular units can meet those. And, in some cases, those delays are significant.

Mr. BACON. Well, thank you. When our readiness levels are down, it undermines deterrence and it makes this world a more risky place.

So, with that, I yield back, and I thank you for your testimony today.

General THOMAS. Good to see you, Congressman.

Mr. TURNER. Mr. Banks.

Mr. BANKS. Thank you, Mr. Chairman.

General, thank you for being here today. Thanks for your service. You have made a compelling case overall today about the impact of the chaotic congressional appropriation process through funding the military through CRs, sequestration, the BCA. And while, statistically, that testimony is very compelling, I often find, as a new Member of Congress, as a freshman on this committee, that the anecdotal evidence is often even more compelling.

When I read about marines raiding museums for parts for aircraft, or when I read stories about units from the chairman's home State of Ohio having to cancel training exercises in my home State of Indiana at Camp Atterbury because of government shutdowns and CRs and the congressional process, those anecdotal stories are often most compelling when I make the case to constituents at home about what is wrong with the processes here on Capitol Hill.

And I wonder if you can—first of all, can you confirm those anecdotal examples? And give us more examples of the second- or third-order effects of what does it mean when we have to cancel a training exercise, what does it mean to morale when we have to raid museums for parts for aircraft, for example.

General THOMAS. Congressman, I would just say—and, generally, I mean, you know, the stories that you hear across the joint force as anecdotes, and, you know, to the extent that there are limits on anecdotes, but they are generally—they are accurate. What I have found is, you know, marines, they want to be marines, they want to be good at what they do, and they want to be trained to a high level. Part of that is making sure they have the resources for, you know, equipment, but training and other things that you have articulated.

If I would characterize from a, you know, higher level just some of the additional challenges that we face with, kind of, the budget uncertainty, you know, it really makes it difficult for us to plan. We don't have predictability, and we feel like we are not optimizing the dollars that the Congress has generously allocated to us.

It also slows our acquisition programs. In many cases, we have got the right program, but we are purchasing things at the minimum sustained rate. And what that means is that certainly has an impact on our industry partners, but we pay a premium for that. We are not achieving economic order quantities.

And then there are all sorts of authorities aspects that—authorities that we can't use, depending on the vagaries of budget challenges. For example, with the continuing resolution, you know, we can't do any new starts. That affects our research and development. It affects buying more quantities of a certain capability, even if we have the money to do that.

And then, you know, as you have said, all of these things together, the uncertainty forces us to focus on the 5-meter target and focusing on that near-term readiness, but, meanwhile, our ready bench is being eroded.

Mr. BANKS. Thank you.

On a final note, can you comment, maybe briefly, about the impact of these processes on the Reserve Component of the Marines, the undue stress applied to your reservists?

General THOMAS. I think, you know, at our level, it is all about managing risk, and we have to manage risk across the entire force.

That has an impact on the Reserves, as well, in terms of equipment and training and so forth.

You know, one of the things that we have, you know, struggled with is we would actually like to engage our Reserves more and send them on deployments. We just haven't been able to afford the additional O&M [operations and maintenance] required. You do pay a little bit of a premium to, you know, call up the Reserves or to activate them and send them on deployment, but we haven't been able to use that to provide some dep [deployment] tempo relief to our Active Duty forces.

Mr. BANKS. Thank you.

I yield back.

Mr. TURNER. Mr. Wittman.

Mr. WITTMAN. Thank you, Mr. Chairman.

Lieutenant General Thomas, thank you so much for joining us. We appreciate your leadership. And I am very proud to have Marine Corps Base Quantico in America's First District. We have a lot of great marines there, a lot of great things that go on there. So I appreciate that.

I wanted to talk to you about the AAV [Amphibious Assault Vehicle] and subsequently the ACV. I had an opportunity a couple weeks ago to visit Textron just outside of New Orleans, who, as you know, is producing the new Ship-to-Shore Connector, which is the replacement for Landing Craft Air Cushion, better known as our LCACs. And we all understand how important for the Marine Corps our connectors are.

You stated, though, that the AAV, which is a 40-year-old platform, needs to be replaced immediately. And we know the process we have gone through to get to the development of the Amphibious Combat Vehicle. Can you tell me, in that context, where we are with modernizing those connectors?

Tell me, where are we with the ACV? How important is it for the Marine Corps and total Marine Corps doctrine today to have a modernized connector that is used in conjunction with our Ship-to-Shore Connectors in what the Marine Corps needs to do and its mission statement on having that forced-entry capability?

General THOMAS. Thank you, Congressman.

To your first question about, you know, connectors, you know, the Department of the Navy continues to invest in connectors, you know, the Landing Craft Air Cushion, to keep that, you know, relevant for many years to come. But we are also looking towards new concepts, particularly for connectors for things like Amphibious Combat Vehicle, for example.

As you know, you know, amphibious operations are all about rapid buildup of combat power ashore, so speed is important. The challenge that we learned from the Expeditionary Fighting Vehicle is that when you optimize a vehicle for high water speed, for example, you are sub-optimizing it for operations on land. So we are no longer pursuing that with the Amphibious Combat Vehicle.

But what we are looking at are concepts of, for example—many concepts. One example would be, you know, essentially a sled that the vehicle goes on, gives you that high water speed. And then, once the vehicles are ashore, you now have the, you know, armored protection and so forth that you need.

To your question about the Amphibious Combat Vehicle and where it is, it is fully funded. It is on track for an IOC [initial operating capability] of 2020. And, as you know, that will be the first increment of the Amphibious Combat Vehicle. We are doing a survivability upgrade on our legacy Amphibious Assault Vehicles as a bridge to the second increment of ACV, ACV 1.2.

Mr. WITTMAN. Very good.

Let me ask you, too, about amphibious lift. Obviously, our Marine Corps has a requirement of 38 ships today. We are at 31. As we talk about growing the fleet, it is not just about the number of ships, but I believe it is also about fleet architecture; it is the type of ships. Give me your perspective on where we are today.

And there has been some discussion about a ship like the LHA, the large-deck amphibious ship that does flight operations. The Marine Corps has gone from having a ship that doesn't have a well deck, now back to having a well deck, as part of the Marine Corps expeditionary unit, that amphibious readiness group that we know is so critical, as you pointed out, to put marines forward.

Give me your perspective about fleet architecture when it comes to our amphibious ships and the importance of, you know, large-deck amphibious ship, and especially whether or not it should have a well deck. Should it be a platform for aircraft? Should it have that multicapability? Give me your perspective. Because I know there has been a lot of question about maybe replacing that with a smaller aircraft carrier like a CVL [light carrier]. Give me the Marine Corps' perspective about where that is.

General THOMAS. Congressman, as you rightly point out, it is important for us, when we talk about amphibious lift, what are we trying to do? And, you know, the requirement is for a two Marine expeditionary brigade of lift. And then within that, you know, what is the proper balance between how much you are going to fly, how much you are going to ride on, you know, your amphibious vehicles and your connectors.

That is an ongoing discussion. As you know, the new big-deck amphibs [amphibious ships] will have a well deck. And we think that that is a proper balance between both aviation and, you know, the additional space that you need for your ground forces and those maneuver vehicles.

