HEARING TO RECEIVE TESTIMONY ON THE SHIPYARD INFRASTRUCTURE OPTIMIZATION PROGRAM

Tuesday, May 10, 2022

U.S. Senate
Subcommittees on Seapower and
Readiness and Management
Support
Committee on Armed Services
Washington, D.C.

The subcommittees met, pursuant to notice, at 2:44 p.m. in Room SD-350, Dirksen Senate Office Building, Hon. Mazie Hirono, chairman of the subcommittee, presiding.

Committee Members Present: Hirono [presiding], Kaine, Blumenthal, Peters, Cramer, Sullivan, Wicker, Fischer, Ernst, Scott, and Hawley.
OPENING STATEMENT OF HON. MAZIE HIRONO, U.S. SENATOR FROM HAWAII

Senator Hirono: This hearing will come to order. We will momentarily be joined by Senator Kaine and other members. We are, as you know, in the midst of voting.

I would like to welcome our witnesses to the hearing this afternoon: Mr. Frederick Stefany, Principal Civilian Deputy Assistant Secretary -- that is a mouthful. Welcome, Mr. Secretary -- Assistant Secretary of the Navy for Research, Development, and Acquisition; Vice Admiral William Galinis, Commander of Naval Sea Systems Command; Rear Admiral Troy McClelland, Program Executive Officer for Industrial Infrastructure; and Ms. Diana Maurer, Director of Defense Capabilities and Management for the Government Accounting Office. Thank you for your service to the nation and for the truly professional service of the men and women under your command.

I also want to recognize our ranking member, Senator Cramer. I also want to recognize Senator Kaine and Senator Sullivan, and I appreciate my colleagues' willingness to hold this Joint Readiness and Seapower hearing on this very important subject.

We stand at a crossroad today. The nation's shipyards are in dire need of modernization to ensure we can maintain the current fleet and the fleet of the future. I am
encouraged that the Navy has finally gotten serious about investing in this critical infrastructure that has been neglected for too long.

In Hawaii we are all proud of Pearl Harbor Naval Shipyards' contributions to our fleet's readiness, and I want to be sure that the yard receives the resources it needs to keep our fleet in fighting shape. I look forward to hearing from you this afternoon about how the fiscal year 2023 budget supports this plan.

The Navy has begun a once-in-a-generation program to modernize its shipyards under the Shipyard Infrastructure Optimization Program, or SIOP. This 20-year program to improve the shipyard infrastructure is an effort that has been sorely neglected for many years, and we have to get it right. We are relying on the digital twin modeling and simulation effort to develop the most efficient and productive layout for operations at the four public shipyards.

Last year, for example, we had to add $250 million to fund the dry dock at the Portsmouth Naval Shipyard due to unexpected ballooning of the estimated cost. We need to understand what steps the Navy has taken to make sure we have better cost estimates of the projects we are undertaking. This will be important as the Navy turns to the dry dock replacement at Pearl Harbor Naval Shipyard,
which is the next dry dock to be constructed and will require significant dredging and filling to extend the existing dry dock.

We also need to understand how the Navy is structuring the SIOP effort to improve the efficiency of the shipyards to deal with the ship maintenance challenges that are facing the Navy today.

SIOP is not limited to just the dry docks. It also extends to optimizing the work on the shipyards through production facilities and other improvements to misaligned configurations. And this is why I have been so focused on the warfront production facility at Pearl Harbor. This project is important to the workforce there, and I want to ensure the Navy remains committed to it. We need to be able to maintain the fleet we have if we are ever to reach the fleet size the Navy has identified as required to respond to future threats. SIOP's success is critical to that goal.

And we want to help and we would ask the Navy to consider how the program could be accelerated without impacting availability. So I look forward to hearing today how we can work together to make sure SIOP is a fully successful effort.

And now I turn to Senator Cramer for his remarks.
STATEMENT OF HON. KEVIN CRAMER, U.S. SENATOR FROM NORTH DAKOTA

Senator Cramer: Thank you, Chairwoman Hirono, as well as Chairman Kaine and Ranking Member Sullivan for agreeing to hold this hearing jointly to discuss a range of important naval shipyard issues that cross our subcommittee jurisdictions. And let us face it — it is not just the issue of the day. It is the issue of the day with regard to the future of the Navy.

As I think about our naval shipyards it is striking to me how intertwined they are with our nation's history. In other words, they are really old. Even before our independences, for example, Norfolk Naval Shipyard, near and dear to Senator Kaine's heart, of course, was first established in 1767 under the British flag as Gosport Shipyard and seized 7 years later during the Revolutionary War. There is not even a Senator that old anymore, is there?

In the 1790s, the USS Chesapeake, one of the first six U.S. Navy ships authorized and funded by Congress, was built there. Later, the first dry dock in the Western Hemisphere opened in 1833, known as Dry Dock 1, and now a historic national landmark. It is still in use today. Think about it. It is 189 years old and still used to maintain naval vessels.
Suffice it to say, our four public shipyards all have storied histories in their truly national infrastructure. Each is over 100 years old and showing its age. The poor condition of these shipyards is having a serious negative effect on fleet operations today and the bill has come due. This is not a future problem. It is here now and one we must work together to solve.

So while there is a lot to discuss, and I appreciated Chairwoman Hirono's opening comments and much of what she had to say, I plan to focus my questions on how Congress can help in terms of authorities, workforce development, and funding. On the last point, I am hopeful the bipartisan group of Senators working on the Shipyard Act, many of whom are in the room today, will be able to get it done. I look forward to the testimony of our witnesses.

Thank you, Madam Chair.

Senator Hirono: Thank you.

Now I would like to turn to Senator Kaine, the chair of the Readiness Subcommittee. Senator Kaine?
STATEMENT OF HON. TIM KAINER, U.S. SENATOR FROM VIRGINIA

Senator Kaine: Thank you, Chair Hirono. Readiness Subcommittee meetings are fun, Seapower Subcommittee meetings are fun, but this is really exciting, this joint meeting, and I want to thank the chair and I want to thank the witnesses for being here today and for your dedicated service to the country.

You have got some friendly faces around the dais when it comes to support for our Navy's shipyards, but at the same time the Navy has some significant challenges on its hands regarding the implementation of SIOP, especially the ability or inability to be on time, on budget.

There is no doubt that these are necessary investments. The condition of our shipyards, both in terms of infrastructure and workforce, given that the age of the shipyards was indicated by Senator Cramer, do require a lot of resources and support. We have to do our part here in Congress.

When we look at how the Navy has executed SIOP projects to date I have some concerns, and I also see some positives. On the concerns side, how do we ensure that the Navy can even program the average $1 billion per year in budget requests over the next 20 years? The dry dock replacement at Portsmouth -- that is the Portsmouth in Maine, not
Virginia -- was originally estimated by the Navy to cost $250 million. Then the cost doubled, and then it increased another $250 million as a result of a sole-source contract. So today my particular interest in hearing from you is how we have implemented the lessons learned from Portsmouth for the rest of the SIOP portfolio.

It is not all bad news. The Navy has invested well over the statutorily required 6 percental capital investment program since 2011. That is a real positive. The work of the GAO has never been more important than it is today, so I am glad to have Ms. Maurer here testifying again before the committee. I look forward to hearing her insights on how the Navy can better execute construction projects, modernize its capital equipment, and otherwise optimize shipyard operations.

So Madam Chair, thanks again for leading the charge on this hearing to discuss our shipyards in detail.

Senator Hirono: Senator Sullivan?
STATEMENT OF HON. DAN SULLIVAN, U.S. SENATOR FROM
ALASKA

Senator Sullivan: Yes. Thank you, Madam Chair, and I want to thank you and Senator Kaine and all my colleagues for conducting this hearing. It is a very important hearing. And to Senator Cramer's discussion of history, I actually was just talking to Senator Hirono as we walked down to the vote on the latest movie on Midway. I do not know if anyone has seen that movie but it is quite a good movie.

And it has got a scene where the shipyard, I believe that was in Hawaii, did a miraculous job of bringing the carrier, the Yorktown, back online to go fight in the Battle Midway and was decisive. So the shipyard point, about what Senator Cramer was talking about, really made history in that critical battle that was one of the most important in World War II, one of the most important battles in our nation's history. So that is how important this topic of discussion is.

As has already been noted, the average of naval shipyard facilities is over 60 years old, and the average dry dock age is approaching 100 years old, and we have seen the readiness of shipyards weaken as decisions were made to prioritize shipbuilding over ship maintenance. When initially developed, the Shipyard Infrastructure
Optimization Plan had a bill of $21 billion over 20 years. That number has already increased in the last few years, and that is the topic I hope we can discuss in detail today.

Additionally, according to the GAO, the Navy cannot currently complete all required maintenance for aircraft carriers and submarines with our existing dry dock capabilities. So how can we balance these necessary capital investments with the existing maintenance requirements? I think we find ourselves in a challenging situation as it relates to operational demands, ship maintenance, and the conditions of the fleet, not to mention the challenges in the INDOPACOM theater and a look at where China is with regard to its shipbuilding and maintenance capabilities.

Another issue that I think impacts the Joint Force is maintenance on conventionally powered ships. Delayed overhauls of surface combatants that escort nuclear aircraft carriers also impact readiness. And I believe one option in that regard is to conduct lower-level maintenance at smaller private shipyards to free more space for more complex maintenance overhauls at our larger private shipyards. I hosted the Secretary of the Navy a couple of years ago to our shipyard in Ketchikan, Alaska, which has enormous capabilities and is looking to do a lot of work for the U.S. Coast Guard. We have another shipyard in Seward, Alaska, that just completed almost $11 million worth of work on the
USNS Grasp, a Navy rescue and salvage vessel. The work was delivered on time, on budget, and received outstanding feedback.

So this is an all-hands-on-deck need, and I think there are shipyards across America, including in my state, that can participate and help out with regard to the challenges.

Thank you. I look forward to hearing our witnesses.

Senator Hirono: Thank you, Senator Sullivan, and I thank him for suggesting that we all go to see the new Midway movie, because it really highlights the importance of our public shipyards.

We will start this hearing by hearing from Secretary Stefany first. Please proceed.
STATEMENT OF FREDERICK STEFANY, PRINCIPAL CIVILIAN DEPUTY ASSISTANT SECRETARY OF THE NAVY FOR RESEARCH, DEVELOPMENT, AND ACQUISITION

Mr. Stefany: Yes, ma'am. Thank you. I will be reading a statement for all three of us from the Navy.

Chairwoman Hirono, Chairman Kaine, Ranking Members Cramer and Sullivan, distinguished members of the subcommittees, on behalf of myself, Vice Admiral Galinis, and Rear Admiral McClelland, thank you for the opportunity to appear before you today to discuss the Department of Navy's Shipyard Infrastructure and Optimization Program, better known as SIOP.