In terms of fleet architecture, as you know, the Department of the Navy is doing several studies, which we are participating in, writ large. And, again, when you look at threat environment, dispersal, signature are all the things that, you know, have to be considered, you know, going forward. And those may inform, you know, other options that we haven't previously considered.

From a Marine Corps perspective, though, the big-deck, you know, amphib provides a tremendous value to the combatant commander and the Nation.

Mr. WITTMAN. Very good.

Thank you, Mr. Chairman. I yield back.

Mr. TURNER. Ms. McSally.

Ms. MCSALLY. Thank you, Mr. Chairman.

Thank you, General, for your testimony.

I want to talk about how you have had to go to "The Boneyard," which is in my district—which they don't like using that word, by

the way—the Aerospace and Maintenance Regeneration Group, or AMARG, in order to bring aircraft out, F-18s out, going to be upgraded to C-plus to address some of the issues you have talked about today.

You know, given the fact that you have many squadrons who are unable to have the parts and supplies to have a readiness level for those units—and I was an A-10 pilot, just so you know; I get those challenges and those numbers—are these aircraft intended to be additive to the ones in the squadrons? If you don't have parts for them, how are you going to have parts for additional ones? Or are you swapping them out because they have less flight hours on them? What is the cost? How is that going? How many are you bringing out?

I mean, you have seen the reports of, you know, the Marine Corps is dumpster diving, you know, to try and meet their aviation needs. I wouldn't call AMARG a dumpster, but you can see how this is sort of shocking to people who are looking at what is going on, where our Marine Corps is having to go back into, you know, those that were put into various stages of preservation in order to meet its aviation needs.

General THOMAS. Congresswoman, I would just say that when you look across any type of model series, as you know, it is an enterprise effort. And if you have shortages in certain areas, the enterprise will make decisions where it makes sense to harvest, you know, in this case could be parts or, in lesser cases, with regard to the F-18, you know, the body of an airplane that has still got service life on it.

And it just speaks to the broader point. It is old iron. You have got an originally planned service life, you have had multiple extensions approved by Naval Air Systems Command, and you are just managing that risk.

And, in some cases, if you've got, you know, full aircraft in AMARG or specific parts that are difficult to produce, the subs have gone away for whatever reason, it is one of those one-offs, you may choose to take advantage of that. Again, it is——

Ms. MCSALLY. But are you swapping out a lower flight-hour aircraft with a higher one that is in a unit right now? There are reports that there are 10 F-18s being refurbished this year, up to a couple dozen total. Can you just give me an update and the cost of how that is all happening?

General THOMAS. So, you know, again, you are looking across an enterprise of several hundred. I would say, in most cases, you are not replacing, you know, airplanes anymore. I mean, that was done several years ago. You may be taking components, primarily, from those airplanes to repair——

Ms. MCSALLY. So we are not taking airplanes out of AMARG?

General THOMAS. Well, we are taking airplanes out of AMARG, but what we are doing for it—that is, we are not taking an airplane out of AMARG and it is necessarily full-up. We may take components off of it. Or if you do have service life remaining on it—but my understanding is that all of the airplanes are, you know, high service time.

Ms. MCSALLY. Right.

General THOMAS. So if we have life on it, we are just trying to get parts from——

Ms. MCSALLY. Okay. This is confusing me now, because the reports were saying that there was a contract with Boeing specifically to take these aircraft, 10 this year, up to a couple dozen total, upgrade them to the C-plus——

General THOMAS. Right.

Ms. MCSALLY [continuing]. And get them into operation. So are you saying that is not happening?

General THOMAS. No, that is happening.

Ms. MCSALLY. Okay. And do you know the number, how many, and the cost?

General THOMAS. I don't know the cost. I can get that information for you.

Ms. MCSALLY. Okay.

[The information referred to was not available at the time of printing.]

General THOMAS. The number of 10 sounds correct. I would check with General Davis.

Ms. MCSALLY. Yeah, if you don't mind getting back to me on that.

General THOMAS. Okay.

Ms. MCSALLY. Because, again, these are media reports saying 10 this year and a couple dozen total.

General THOMAS. Yeah.

Ms. MCSALLY. It would just be helpful to understand.

General THOMAS. Okay.

Ms. MCSALLY. And, again, you know, I had a squadron of—needed to get 24 airborne to deploy. I had 27 to make 24. Like, they didn't give me 30 to make 24 when we had, you know, a backlog in parts. So I am just trying to understand, are you adding so squadrons have more airplanes that are, you know, more of them sitting unable to fly? Or how——

General THOMAS. You have got many squadrons sitting in Beaufort that are remained behind that, you know, they have maybe half to two-thirds of the actual shadows that they are supposed to have on the flight line.

Ms. MCSALLY. Right.

In the parts of the readiness we are talking about here with these pilots flying 10 hours a month, I mean, those hours are meaningless to me; it is what kind of actual missions you are training on that matter. Is it related to flight-hour money, or is it all about the parts and the backlog?

General THOMAS. It is the parts and the backlog. It is the aircraft.

Ms. MCSALLY. Okay.

Are you seeing a pilot retention issue? There are push and pull factors. Are you seeing any——

General THOMAS. Today, we have all the pilots that we have. We are concerned that we may have some challenges going forward based on the plans of the airlines going forward.

Ms. MCSALLY. Okay.

General THOMAS. And, you know, again, you know, quality of life for our marines, you know, a piece of quality of life is giving the marines——

Ms. MCSALLY. Doing your job.

General THOMAS [continuing]. The equipment—exactly.

Ms. MCSALLY. Yeah. I get it. So I look forward to working with you more on this, because I think there are going to be some push factors.

And I am over my time. Thank you, Mr. Chairman.

Mr. TURNER. Thank you, General. Thank you for appearing before us today.

We will be adjourned.

[Whereupon, at 10:11 a.m., the subcommittee was adjourned.]



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

MARCH 10, 2017

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**PREPARED STATEMENTS SUBMITTED FOR THE RECORD**

MARCH 10, 2017

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**Statement of the Honorable Michael Turner**  
**Chairman, Subcommittee on Tactical Air and Land Forces**  
**Hearing: The Effect of Sequestration and Continuing Resolutions on**  
**Marine Corps Modernization and Readiness**  
**March 10, 2017**

The hearing will come to order.

The Subcommittee meets today to continue informing our members and the public about the ongoing readiness crisis that all of our military services find themselves in.

Readiness includes many things such as end-strength, training, and modernization.

Today, we will focus on how sequestration and years of continuing resolutions have impacted the Marine Corps' ability to modernize the current force to be "ready and capable" against current and emerging threats.

We will have a similar hearing planned with the Army next week.

I'd like to welcome our witness:

**Lieutenant General Gary L. Thomas**, the Deputy Commandant for Programs and Resources, United States Marine Corps

General Thomas, we thank you for your service and look forward to receiving your important testimony.

Today's hearing will allow for a much deeper review of the modernization and readiness challenges identified by the Assistant Commandant of the Marine Corps during last month's full committee hearing on the State of Military.

Based on his testimony we know the Marine Corps is not only out of balance, but also lacks the necessary resources needed to rebalance itself.

This is a dangerous trend that we must reverse for the Nation's expeditionary force in readiness.

As such General Thomas has been asked to address and identify:

- the near and long-term impacts that continuing resolutions and sequestration are having on the Marine Corps' ability to modernize and ready its forces;
- the specific impacts to ground system and rotorcraft modernization programs;
- the processes the Marine Corps is utilizing to prioritize modernization requirements in order to address immediate and near-term capability gaps in a budget constrained environment;

- where the Marine Corps should be focusing its modernization strategies across the future years defense program to address the anticipated security environment; and,
- the potential resources that would be required to support these strategies.

To be clear about resources—the top line is the issue.

I support the President’s commitment to rebuilding the military, as well as his early directive to Secretary Mattis that, “To pursue peace through strength, it shall be the policy of the United States to rebuild the U.S. Armed Forces.”

However, early reports indicate that the Administration plans to offer a budget of \$603 billion for defense in fiscal year 2018.

I agree with Chairman Thornberry that a 3 percent increase above President Obama’s budget request from last year is not enough.

While we cannot repair all of the damage done as a result of sequestration in a single year, we can and should do more than this level of funding will provide.

For National Security reasons, we cannot afford to wait until 2019 to begin to rebuild our military.

I look forward to working with the Administration in order to increase the fiscal year 2018 budget to get as close as possible to the \$640 billion number referenced in Chairman Thornberry’s Views and Estimate letter to the Budget Committee.

Before we begin, I would like to turn to my good friend and colleague from Massachusetts, Ms. Niki Tsongas, for any comments she may want to make.

Not public until released by the  
House Armed Services Committee

**STATEMENT OF**  
**LIEUTENANT GENERAL GARY L. THOMAS**  
**DEPUTY COMMANDANT, PROGRAMS AND RESOURCES**  
**UNITED STATES MARINE CORPS**  
**BEFORE THE**  
**TACTICAL AIR AND LAND FORCES SUBCOMMITTEE**  
**OF THE**  
**HOUSE ARMED SERVICES COMMITTEE**  
**ON**  
**THE EFFECT OF SEQUESTRATION AND CONTINUING RESOLUTIONS ON**  
**MODERNIZATION AND READINESS**  
**10 MARCH 2017**

Not public until released by the  
House Armed Services Committee

Lieutenant General Gary L. Thomas, USMC  
Deputy Commandant for Programs and Resources

Lieutenant General Gary L. Thomas is currently serving as the Deputy Commandant for Programs and Resources.

A native of Austin, Texas, he graduated from the University of Texas and was commissioned in 1984. He previously served as the Commanding General, 2d Marine Aircraft Wing.

Lieutenant General Thomas is a Naval Aviator and has served in several FA-18 squadrons. He commanded VMFA-323 during Operation IRAQI FREEDOM while embarked aboard USS CONSTELLATION (CV-64). He also commanded Marine Aviation Weapons and Tactics Squadron One (MAWTS-1), and he served as the Commanding General, 2d Marine Aircraft Wing (Forward) in Afghanistan from February to December 2013.

He has served as the Assistant Wing Commander for the 2d Marine Aircraft Wing, Assistant Deputy Commandant for Aviation, and the Marine Corps Deputy Director of Operations.

His Joint assignments include service in the Strategic Plans Directorate (J-5) and in the Force Structure, Resources, Assessment Directorate (J-8).

Lieutenant General Thomas is a graduate of the Weapons and Tactics Instructor Course, the Navy Fighter Weapons School, Air Command and Staff College, and the National War College. He holds a M.S. in National Security Strategy from National Defense University.

## **Introduction**

Chairman Turner, Ranking Member Tsongas, and distinguished members of the subcommittee, thank you for the opportunity to testify on the effect of Sequestration and Continuing Resolutions on Marine Corps modernization and readiness. Congress and the American people have high expectations for the Marine Corps as our nation's naval expeditionary force in readiness. Marines serve forward to shape events, engage with partners, manage instability, project influence, respond to crises, and deter potential adversaries. As a force, we must remain ready to fight and win across the range of military operations and in all five domains - maritime, land, air, cyber, and space. Our role as America's 9-1-1 force informs how we man, train, and equip our force. It also drives how we prioritize and allocate the resources we are provided by Congress. A balanced Marine Corps is a force that has a sustainable operational tempo and is able to train with the right equipment for all assigned missions. The result of this balance is optimally trained and equipped forces that deploy when required, with the right quantity of forces, on the required timeline with a ready reserve of non-deployed forces that can surge to meet large scale contingencies and operational plans. While today's force is capable and our forward deployed forces are ready to fight, we are fiscally stretched to maintain readiness across the breadth of the force in the near term, and to modernize for future readiness against the threats we will face.

## **Understanding the Threat Environment**

In 2017, Marines continue to be in high demand from all our combatant commanders around the world. They're forward deployed, engaged on land and sea, and ready for crisis response in Africa, Europe, the Middle East, and the Pacific. As a result, we must constantly balance between our operational readiness and our institutional readiness, between capability and capacity, between current operations and future operations, between steady state and surge readiness, as well as between low end and high end operations and training. All of this must be done as we face increasing threats. In our challenging fiscal environment, we're struggling to maintain this balance.

As we engage in the current fight and maintain our forward presence in order to respond to crises, our enemies and potential adversaries have not stood idle. They have developed new capabilities which now equal, or in some cases exceed, our own. These potential adversaries are, for example, capable of creating combined arms dilemmas using information, cyber, deception, unmanned ISR and long range precision fires in highly advanced and lethal ways. The evolving operational environment is characterized by complex terrain, technology proliferation, information warfare, the battle of electro-magnetic signatures, and a contested maritime domain. The evolution and expansion of the information domain, advanced robotics, and improved weapons technologies are causing threats to emerge with increased speed and lethality. The actions of ever more aggressive and capable peer competitors are demonstrating

advanced multi-domain (ground, air, sea, space and cyber) capabilities across the range of military operations (ROMO). Anti-access anti denial capabilities are proliferating, becoming cheaper, more lethal and harder to target. Future adversaries with masked signatures will fight in distributed fashion in densely populated urban littorals. U.S. satellite-based capabilities may be degraded or denied. Cyber threats will target the digital networks that are essential to the way we currently fight. And adversaries will leverage advanced commercial off-the-shelf technologies to out-cycle our acquisition process. Information warfare will exploit global communications and social media, and we'll face all of these challenges potentially in an era of fiscal uncertainty.

### **Fighting and Winning in the Future Operating Environment**

Recognizing this new era in which the Marine Corps must not only modernize, but also change in order to deter competitors and, if necessary, fight and win against such foes, we developed the Marine Corps Operating Concept (MOC) which describes in broad terms how the Marine Corps will operate, fight, and win in the future operating environment. This is shaping our actions as we design and develop the capabilities and capacity of the future force. To this end, we conducted a bottom-up review of the force necessary to deter, and if necessary, defeat 21st century threats. This review, entitled Marine Corps Force 2025, identified critical gaps in capability and capacity that must be addressed in order to build a Marine Corps with the 5th Generation infantry and aviation elements that can fight and win in this environment.