Modernized and ready shipyards are generators of fleet readiness and are the strength of our national security. We appreciate the strong support this committee, and particularly the subcommittees have shown for infrastructure optimization efforts to date. We are committed to maintaining transparency throughout the planning and execution of the Department's SIOP investments.

As mentioned, SIOP is a once-in-a-century opportunity to revitalize our nation's four public shipyards, ensuring that these critical national security facilities are properly positioned to meet current and future needs of the Navy. It is about modernizing aging facilities, equipment, and dry docks that have served our fleet for generations,
and doing that modernization without disrupting our current
maintenance that supports the readiness of today's fleet.

We also need to upgrade these facilities and equipment
to support new classes of ships, such as the Ford aircraft
carrier and the Virginia Block V submarines, while at the
same time making the shipyards more efficient and more
effective at maintaining all our ships. We need to bring
them up to modern standards and ensure they are resilient to
climate change. All of this will take years of consistent
funding, construction, and leadership at all levels.

Informed by complete Future Years Defense Program,
FYDP, the fiscal year 2023 budget includes our strongest
SIOP funding since the program was established. It includes
$1.7 billion for the program in fiscal year 2023, with a
sustained commitment of $8.3 billion across the FYDP.

In fiscal year 2023, the request will support
modernization of capital equipment and will enable advanced
planning activities and required environmental assessments.
The 2023 funds will also enable critical MilCon projects
such as the start of the replacement of Dry Dock 3 at Pearl
Harbor, Hawaii, and the continuation of multi-mission Dry
Dock 1 in Kittery, Maine, and Dry Dock 8 saltwater systems
in Portsmouth, Virginia, as well as the planning for the

Multiple Navy commands play key roles in SIOP planning
and execution. For example, the Navy Facilities Engineering Systems Command, or NAVFAC, builds and maintains the shipyards, the Naval Sea Systems Commands operates the shipyards, and the commander of the Naval Installations Commands hosts all of those activities.

To ensure disciplined oversight while maintaining uninterrupted support to the fleet, the Navy is treating SIOP as if it is a major defense acquisition program. We have established a program executive officer for industrial infrastructure late last year, we are developing an overall SIP acquisition strategy, and we are developing individual master plans with cost, schedule, and performance measurement baselines for each of the shipyards to measure our progress as we go.

We understand that for SIOP to succeed we must properly plan and execute SIOP work with impacting the shipyard's ability to execute their mission. Balancing SIOP's needs with that of the fleet and the shipyards is, and will continue to be, critical and an iterative process involving all stakeholders. We are committed to working as a team to ensure the program is executed to avoid impacting fleet operations or ship maintenance periods, and conversely, that ship maintenance availabilities do not impact downstream SIOP projects.

We believe improved SIOP governance, combined with
consistent funding, will focus and accelerate this critical long-term initiative. It will enable the Navy to sustain nuclear-powered warships we have now and the ones that we are building for the future fleet, strengthening maritime dominance in defense of our nation.

And with that we look forward to your questions. Thank you.

[The prepared statement of Mr. Stefany, Admiral Galinis, and Admiral McClelland follows:]
Senator Hirono: Thank you. I would like to hear from Ms. Maurer.
Ms. Maurer: Thank you very much. Good afternoon, Chairwoman Hirono, Chairman Kaine, Ranking Members Cramer and Sullivan, and other members and staff. It is good to be back before both subcommittees today.

Over the past 5 years we have issued a series of reports about the poor condition of infrastructure at the Navy's shipyards. The 37,000 skilled artisans who overhaul and repair carrier and submarines often perform that work in facilities that are in poor condition, using equipment that is well past its expected service life.

As was mentioned, the shipyards were built well over a century ago to repair wind- and steam-powered ships. Their layout is far from efficient to maintain nuclear-powered vessels. Moving the people, equipment, and parts necessary to repair a submarine is like trying to drive the century-old streets of Boston.

Perhaps most significantly, the Navy does not have enough dry dock capacity to meet the future maintenance needs of the fleet. In 2017, we found that the Navy lacked a comprehensive plan for addressing these significant problems. The Navy, to its credit, developed the SIOP, created a program office to manage it, and kept Navy
leadership informed of its progress. In late 2019, we took
an in-depth look at the SIOP. We thought it was a decent
first step, essentially a series of plans to improve each of
the shipyards, and at that time the Navy estimated it would
take 20 years and spend about $21 billion to implement its
planned improvements.

We found that initial cost estimate was unrealistically
low. Among other things, that $21 billion price tag did not
factor in inflation and did not include the cost to improve
underlying utilities. We recommended the Navy improve its
cost estimates to help manage the program and provide
Congress the information that you need to help make funding
decisions, and those recommendations are still open.

Fast forward to today. The Navy has refined its plan,
identified resource needs, and enhanced leadership
engagement. This provides a reasonable framework for
eventually improving shipyard infrastructure. But the
realities of the shipyards have not significantly changed
since our 2019 report.

In a report that we issued yesterday, we found that
overall facility conditions at all four shipyards remains
poor and among the lowest across the entire depot
enterprise. The average age of equipment has increased and
most is beyond its expected service life. And the backlog
of facility restoration and modernization projects has grown
to about $7 billion. Plus the Navy faces some very real
time pressures. Ford-class carriers and expanded payload
Virginia-class submarines will need dry dock capacity that
the Navy currently does not have. It remains to be seen how
the Navy will specifically address these problems. Its
proposed actions are complex and are many years away from
being fully implemented.