This unstable and increasingly dangerous world situation is further complicated by the constrained resource environment from which we must continue current operations, maintain our warfighting readiness, and modernize the force. We continue to make tough choices and balance our available resources to meet current operational commitments and, at the same time, to try to achieve tomorrow's readiness. However, as our attention is spread across the globe in a security environment where the only certainty is uncertainty, we must make decisions about our strategy and structure that will determine our nation's military capability in the future. In a 21st century characterized by rapid change, it is imperative that we keep pace with change, for history has not been kind to militaries that fail to evolve.

### **Rebuilding America's Naval Expeditionary Force in Readiness for the 21<sup>st</sup> Century**

Rebuilding a balanced Marine Corps will require both near term actions that can be implemented beginning now in Fiscal Years 2017 (FY17) and 2018 (FY18) and longer term efforts that must be built into future budgets. To begin to address these challenges requires appropriate resources applied to modernization, manpower and readiness in a prudent and executable manner to pay for existing modernization requirements, address existing readiness challenges and shortfalls in infrastructure, aviation and ground platforms, and resource the new structure, materiel and training requirements that together generate capability. Additionally, in order to have the

capacity to meet operational demands and ensure our force is capable of fighting and winning in complex environments, such as contested urban littorals, it will be necessary to build a larger, more experienced and better trained force. It will also be necessary to increase our inventory of Marines with special skills, such as intelligence, electronic warfare, and cyber. Rebuilding the Marine Corps for the 21st century will ultimately require the necessary manpower and with resources guided by strategy, the Marine Corps will be able to develop the capacity and vital warfighting capabilities that will allow us to pursue five critical tasks necessary to build a 5th Generation Marine Corps: evolve the Marine Air-Ground Task Force to be able to fight across all warfighting domains, enhance our ability to maneuver, integrate the Naval Force to fight at and from the sea, operate with resilience in a contested network environment, and exploit the competence of the individual Marine.

#### **The Effect of Continuing Resolutions and Sequestration**

The current fiscal environment increasingly stretches our force. This is not healthy for your Marine Corps or for the security of our Nation as we tackle problems with current readiness at the expense of future readiness. The Marine Corps manages uncertainty and risk through planning. Unstable fiscal environments prevent the deliberately planned, sustained effort needed to recover current readiness of our legacy equipment in the near term, and to modernize in the longer term. The FY17 budget has yet to be approved. Decisions in the FY17 budget will affect the FY18 program and our Future Years Defense Program. Budget Control Act (BCA) caps will continue to impact these plans. The Bipartisan Budget Acts (BBA) of 2013 and 2015 provided some relief from the automatic, across the board cuts of Sequestration, but that relief was partial and has done little to provide the fiscal certainty needed to plan for the future and make long term investments. The Marine Corps has testified over the last several years to the increased risk and damaging impact of BCA top-line caps and constraints on military readiness, modernization, and the welfare of our Marines and their families. We must work to avoid a budget-driven strategy and return to a strategy-driven budget, informed by the strategic requirements of the current and future operating environments. Unless we do so, the range of options we have to address current and future threats will further erode.

We have become all too accustomed to operating under continuing resolutions (CR) each year, and while we have learned to expect and manage under short-term CRs, longer duration CRs dramatically increase risk to an already strained fiscal environment and disrupts predictability and our ability to properly plan and execute a budget and a five-year program. A full year continuing resolution for FY17 would deny us the opportunity to execute our budgeted FY17 plan. This would delay important new starts of such programs as CH-53K, Unmanned Aircraft System (UAS) Sensor Payloads, and Cyber Operations Technology Development supporting Marine Corps Cyber Mission Forces. It would delay production increases in programs such as Joint Light Tactical Vehicles (JLTV), RQ-21 Unmanned Aircraft Systems, and Common

Aviation Command and Control Systems (CAC2S). It would limit planned investment funding increases to critical programs such as Networking on the Move (NOTM), Ground/Air Task Oriented Radar (G/ATOR), Aircraft Survivability Equipment Systems, and the Amphibious Assault Vehicle (AAV) Survivability Upgrades. It would create unnecessary pressure on increased funding needed for military personnel to provide for the pay raise and higher end strength goal mandated in the FY17 National Defense Authorization Act (NDAA). And it would create additional pressure on Operation and Maintenance accounts, further exacerbating current readiness challenges and causing the Marine Corps to re-evaluate planned training and exercises in the Operating Forces, take risk in maintenance at all levels, and further reduce Facilities Sustainment, Restoration and Modernization.

To achieve institutional readiness, sustain operational requirements, and be prepared for crisis and contingency response now and in the future, we must maintain the right balance of capability and capacity for our Marine Corps across our modernization, manpower and current readiness efforts. We are currently working to achieve balance but evaluating how best to allocate resources required to rebalance. The lack of a more stable and predictable fiscal planning horizon needed to support increased end strength, equipment recapitalization and modernization, amphibious ship capability and capacity, and the modern infrastructure required to rebuild and sustain the balanced readiness of the force continues to be a challenge. The fiscal instability of the current fiscal year and BCA caps continue to disrupt our planning and directly challenge our current and future readiness.

#### **Modernization – The Foundation of Our Future Readiness**

Modernization is central to building the Marine Corps of the 21<sup>st</sup> century. It includes the replacement of legacy obsolete weapons systems with new ones, such as the Joint Strike Fighter (JSF), CH-53K, JLTV, G/ATOR, and Amphibious Combat Vehicle (ACV), key components of our strategy to keep pace with expected future threats and our planned concepts of operation. It includes changes to the structure of our Tables of Equipment (T/E) as we continue to incorporate the lessons learned on the modern battlefield into equipment sets that balance affordability with the need for a networked, mobile, and expeditionary force. And it includes the insertion of technological advances into current capabilities, including such efforts as developing active protection systems, long-range precision fires and counter-UAS capabilities. Over the past decade and a half, funding constraints and operational demand increases have forced us to take risk in our future readiness in order to preserve current readiness, deferring critical future aviation and ground programs. Continued sustainment of legacy systems cost more and more to repair and maintain, while not providing the capabilities we know are needed for the future operating environment. Investing in and accelerating our modernization programs directly correlate to improved readiness by achieving efficiencies and providing needed capabilities sooner.

We need to accelerate investments in our command and control (C2) capabilities needed to build a 5th Generation Marine Corps that will dominate the information domain. This requires transforming Marine Air Ground Task Force (MAGTF) C2 capabilities through a unified network environment that is ready, responsive and resilient, including integrating Navy and Marine Corps systems for naval amphibious forces to effectively command and control forces both afloat and ashore. Enhanced C2 and digitally interoperable protected networks are modern capabilities that will facilitate improved battlefield awareness to and from small, dispersed tactical units. Such systems as CAC2S, G/ATOR, and NOTM provide a significantly increased capability associated with maneuver across the battlespace. As warfare evolves into a battle of signatures and detection, these capabilities are vital to maximize the effectiveness of our forces.