We have a number of concerns about SIOP implementation.
First, the Navy's estimated date for completing the
individual shipyard plans has slipped to the end of 2024.
As a result, we do not yet know the full details of what the
Navy will upgrade and optimize, how long that will take, or
what it will cost.

Second, as was mentioned, the estimated cost for the
first three dry dock improvements projects have grown from
just under $1 billion to nearly $6 billion. That does not
bode well for the future cost of the 11 other planned dry
dock projects.

Third, we are concerned that these increasing dry dock
costs could crowd out other planned improvements. Dry docks
should be a top priority but they are not the only priority.
Mr. Stefany, Admiral Galinis, and Admiral McClelland
understand these challenges and have committed to addressing
them. Maintaining that top-level support will be vital
because this effort will span many administrations and many
Congresses.

GAO will continue our independent oversight of shipyard improvements. Later this month we will start our next review, focusing on the Navy's cost estimates and schedule for SIOP projects. Our continued oversight will help inform Congress and enhance the Navy's efforts to improve its shipyards, which are vital for ensuring naval readiness.

Madam Chairwoman and Mr. Chairman, thank you for the opportunity to testify this afternoon. I look forward to your questions.

[The prepared statement of Ms. Maurer follows:]
Senator Hirono: Thank you. We will proceed to 5-minute rounds of questioning. We will start with me.

So Admiral McClelland, are you the person that is charged with overseeing SIOP?

Admiral McClelland: Yes, Senator, I am. Admiral Troy McClelland and I have been assigned as the Program Executive Officer for Industrial Infrastructure, and SIOP is in my portfolio. I will note that I work very closely with the Naval Facilities Engineering Systems Command, the construction agent for design and construction, and Naval Sea Systems Command, Senator.

Senator Hirono: But you are the point person to oversee SIOP?

Admiral McClelland: Yes, Senator, I am.

Senator Hirono: So one of the major issues relating to the modernization program is the vast difference between the cost estimates -- and I think Portsmouth is a prime example -- the difference between the estimates of what it would cost to modernize those facilities, that shipyard, and what the contract goes out for. So what is being done or has been done to make sure that as you embark on the Pearl Harbor Naval Shipyard modernization that the estimates are accurate?

Admiral McClelland: Thank you, Senator, for that question. So what I lead with is a mechanism for early
contractor engagement has been installed by the construction agent, Naval Facilities Engineering System Command, and specifically it is an acquisition strategy that allows us to have early engagement with multiple contractors so we can discuss with them means and methods, talk to them about the costs that they see, and then implement lessons learned as we are developing the program. And that has been done for the Pearl Harbor work, Senator.

Senator Hirono: Ms. Maurer, do you think that that is a lesson learned from the Portsmouth example?

Ms. Maurer: Thank you, Senator. Yeah, I would imagine and hope that the Navy has learned some lessons from what happened in Portsmouth in terms of cost growth with the dry dock.

Senator Hirono: Is your microphone on? I am having a little difficulty hearing you. Maybe you can get closer.

Ms. Maurer: Sure. Is this better?

Senator Hirono: Yes.

Ms. Maurer: Okay. So I would hope that, and it is clear from the Navy's reporting that it provided the Congress just a few weeks ago that they have listed a number of lessons learned, and one of the items that is noted in their report is that they are learning some lessons from the cost growth from the Portsmouth project as well as others. That is something we will be looking into in much more depth
when we start our new review, digging into cost estimates and schedule estimates for some of the larger SIOP projects.

I would note, as well, that there has been pretty significant cost growth for the Pearl Harbor project as well, which is obviously a critical capability that is required, but there has been significant cost growth in that project as well as increase in the overall scope.

Senator Hirono: So Secretary Stefany, in view of the challenges that you have had in making sure that our cost estimates are accurate, and you note that there is, in the 2023 budget, $1.7 billion, and then going forward what I think I heard you say $8.3 billion for the SIOP project. Do you think that is going to be enough, in view of the challenges that you faced in accurate cost estimates?

Mr. Stefany: So, ma'am, one of the other lessons that we wanted to bring up was getting the design much more mature before we actually put out a formal estimate. That was another lesson we learned from Portsmouth and Pearl as well.

So I feel like the big projects that are in the next 5 years, we have the designs mature enough that we have confidence that there is not going to be continued growth on those projects. Do we have enough funding across the FYDP to do all the work that we have planned for those 5 years?

Yes, ma'am. I think later on we will talk about things
maybe to accelerate or move things from outside the FYDP in.

But yes, in the 5 years for the FYDP we have enough funding to do the work we need to do in those years.

Senator Hirono: I think that we are really going to be very much focused on making sure that there is enough funding to proceed with SIOP because the four public shipyards are counting on us to be able to move forward.

And as mentioned, I have been very focused on the waterfront facility. I still do not quite understand why that production facility, which is going to enable the Pearl Harbor Navy Shipyard workers to be able to be more efficient in the work that they do, I still do not understand why the facility part of the modernization is not happening at the same time as the dry dock building. Care to comment, Mr. Secretary, very briefly? I am running out of time.