We need to accelerate investments in our aviation systems to modernize our aviation combat element. Operational tempo has increased the utilization and stretched the sustainability of our aviation assets. For several years, our aviation units have been unable to adequately meet our aircrew training requirements, primarily due to Ready Basic Aircraft (RBA) shortfalls, where nearly 80% of the units lack the minimum number of aircraft for training and we are significantly short of those needed to meet wartime requirements. The Marine Corps is challenged to replace aging aviation platforms that have reached the end of their service lives or suffered accelerated wear in harsh operating environments, thus reducing service life and resulting in the loss of critical warfighting capabilities. Our aviation modernization plan is a phased multi-year approach to modernization that encompasses aircraft transitions, readiness, aircraft inventory shortfalls, manpower challenges, safety and fiscal requirements. Our modern expeditionary force will require fixed wing aircraft capable of flexible basing ashore or at sea in support of our Marine units. A top priority is the 5<sup>th</sup> Generation Joint Strike Fighter (JSF), which will not only replace three aging platforms, but provides transformational warfighting capabilities for the future. Other priorities for aviation include investing in persistent multi-role intelligence, surveillance, and reconnaissance (ISR); supporting capabilities such as electronic attack and vertical lift; robust strike weapons programs; creating manned-unmanned teaming capabilities; and targeted modernization of the force for relevance and sustainability. The CH-53K Heavy Lift Replacement remains critical to maintaining the battlefield mobility our force requires, nearly tripling the lift capacity of the aircraft it is replacing. And our MV-22 Ospreys expand the operational reach of Marines supporting Joint Force requirements. The acceleration of these key modernization programs and others will directly improve our readiness and allow us to retire aircraft that have reached or exceeded their intended life.

We need to accelerate investments in our ground systems to modernize our ground combat element. Our ground units continue to suffer equipment readiness shortfalls. Prioritizing and sourcing equipment requirements to deployed and deploying units have degraded availability to our non-deployed forces, creating training gaps. The availability is exacerbated by the

increasing age of our legacy equipment and reduced funding levels that have slowed modernization efforts to minimum production rates. Our Ground Combat Tactical Vehicle (GCTV) modernization strategy is to sequentially modernize priority capabilities, reduce equipment inventories wherever possible and judiciously sustain remaining equipment, yet the fiscal environment has prevented us from accelerating procurement of critical ground systems. A core capability of our expeditionary forces is the ability to project forces ashore from amphibious platforms and to maneuver once ashore. Our 40-year old Amphibious Assault Vehicle (AAV) fleet needs to be replaced as soon as possible. We remain committed to developing and fielding an Amphibious Combat Vehicle (ACV) that meets this critical need. The procurement of Joint Light Tactical Vehicles (JLTV) as planned will incrementally replace our High Mobility Multipurpose Wheeled Vehicles (HMMWV) that we began operating over 30 years ago and that are still in use today, but this needs to be accelerated. And, because of reduced topline, there is currently no replacement program for our 34-year old Light Armored Vehicle (LAV) fleet. We have a life extension program but we need to develop and invest in a next generation replacement for this system. The Marine Corps needs to recapitalize and modernize these key ground capabilities and others to ensure success against increasingly capable current and future threats.

We need to increase amphibious ship and surface connector capability and capacity. A critical component in building, training, and maintaining an expeditionary forward presence is the availability and readiness of amphibious ships. Current amphibious shipbuilding plans, as well as surface ship-to-shore connectors programmed to replace the Landing Craft Air Cushioned and Landing Craft Utility platforms, are vital to the Nation's ability to provide continuous naval expeditionary presence and project power across the globe whenever and wherever needed. The Nation's amphibious warship requirement remains at 38, and we are currently at 31, with increases in the amphibious warship inventory to 34 by FY22. Maintenance shortfalls have significantly exacerbated this shortfall. The decreased quantity and availability of amphibious warships, the preferred method of deploying and employing Marine Corps capabilities, have resulted in establishing land-based Special Purpose Marine Air Ground Task Forces (SPMAGTF) to compensate so the Marine Corps can meet operational commitments and ensure timely response to crises. Where an Amphibious Ready Group/Marine Expeditionary Unit (ARG/MEU) may have been the response force of choice in the past, these SPMAGTF have been called on to conduct operations in support of Geographic Combatant Commands. Although SPMAGTF have met a limited requirement for the Joint Force, they lack the full combat power, capacity and strategic and operational agility that results when MAGTF are embarked aboard amphibious ships. Increased amphibious ship capacity and modernization, along with the associated surface connectors to transport Marines from ship-to-shore, are critical investments in allowing us to respond with our full capabilities in the current and future operating environments.

We need to invest in our infrastructure, a key enabler to our readiness. Investment in real property, facilities maintenance, and base infrastructure to support the missions and readiness of our operating forces and other tenant commands are critical to providing the capacity and capability needed to build, train, and launch combat ready forces. Funding for our facilities sustainment, restoration, and modernization, as well as military construction, has been limited to support the readiness of our deployed and deploying forces. Aging facilities and constrained sustainment funding has resulted in a gradual degradation of our infrastructure and created a bow wave of increased long-term costs to return these assets to proper condition. Absent future investment, the sustainment and recapitalization of existing capacities and capabilities will be insufficient to adequately provide the required facilities associated with new and emerging operational requirements necessary to sustain and train our Marine Corps now and in the future.

### **Conclusion**

On behalf of the Marines and Sailors who provide this Nation with its naval expeditionary force in readiness, I thank Congress for your constant interest in and recognition of our challenges. We have readiness recovery and future modernization plans to address our requirements. However, without additional and consistent funding, we cannot rebuild and recapitalize our readiness. The Marine Corps is the Nation's crisis response force that is "most ready when the Nation is least ready," but there is a cost to maintaining this capability and to building the capabilities required for the future operating environment. With that cost, our Nation gains the ability to respond to unexpected crises, from humanitarian assistance and disaster relief efforts, to non-combatant evacuation operations, to major combat operations. This same force can be reinforced quickly to contribute to assured access anywhere in the world in the event of a major contingency. It can be dialed up or dialed down like a rheostat to be relevant across the range of military operations. No other force possesses the flexibility to provide these capabilities. The most important actions Congress can take now is to immediately repeal the Budget Control Act and provide a defense appropriation that ensures sufficient funding to train, man and equip the FY17 NDAA authorized force. The Marine Corps must begin to rebalance and modernize for the future. Resourcing Marine Corps Force 2025 will enable future readiness and create a 5<sup>th</sup> Generation multi-domain force with overmatch that can deter and if necessary, defeat a highly capable near-peer adversary. With your help, we can begin the deliberate journey to overcome these challenges and rebuild your Marine Corps for the 21st century.



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**QUESTIONS SUBMITTED BY MEMBERS POST HEARING**

MARCH 10, 2017

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## QUESTIONS SUBMITTED BY MR. TURNER

Mr. TURNER. General Thomas, you obviously have some significant challenges before you with respect to modernizing your ground combat vehicle fleets. The Amphibious Assault Vehicles are more than 40 years old. Your Light Armored Vehicle fleet is on average 26 years old, and your M1 Abrams tanks are over 30 years old. I understand that as a result of budget constraints you have had to defer modernization efforts and are making incremental improvements to current systems. How would additional resources in FY17 and FY18 help in accelerating ground combat vehicle modernization?