Mr. Stefany: Quickly, ma'am, yes. In a previous budget cycle we had to make a hard choice to push the design and the planning of the waterfront facility off because of budget constraints in a previous cycle. Now we are looking to see if we can bring it back. So previous decisions have pushed the facility out 2 years beyond the dry dock itself, but we are looking, as part of the next budget cycle, can we bring things forward and try to line them up. Because ideally, we would like to have them lined up, in a perfect world, ma'am.
Senator Hirono: Which means -- just one more thing, then -- as Ms. Maurer testified, a lot of the equipment is also beyond the age of when they should be replaced, and if we are not going to have the waterfront facility next to or near where the dry dock is, where they equipment will be necessary, we have got to make sure that the equipment that they are using is up to par.

I would like to recognize Senator Cramer.

Senator Cramer: Thank you, Chairwoman, and thanks again to all of you. So sticking with the lessons learned theme a little bit while looking forward, let me start with you, Secretary Stefany. Do you have any advice for us, in terms of policy, streamlining processes, authorizations, obviously funding, but what have we learned that we can be helpful with in making this process a little more efficient and effective?

Mr. Stefany: I will start with a couple, Senator, and see if Admiral McClelland has a couple more in the details.

Senator Cramer: That would be great.

Mr. Stefany: Authority which we have for these mega-projects to fund them incrementally over time, which you have provided us in the past, I think continuing that for these large projects and potentially looking at maybe a multi-year type procurement like we do in the shipbuilding world, where we can see if we can get the most efficiency by
building a set of projects together in a multi-year contract, a single, large contract I think are two authorities that might be worth looking at to give more flexibility and negotiating space to our team.

    And I will ask Admiral McClelland if he has any more specific ones.

Admiral McClelland: Thank you, Mr. Stefany. So I would only mention maybe and emphasize what Mr. Stefany said. Really, the multi-year work relative to repair and maintenance is something we are looking very closely at. These are complex projects, and I sometimes think repair and maintenance could give the impression of less complexity. But really, the multi-year relative to, say, a dry dock that we are repairing and the way that relates to an operational availability, and a current operational availability, is absolutely critical.

    And so our ability to have a flexible approach, multi-year funding certainly is going to help us execute over time, Senator.

Senator Cramer: Thank you for those. Along with all of that, of course, there is another challenge that we are hearing from everybody, I mean, seasonal, farm, hospitality workers to surgeons and very sophisticated technology workers, and everything in between, we have a workforce challenge in our country right now, particularly in the
private sector.

I presume you are experiencing the same thing or seeing the same thing. Do you have any thoughts, first of all, maybe what you are trying to do to recruit and retain employees at the yards but also, again, if there is anything that you think we could be doing.

Mr. Stefany: I think Admiral Galinis would be best to address the workforce at the shipyards.

Admiral Galinis: Yeah, Senator, that is a great question. Thanks very much. You know, we are seeing the same thing in the public yards as well. Our attrition rates are higher than what we had planned. Our recruitment rates are lower than what we had planned. And what we are doing is we offer some pretty good training as we bring people into the yards through our apprentice programs, so that is one real positive.

The other thing that we are looking at right now is, you know, we are actually looking at wages. For our entry-level positions -- and many times we are competing at a wage that is less than what some businesses in the local area, for example, whether it be Amazon or even a Starbucks, for example. Typically the starting wage for some of our mechanics is in that $14- to $15-an hour, so right about the minimum wage level. And what we are finding is in some areas where our shipyards are located, Portsmouth and Puget
Sound, in particular, the going wage is actually higher than that. So we are working through Navy leadership and with the human resources organizations across the Department of Defense to look at that wage grade that we are paying our folks.

Senator Cramer: I commend you on that, and if we can be helpful we ought to be. Clearly when you are competing for talent with Starbucks in the Seattle area it is a tough competitor, but we ought to have the best that we can get, and we want to certainly help you be competitive.

I will just bring up, real quickly, there are 18 co-sponsors, and a lot of from this committee, of the Shipyard Act, infrastructure and some additional resources. Maybe you could just generally comment on the Shipyard Act, what you know about it, and how helpful it maybe could be. Mr. Secretary?

Mr. Stefany: Yes, sir. The Navy supports that act, the idea of having a commitment of all the funding up front with a time -- not a time limit, you know, 1 year to spend it, but having a period of time to spend the funding most efficiently. And the knowledge that all, in this case, the total dollar value was there and could be worked with industry most effectively, is a best practice. So we would absolutely support that, sir.

Senator Cramer: It is always tough to apply the time
value of money in appropriations processes by the government but we need to get better at it. Thank you.

Thank you, Madam Chair.

Senator Hirono: Senator Kaine.

Senator Kaine: Thank you, Chair Hirono. Ms. Maurer, I have a couple of questions for you. In your prepared testimony you talk about the GAO finding that the average condition of facilities at the four public shipyards improved at three of the four from 2016 to 2020. I would be remiss if I did not notice that the one that did not improve, and actually got worse, was the Norfolk Naval Shipyard. Explain the GAO's finding in that regard.

Ms. Maurer: Sure. Thank you, Senator. So we were reporting and summarizing information that is collected at all the public shipyards by the Navy, and you are absolutely right, Norfolk was one of the four where conditions had actually worsened a bit over the course of a 3-year period. Some of that was no doubt related to just the sheer age of the facility, both in terms of the facilities as well as some of the equipment. Some of it may have been related to a change in some of the methodologies that the Navy is using to assess facility conditions. That may have been part of it as well.

Big picture, all four of the public shipyards are still rated as poor in terms of overall facility conditions, and
we remain gravely concerned about that.

Senator Kaine: The GAO issued a report yesterday, and your team's work found that applying leading practices and more transparent reporting could help reduce risks posed by the $1.8 billion maintenance backlog. Can you talk a little bit about the GAO's recommendations to reduce risk associated with that backlog?

Ms. Maurer: Sure. Thank you. Yes. So we did issue a report yesterday. We were focused on the amount of backlog which is the uncompleted depot level maintenance across the fleet. Nearly all of that $1.8 billion was in the surface fleet. Most of that was in some of the ships that the Navy has identified either previously or currently for decommissioning.

We made recommendations to encourage the Navy to be more transparent about how it collected and reported the information on backlog, both internally as well as to the Congress. We also felt that the Navy could do a better job of applying best practices, of tracking that growth in backlog and assessing its progress and whittling it down over the years.

Senator Kaine: One more question for you, Ms. Maurer. In the prepared testimony you said that the GAO had offered nine recommendations and the Navy has implemented five of them to date. Can you talk a little bit about why the other
four have not yet been implemented?

Ms. Maurer: Sure. So definitely want to give Navy credit for implementing the five, and those are largely around the overall governance around the SIOP effort, so that is a good-news story.

The four that are still open, three are related to cost estimation, and that has been, frankly, one of the major problems with SIOP from day one. The cost estimates have not been on point and they have been, frankly, wildly off point from the initial plan that was developed in 2018.

We are encouraged by what we are hearing today, that the Navy is taking better steps to get their arms around that problem, but we are going to continue to encourage them to fully implement the three recommendations we have on cost estimation. The other remaining open recommendation is around assessing and tracking overall progress with the SIOP.

Senator Kaine: Thank you. To the Navy witnesses, talk to us a little bit about what you are doing — well, actually, I am going to skip. I think that question has been asked by another colleague.

To the Navy witnesses let me ask one thing about pandemic. Everything everybody has to do has had to change because of COVID, and shipbuilding and the operation of your enterprise along with it, and we are not out of it yet. I
think we are seeing improvement but we are not out of it yet. What pandemic-related impacts have you observed as it relates to shipyard operations, workforce issue, and supply chain-related challenges?

Admiral Galinis: Yes, Senator, thanks for that question. I will take that one. We have seen some impacts across the shipyards. I will tell you due really to the men and women in our shipyards and the leadership in those shipyards we kept every shipyard open every day during the pandemic, and they really did a tremendous job.

That being said, there was impact as the pandemic kind of ebbed and flowed across the country. We were able to mitigate that to some extent by activating our reserve force that we have in each one of the shipyards. That played some tremendous benefits. So we activated the reserve force for a period of about 9 months or so, really through the worst stages of the pandemic, and that really helped us mitigate that.

I would tell you right now I think we are at a stable work environment. We are seeing probably almost near pre-pandemic levels in terms of the workforce on site every day inside the shipyards. Where we are starting to see some of the impacts is in the supply chain, I think, and that has been discussed in several different forms, but that is where our biggest impact is today, sir.
Senator Kaine: Thank you. And as I hand back to the chair, as I have spent time in shipyards and ship repair facilities in Virginia I sort of just ventured a compliment, how well you are dealing with pandemic. It has got to be hard to rethink everything. And one of the ship repairers reminded me, you have got to remember we are an industry that thinks about safety first. Not every office puts safety at the beginning, the first briefing of every day, and they said this is an industry that does it, and so it was maybe easier for us than others to come up with the right protocols to continue to do the nation's work and to do it safely. So I applaud our shipbuilders and ship repairers in the Navy and our industrial partners for that.

Madam Chair, I yield back.

Senator Hirono: Senator Sullivan.

Senator Sullivan: Thank you, Madam Chair. I want to go back to my Yorktown historical moment. So that was a ship that was severely damaged in battle and then came to Hawaii, I believe, and was very rapidly repaired and then participated, decisively, in the Battle of Midway.

Admiral Galinis and Ms. Mauer, a June 2021 GAO report on the Navy's ability to repair battle-damaged ships revealed alarming shortcomings. So I want to know how we are addressing this contingency. Let us assume we get into a serious naval battle with the Chinese, led by the Chinese
Communist Party. What is our capability to, for example, repair a battle-damaged aircraft carrier or a battle-damaged submarine? My understanding, from reading the GAO report, is that those ships would have to go back to the continental United States for repair. Is that true, and are we trying to address many of the shortcomings revealed in the 2021 report?

Admiral, why don't we hear from you first and then Ms. Mauer on this question.

Admiral Galinis: Yes, sir. That is a good question. I mean, let me just, for the committee, right up front, I would tell you I feel like we are challenged in that area, and that is something our team is working on closely. We have conducted a number of different, I will say, exercises, both tabletop exercises as well as real-life exercises on battle damage repair.

And I will give you just a couple of examples. The Bonhomme Richard, I think everybody here knows the story of that. We were able to, as we were bringing her around and into the ship dismantling yard on the Gulf Coast there we conducted a number of exercises where we actually sent teams of Navy repair experts onto that ship to go through and conduct battle damage assessments and some rudimentary repairs to really start to exercise some of that capability.

For some of our normal repairs, and I will use the USS
Chancellorsville, which right now is in dock out in Yokosuka, Japan, where we are replacing a shaft out there, looking at that and thinking about that differently. The initial estimate that came in to replace that shaft was in the range of 140 to 150 days. As we kind of thought our way through that, you know, we got that down to 90 days to 100 days or so, just by changing our processing and thinking about things different.