General THOMAS. In order to maintain balanced investment relative to other capabilities, the Marine Corps deliberately planned to selectively and sequentially modernize the combat and tactical vehicle fleets. Achieving a comprehensive modernization of the assault amphibian capability remains the highest priority within the portfolio. Selective High Mobility Multipurpose Wheeled Vehicle (HMMWV) replacement via the first increment of the Joint Light Tactical Vehicle (JLTV) program has been timed to field to the elements of the light combat portion of the fleet most at risk in conjunction with the first phase of Amphibious Combat Vehicle (ACV) program. This approach enables an affordable, incremental modernization of the two most pressing gaps within the ground combat and tactical vehicle portfolio. All vehicle modernization programs are funded to support their acquisition strategies and require stable funding in order to execute effectively. There is also potential to accelerate the second increment of the JLTV program with additional procurement funding in FY20 and beyond, after completing low rate initial production. Additional RDT&E funding in FY18 and beyond will help to accelerate a critical element of modernization, the development of Vehicle Protection Systems for tanks and ACVs in order to increase force protection and survivability against increasing proliferated anti-tank guided missiles.

Mr. TURNER. It's my understanding the Army and Marines are currently testing vehicle active protection systems (APS) for possible use on a range of combat vehicles. The current Marine APS technology demonstration effort, as understood, involves installing an existing Israeli Trophy APS on the M1A1 tank in conjunction with the Army's ongoing Expedited APS Non Developmental Item testing. Please describe your ongoing APS tests and your plans for the rest of the fiscal year. What are some of the challenges you have come across during testing as well as some of your successes?

General THOMAS. Your understanding is accurate. The Marine Corps evaluation of Trophy is a technology demonstration to understand the potential operational application and feasibility of installation and integration of the Trophy Active Protection System on the USMC M1A1 Abrams. The Marine Corps is working closely with the Army's expedited APS effort and our evaluation is complementary to the Army evaluation of Trophy as applied to the M1A2SEP v2. The Marine Corps' effort involves developing a technical package for an installation kit for USMC M1A1, installing the Trophy system, assessing Human Systems Integration analysis with Marine operators, experimenting and testing the M1A1 with APS in order to capture unique operational, employment and platform specific challenges and requirements as well as MAGTF integration opportunities and challenges, and using lessons learned to inform requirements and future deliberate acquisition and integration programs. To date, we have completed the analysis, design and fabrication of a suitable installation kit as well as leveraging the Army's radar testing and tuning. The Marine Corps evaluation of the system integrated on a M1A1 Abrams is planned to start at the end of April and continue through the end of July. The initial focus will be assessing the suitability of the Trophy systems integration by performing a user evaluation, assessing stabilization, target tracking, slew rate, physical characteristics, bonds and grounds, and main gun live fire. Subsequently, live fire events will characterize the Trophy system's effectiveness while installed on the M1A1 Abrams. These events will assess system performance related to fields of fire and fields of view, and target tracking. The primary focus of efforts to date has been to rapidly create a suitable installation kit for the Trophy system and address immediate technical challenges to ensure the system can function as intended when

installed on the M1A1 Abrams. The M1A1 current turret design is not optimized for the installation of the Trophy system, resulting in reduced fields of view for the tank commander, interference with the employment of the Stabilized Commander's Weapon Station, required relocation of the CREW system and relocation of several other components. The planned evaluations, which will help inform how critical it is to address these challenges, will be the focus of development and integration efforts during fiscal year 2018.

Mr. TURNER. We've heard testimony that the most serious readiness concerns are found in aviation units. There's a direct correlation here to modernization. General Thomas, how have continued fiscal constraints caused by sequestration and continuing resolutions affected Marine Corps aviation modernization strategies, and if additional funding were available, what programs would the Marine Corps invest in?

General THOMAS. Lowered budgets have shallowed procurement profiles, delayed introduction of the F-35B/C, and CH-53K and forced the DON to accept risk in Naval Aviation modernization. Meanwhile, sustained operational demand over the last 15 years has prematurely aged our aircraft, kept them forward deployed, and flown them on harder missions at longer ranges. With additional funding, Marine aviation could simultaneously improve aviation readiness by investing in and accelerating its transition to new platforms. For example, by increasing and optimizing the F-35 ramp rate to the desired and executable amount of aircraft that could be procured, Marine aviation will transition from legacy TACAIR platforms to F-35 five years ahead of forecast. Additionally, Marine aviation will continue to fully fund the readiness accounts towards executable levels across the FYDP. Although readiness accounts will improve with funding, they remain a concern and require full funding in future years.

Mr. TURNER. During this period of reduced funding, but not reduced missions or operational tempo, what types of investments has the Marine Corps sacrificed to sustain the deployable readiness levels of the operating forces?

General THOMAS. The combination of inconsistent funding and the continuously high operational tempo has frustrated the Marine Corps' modernization efforts. Operational tempo is not expected to slow and the readiness of deployable forces remains a top priority. That readiness comes at the cost of much needed modernization.

The pace at which we modernize is completely dependent on available resources. With fiscal limitations, we have made the conscious decision to work within the construct of 185,000 end strength (185K). Therefore, we have decided to focus our modernization efforts on:

- The Amphibious Assault Vehicle (AAV) survivability upgrade. This will continue to provide a ship to shore self-deploying capability bridge until we have replacement for our 40 year old AAVs.
- The Amphibious Combat Vehicle (ACV) 1.1, which is our first step in an incremental approach to replacing those AAVs.
- The Joint Light Tactical Vehicle (JLTV), a joint USMC/U.S. Army program to procure the next generation replacement for the venerable High Mobility Multi-purpose Wheeled Vehicle (HMMWV).
- Common Aviation Command and Control System (CAC2S) and Ground/Air Task Oriented Radar (G/ATOR) which will provide an ability to control our airspace enabling freedom of action to employ our organic weapons with the speed and tempo that makes the Marine Air Ground Task Forces successful.
- Networking-On-The-Move (NOTM) and MQ-21A Blackjack a small tactical unmanned aircraft system (UAS) are some of the new capabilities that we must buy to support the IW enablers.
- Increase our quantities of Communications Emitter Sensing and Attack Systems (CESAS II) and Intrepid Tiger II, an airborne communications-band electronic attack pod, in order to support increases in end strength.

However, the aforementioned investments come at the expense of the other 150+ programs in need of sustainment and modernization. In most cases lower priority programs are underfunded, not procured to the full identified requirement, or not sustained at a level that would be expected for the Nation's crisis response force.

While not a direct investment sacrifice, the Marine Corps has made the following adjustments to rotational force allocations in order to recover readiness for the operating forces to better meet major contingency operation response requirements:

- Reduced MV-22 and KC-130 allocations for Crisis Response SPMAGTF's in CENTCOM and AFRICOM by 50% and 25%, respectively.
- Reduced a future VMFA squadron deployment in the CENTCOM AOR from approximately 6 months to 3 months.

- Replaced a recent VMFA squadron deployment with a VMA squadron in order to facilitate readiness recovery in the FA-18 community. Temporarily reduced the flightline entitlement for deploying VMFA squadrons from 12 to 10 aircraft in order to facilitate readiness recovery in the FA-18 community.

Mr. TURNER. Modernization not only deals with next generation platforms and technology, but also has a direct correlation to capacity. Regarding long range precision fires, munitions, and ammunition, are you currently experiencing any inventory shortfalls, and if so, what are the plans to address them?

General THOMAS. The vast majority of USMC ground ammunition inventories are sufficient to satisfy the Total Munitions Requirement. However, baseline funding is insufficient to replace training expenditures and modernize munitions leading to an increase in projected shortfalls. Additional funding was requested for FY17-Amendment that will help with capacity concerns and improve the outlook. The War Reserve Munitions Requirement is prioritized over training and has minimal shortfalls. Additional efforts are underway to reduce training ammunition expenditures to a level that is fiscally feasible while ensuring readiness levels maintain acceptable risk. The Guided Multiple Launch Rocket System (GMLRS) is the Marine Corps long-range precision fires capability. The GMLRS Alternative Warhead (AW) is an area-effects rocket designed to replace the GMLRS Dual Purpose Improved Conventional Munition (DPICM), which is leaving the inventory due to policy restrictions. The Marine Corps began procurement of GMLRS AW in FY15. With FY17 funding, we have a sustainable path to reaching the Total Munition Requirement for this munition in the mid-2020s. However, there will be some risk to Marine Corps long-range area effects capability as GMLRS DPICM will be removed from the inventory (1 January 2019 per current U.S. Policy on Cluster Munitions) prior to GMLRS AW reaching the Total Munitions Requirement. Shortfalls of critical aviation weapons do exist, but are being mitigated through the use of inert training weapons and simulation. Additionally, Overseas Contingency Operation (OCO) funding has been helpful, but late to need, in further mitigating inventory shortfalls. We expect these shortfalls to continue into FY18 due to the existing constrained inventory and unplanned expenditures in support of OIR. Efforts are underway to pursue maintenance and repair of the existing weapon inventory, which will improve life cycle sustainment at significant cost avoidance when compared to new weapons procurement.

Mr. TURNER. The Marine Corps has had numerous security cooperation engagements in recent years. In light of current readiness and deferred modernization shortfalls, do you believe that this type of activity is valuable in the long-term, or should they be deferred and the savings put back into efforts such as modernizing equipment and facilities maintenance?

General THOMAS. The Marine Corps continually seeks to increase efficiencies in security cooperation activities. No single Service—or country—has the capability or capacity to be everywhere at once. In an ambiguous security environment, faced with hybrid warfare, we stay ahead of our adversaries by partnering with our allies and partners. Marine security cooperation enables and sets the force up for success in crisis response, contingencies, and major combat operations. The Marine Corps engages with foreign partners to enable their forces to operate with ours, to provide access for Marine power projection, to build relationships that support strategic objectives, and develop Service operational capabilities with minimal impact to readiness. Our engagements maintain interoperability with capable partners who will share our battlespace, ensure our forces can get to the fight—at any clime or place—are trained and ready when they arrive, and can alleviate the need for or improve the lethality of the Marine Corps. In many ways, security cooperation is what we excel at: partnering in peacetime to help the nation avoid war, but prevailing together with our partners when conflict arises. Reducing security cooperation activities would undermine the interoperability forged with allies and partners through over a decade of conflict, threatens Marine access and basing established through trust and sustained engagement, and jeopardizes forward-training bases and ranges that ensure our forces are operationally ready for any fight.

Mr. TURNER. Staying in line with the specific focus of this hearing, what are your top three ground force modernization priorities, and are they currently fully funded?

General THOMAS. The Amphibious Combat Vehicle (ACV), Joint Light Tactical Vehicle (JLTV), and the Ground/Air Task Oriented Radar (G/ATOR) are the Marine Corps' top ground acquisition priorities, although G/ATOR will support the entire MAGTF in ground and aviation mission sets. While these programs will be in full rate production over the next five years, the Marine Corps will also be taking every opportunity to address other modernization priorities, wherever possible, to ensure we remain a Lethal Force with a 21st century approach to combined arms that integrates information warfare, long-range precision fires, and air defense and seeks to

destroy and defeat our enemies across five domains—air, land, sea, space, and cyberspace. These three modernization programs are funded to support their acquisition strategies assuming stable funding remains available.

Mr. TURNER. Currently, the Amphibious Combat Vehicle Increment 1.1 (ACV 1.1) is in the preliminary stages of Engineering Manufacturing and Development (EMD) testing with the current schedule requiring about 12 to 14 months of testing and an operational assessment in the 2nd Quarter of FY 2018. If the operational assessment proves successful, the Marine Corps would then down-select to one vendor in August 2018 to provide 204 vehicles and achieve an initial operational capability (IOC) in FY 2020. While admittedly this is an aggressive schedule, if additional resources are made available in FY 2017 and beyond, is there potential to achieve an earlier IOC for ACV 1.1 and perhaps accelerate the development of ACV 1.2?

General THOMAS. Additional resources in 2017 would not accelerate the program. Through the efforts of OSD and all other stakeholders, the aggressive ACV 1.1 schedule (currently fully funded) has been designed to field a much needed capability as quickly as possible, while solidifying the requirements and path forward for ACV 1.2.

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#### QUESTIONS SUBMITTED BY MS. TSONGAS

Ms. TSONGAS. The question involves the Amphibious Assault Vehicle Survivability Program. In the annual report, the Director pointed out that “additional armor coupon testing is required to fully characterize all areas of the crew-occupied space against the expected range of threats” and that “due to the lack of sufficient quantity of armor coupons” the Program Office deferred the additional armor characterization to later in the program. Is the additional armor coupon testing recommended by the Director is going to happen when he recommends, and if not, why not? Also, if this is a funding issue, can Congress help by providing additional funds through a reprogramming action or some other way?

General THOMAS. The armor coupon issue on AAV SU was worked out to DOT&E satisfaction when the Program Office proposed the use of an EMD vehicle to conduct all of the remaining testing, as opposed to additional coupons. DOT&E is using the full vehicle exploitation and characterization testing conducted from January through March of this year to meet their testing requirements. There is no additional funding required at this time.

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#### QUESTIONS SUBMITTED BY MS. ROSEN

Ms. ROSEN. During this period of reduced funding, but not reduced missions or operational tempo, what types of investments has the Marine Corps sacrificed to sustain the deployable readiness levels of the operating forces? How do we balance combat readiness with cyber readiness?

General THOMAS. The combination of inconsistent funding and the continuously high operational tempo has frustrated the Marine Corps’ modernization efforts. Operational tempo is not expected to slow and the readiness of deployable forces remains a top priority. That readiness comes at the cost of much needed modernization.