So we are exercising that type of thought process into some of our repair, sir, but I will tell you we have still got some work to do.

Senator Sullivan: But is it true right now that at least for a nuclear aircraft carrier or submarine that is battle damaged the only place for it to be repaired would be a shipyard in the continental United States?

Admiral Galinis: We could do some of that work in Yokosuka, Senator. We have got docking facilities and certainly a full range of ship repair capability in Yokosuka. Our major repair facilities, yes sir, are back here in the United States, particularly up in Puget, on the West Coast.

Senator Sullivan: So, Ms. Maurer, do you think that the rather alarming shortcomings revealed in the 2021 GAO report on this topic have been addressed or are they still pretty glaring? And I am talking about the topic of battle-
damaged ship repair, quickly, like we did with the Yorktown.

Ms. Maurer: Thank you, Senator. I think the Navy continues to be challenged to do its regularly scheduled maintenance. We have done reviews that showed that competing depot-level maintenance continues to be significantly delayed far too often. In our estimation they would be significantly challenged to repair battle-damaged ships as well.

On the encouraging side, though, we have seen increased Navy attention and focus on the recommendations we made in our report, which were broadly speaking, to bring some coherence and central leadership and focus to the issue of battle damage assessment and battle damage repair. That has happened since our report so we are encouraged by that. But we are going to continue to watch this very, very closely.

You know, you used the Yorktown example. Obviously, the ships that the Navy is using today are much more technologically sophisticated than the Yorktown so it creates an even more substantial and significant battle damage repair challenge for the Navy.

Senator Sullivan: Great. Thank you.

Senator Hirono: Senator Scott.

Senator Scott: Thank you, Chair.

First of all, I thank all of you for being here. Mr. Stefany and Admiral McClelland, thank you for all your hard
work with regard to shipyards. Do you think we have enough shipyards? Are they the right size, adequately equipped? Do you think we have the right labor force, and are we where we need them?

Mr. Stefany: Thank you, Senator. I will start with the nuclear base, and I would say yes, the four nuclear shipyards we have, as augmented by our two private shipyards, are able to do nuclear repair work. Newport News and Electric Boat I think are sufficient. The SIOP improvements, efficiencies we are going to get from SIOP as well as some of the productivity improvements to our Naval Sustainment System will provide the capacity among those six, the four public shipyards and the two private, I believe, to meet the demand going forward.

On the surface ship side, the private shipyards, again, that is an industrial base that looks is more, but I believe again we have the right number of private shipyards for the surface ship side as well, sir.

Senator Scott: How about the labor force?

Mr. Stefany: Labor force I think we are tapping out in each of those regions. And so we have actually started a couple of pilot projects with the Department of Labor, looking at bringing skilled workers from other parts of the country into the area where our shipyards are. Because I think each shipyard has a really good training program
locally but it is not enough to support the shipyards in those areas. And I can certainly give you a do-back on areas where we are working for developing other forces around the country.

Senator Scott: Admiral McClellan, do you want to add anything?

Admiral McClelland: Yes, sir. I would only mention that of course we are considering the future capability that is needed for new classes as we are working on the capacity as well, and it is really all three of the efforts in SIOP that help us relative to the capability and capacity, and that is the new dry dock, of course, as well as repaired and restored dry docks, as well as recapitalization, new and restored buildings, and then the equipment. I think it was mentioned the equipment and upgrading the equipment is vital for the ultimate capacity of the public shipyard. Sir, all of those are being considered in SIOP and thought through accordingly, Senator. Thank you for the question.

Senator Scott: Thanks. As I understand it, Communist China is producing about half of all ships built globally. If our number one adversary has that kind of market control, does the United States and our democratic allies facing long-term risks to national security and merchant shipping? If each of you could sort of answer that.

Admiral Galinis: Yes, sir. You know, from a
shipbuilding capacity perspective, you know, predominantly the shipbuilding done here in the United States is military vessels, both on the nuclear side as well as the surface side. And we have got some good capacity in that area, down on the Gulf Coast in particular, Newport News and a number of other places, and Virginia, up in the Northeast as well. So we have got good capacity, surely not near what our competitors have, particularly China. But, you know, the capacity we have, I think, is fully utilized right now, utilized well.

Mr. Stefany: I would like to offer that the other competitor companies that you mentioned, Senator, have a strong commercial shipbuilding that then feeds their military. And so anything we can do to help expand U.S. shipbuilding would be something that we would certainly look favorably upon, to help our military shipbuilding.

Senator Scott: Anybody else?

Admiral McClelland: Sir, and in SIOP the four public shipyards is, of course, focused on the availabilities and the depot-level maintenance. And so I think that works hand-in-hand as we improve our efficacy relative to the operational availability in SIOP in conjunction with the process improvements. I think that will then help overall from a fleet availability, sir.

Senator Scott: Ms. Maurer?
Ms. Maurer: Thank you, Senator. From the GAO perspective, some of our work has seen some of the tradeoffs that need to be made between new ship construction and resources going towards maintaining ships. Sometimes those tradeoffs need to be made. We already talked a little bit about the workforce challenges. I think that is a significant constraint as well. We issued a report about 3, 4 years ago that flagged workforce challenges facing the entire depot enterprise, not just the public shipyards. That continues to be a challenge and an even more significant one. It is certainly an issue that would need to be addressed, on both the private sector as well as the public sector side of the house.