The pace at which we modernize is completely dependent on available resources. With fiscal limitations, we have made the conscious decision to work within the construct of 185,000 end strength (185K). However, the Marine Corps’ revised POM-18 submission is insufficient to maintain either the 185K end strength or for modernizing equipment within an acceptable timeline. The Marine Corps would require an estimated increase of approximately \$5B more per year in order to modernize within an acceptable timeline for the 185K force. Therefore, we have decided to focus our modernization efforts on:

- The Amphibious Assault Vehicle (AAV) survivability upgrade. This will continue to provide a ship to shore self-deploying capability bridge until we have replacement for our 40 year old AAVs.
- The Amphibious Combat Vehicle (ACV) 1.1, which is our first step in an incremental approach to replacing those AAVs.
- The Joint Light Tactical Vehicle (JLTV), a joint USMC/U.S. Army program to procure the next generation replacement for the venerable High Mobility Multi-purpose Wheeled Vehicle (HMMWV).
- Common Aviation Command and Control System (CAC2S) and Ground/Air Task Oriented Radar (G/ATOR) which will provide an ability to control our airspace enabling freedom of action to employ our organic weapons with the speed and tempo that makes the Marine Air Ground Task Forces successful.

- Networking-On-The-Move (NOTM) and MQ-21A Blackjack a small tactical unmanned aircraft system (UAS) are some of the new capabilities that we must buy to support the IW enablers.
- Increase our quantities of Communications Emitter Sensing and Attack Systems (CESAS II) and Intrepid Tiger II, an airborne communications-band electronic attack pod, in order to support increases in end strength.

However, the aforementioned investments come at the expense of the other 150+ programs in need of sustainment and modernization. In most cases lower priority programs are underfunded, not procured to the full identified requirement, or not sustained at a level that would be expected for the Nation's crisis response force.

While not a direct investment sacrifice, the Marine Corps has made the following adjustments to rotational force allocations in order to recover readiness for the operating forces to better meet major contingency operation response requirements:

- Reduced MV-22 and KC-130 allocations for Crisis Response SPMAGTF's in CENTCOM and AFRICOM by 50% and 25%, respectively.
- Reduced a future VMFA squadron deployment in the CENTCOM AOR from approximately 6 months to 3 months.
- Replaced a recent VMFA squadron deployment with a VMA squadron in order to facilitate readiness recovery in the FA-18 community.
- Temporarily reduced the flightline entitlement for deploying VMFA squadrons from 12 to 10 aircraft in order to facilitate readiness recovery in the FA-18 community.

Lastly, "Cyber readiness" is inherent to "combat readiness." All warfighting functions are increasingly dependent on freedom of action in cyberspace—operating and defending our systems and networks, and projecting power through cyberspace. The Marine Corps—Operating Forces enabled by the Supporting Establishment—require resilient and responsive cyberspace operations capabilities for mission accomplishment. Without freedom of action in cyberspace, our ability to plan operations, deploy and sustain Marines, find and fix targets, conduct fires, and command and control forces would be severely compromised.

Ms. ROSEN. General, you named electronic warfare, cyber, and intelligence capabilities as areas requiring the most growth in response to my question about the equipment-related challenges associated with standing up an additional 12 active duty infantry battalions and growing the Marine Corps writ-large. How does the Marine Corps plan to balance equipping new units, while also continuing to modernize in a budget constrained environment?

General THOMAS. With the additional 3,000 Marines added to our end strength in the FY17 NDAA, we look to close some of our capability gaps by investing in the Information Warfare, Long Range Precision Fires, and Air Defense communities. However, the current budget constraints will not allow us to sufficiently modernize even this 185,000 person force. Additionally, these increased capabilities will not meet the Marine Corps' desired capacity for a 1:3 deployment to dwell ratio. Growing the Marine Corps past 185,000 would help mitigate dwell issues, but we risk building a hollow force if no modernization funding accompanies the growth. With fiscal limitations, we have made the conscious decision to work within the construct of 185,000 end strength (185K). However, the Marine Corps' revised POM-18 submission is insufficient to maintain either the 185K end strength or for modernizing equipment within an acceptable timeline. Therefore, we have decided to focus our modernization efforts on:

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#### QUESTIONS SUBMITTED BY MR. CARBAJAL

Mr. CARBAJAL. General Thomas, it is my understanding the Marine Corps has been working on developing body armor that provide better fit and coverage for female Marines. There were some concerns that the Marines Corps was just developing more sizes rather than developing female-specific body armor. Can you update this sub-committee on what approach the Marine Corps is taking and where we are in terms of getting these body armors to our female Marines? Why isn't the Marine Corps taking the same approach as the Army?

General THOMAS. The Marine Corps fits our female Marines with the best personal protection systems available. The Plate Carrier (PC) is the primary body armor system for the Marine Corps. The PC is 3.5lbs lighter and provides better form, fit, and function to female Marines than the Army's Female Improved Outer Tactical Vest (FIOTV). The female specific modifications made to the FIOTV are either already incorporated in the Marine Corps' PC or are in areas that were removed from the Army's PC, which provides a better fit overall for the entire population of Marines. Fit studies conducted by the Marine Corps throughout 2015 and 2016, focusing on our body armor systems, have shown that Marines and Soldiers (both female and male) prefer the Marine Corps PC to the Army's IOTV/FIOTV and their new Modular Scalable Vest (MSV)(replacing the IOTV) in form, fit, and function.

In 2013, the Marine Corps received the results of a comprehensive anthropometric survey of U.S. Marines conducted through the Natick Soldier Research, Development and Engineering Center. The survey incorporated (94) directly-measured dimensions, (39) derived dimensions and 3D scans of 1,301 male and 620 female Marines. This survey provides the large body of data needed to inform the Marine Corps' design and engineering needs and is the basis of the physical measurements used to inform the design of personnel protective and load bearing equipment, as well as clothing and individual warfighter equipment to accommodate small-statured (2nd percentile) females through large-statured (98th percentile) males. In the rare cases where a Marine falls outside of the 2nd percentile female and 98th percentile male parameters, the Marine Corps procures custom sized uniforms and equipment to ensure the Marine is properly fitted with mission essential capabilities.

The Marine Corps is currently developing the Plate Carrier, Generation III (PC Gen III). The PC Gen III is less bulky, lighter in weight, and provides a smaller overall footprint than the current PC while maintaining the same soft armor coverage and protection level. It is 1.5" shorter than the current PC, provides reduced shoulder width for a better shoulder and weapon stock weld, and has graded shoulder strap lengths to better accommodate smaller and larger Marines. PC Gen III will accommodate the 2d percentile female to 98th percentile male and will be 4.8 lbs lighter and 2" shorter than the FIOTV. The Army is currently evaluating the PC Gen III as a potential solution for their Soldier Protection System Increment II vest. With the information developed through multiple fit studies of the plate carrier systems, neither the Army nor Marine Corps plan to make female specific variants of their future body armor systems.

The Marine Corps has a standing Improved Personal Protective Equipment System (IPPES) Integrated Product Team (IPT) to develop requirements for the next generation of personal protective equipment. The U.S. Army Maneuver Center of Excellence is an active participant in the IPPES IPT, and both services continue to work hand-in-hand in our research and development efforts for individual combat and personal protective equipment—particularly with regards to female Marines/Soldiers.