Senator Scott: Thank you. Thank you, Chair.

Senator Hirono: Senator Hawley.

Senator Hawley: Thank you, Madam Chair. Thanks to all the witnesses for being here.

Mr. Stefany, if I could just start with you. A few weeks ago Admiral Conn testified to the committee, and you were here for this, that the first and second profiles in the April shipbuilding report did not meet or support the operational requirements for denying a Chinese assault on Taiwan. Can you help me understand why the Navy would include two shipbuilding profiles in the plans that do not support the pacing scenario and the pacing theater?
Mr. Stefany: Yes, sir, Senator. I believe the goal of the plan was to provide options, different ranges of options, to you and to the rest of the Department. One option clearly is if we had a fiscally constrained approach, what would be the best Navy we could have with that fiscally constrained approach, as was mentioned by Admiral Conn. That is a very high-risk approach so we also then wanted to have the un-fiscally constrained approach. So you saw a range there for levels of risk to meet the threat.

Senator Hawley: So let me ask you this. How does the SIOPs report that third profile in the plan, the one that actually will allow us to meet the pacing challenge and the pacing theater, Profile 3, I think it is.

Mr. Stefany: Yeah, Profile 3, as you look at the ships that we would build in that profile compared to the capacity that we are creating through the SIOP program, that those match up, that as we look further out into the out years, in the '30s and the '40s, the SIOP will enable us to be able to maintain that size fleet.

Senator Hawley: Okay, good. So the SIOP does support that third profile.

Mr. Stefany: Yes, sir, because, frankly, in the submarine and in the aircraft carrier world, the profiles are not that different, and that small delta the SIOP will support. Yes, sir.
Senator Hawley: Great. Good. Tell me this. Is it accurate, Mr. Stefany, that 20 percent of the Navy's fast attack submarines are both behind schedule on maintenance and have also lost critical dive certifications? Is that right?

Mr. Stefany: Sir, I would not know the exact number here in front of me. I would have to take that for the record, unless one of my other witnesses know that number.

Senator Hawley: Does anybody else know?

Admiral Galinis: No. I would have to look at that to get those numbers.

Admiral McClelland: No, sir. I do not know.

Senator Hawley: Let me ask you this then, Mr. Stefany. How does the Navy plan to overcome the current maintenance and certification backlogs? Go ahead, Admiral.

Admiral Galinis: Yes. So there are three areas that we are working on. One is the SIOP piece, with is a recapitalization of the yards that we are talking about today. The second area is how we operate the shipyards, which is through the Naval Sustainment System for the shipyards, that Secretary Stefany talked about. That really gets into the processes, so that is how we plan the availabilities, how we execute the availabilities, how we get material into the yards, and really just kind of improving those processes. And I tell you, we have got some
challenges in that area.

And then the third part really gets to our workforce piece and how we train the workforce. And I talked to you a couple of times about some of the training programs that we have, bringing people in. I will tell you, you know, one of the things that we are seeing is as we hire folks, more of a challenge in bringing people into the yards that have some level of mechanical experience. By this I mean at the journeyman or even the apprentice level. We are finding that more of the folks are coming in really with little skills and we are having to put them through the entire training program, and that is something we have continued to work through over the last couple of years.

Back on the Naval Sustainment System piece, just a lot of work going in there. Think about the complexity of overhauling a nuclear-powered aircraft carrier or a nuclear submarine. You know, getting the planning right up front, getting the planning done right up front is key to that. And so a lot of focus on that.

Materiel procurement, especially on a Virginia class, has got to improve, and then just basic day-to-day execution inside the yards.

Senator Hawley: So, Admiral, do you have now the manpower and dry docks available to address the current maintenance backlog?
Admiral Galinis: I do feel like we have the manpower available. We have got about 37,000 folks inside our four shipyards. That is enough manpower. We need to improve our productive capacity inside those yards through the three things I just talked about.

Senator Hawley: Okay. Fair enough. I am just wondering if we are having this much trouble right now servicing the current submarine force how are we going to maintain the force that the Navy hopes to acquire in the coming years?

Admiral Galinis: So again, improving that productive capacity. I think SIOP brings a lot of that. The other thing of part of the processes we use and how we manage the shipyards is looking for opportunities to outsource some of this work to commercial industry, particularly at the component level. I think there are more opportunities to do that, that would then free up some of the mechanics inside the shipyard to get after what we really need them to do, working on the vessels on the waterfront there.

Senator Hawley: Great. Thanks to all the witnesses.

Senator Hirono: Thank you. I am going to take a second round of questions, and actually it is a follow-up to Senator Hawley's questions about the certification backlog.

So that means that we are having some challenging in making
sure that we are repairing and making ready our current ships. I am not talking about the new dry dock that has to be built, et cetera.

Admiral Galinis, you mentioned that these are processes and we have workforce issues, et cetera. So are there specific things you are doing to address the certification backlog problems, specific things you are doing?

      Admiral Galinis: Yes. Specifically inside the shipyards. So I talked about the number of areas that we are working on. So on the production workforce, for example, waterfront operations, how we manage work day-to-day. So, you know, over a shift, over a week, over a month are we getting the work completed that we have planned? And we are finding that in all areas we are not doing that.

      And so when you start to dig into that, why is that not happening? Well, the mechanics do not have the right engineering paper. They may not have the right materials. In some cases, you know, we talked about the industrial plan equipment. Okay, we may not have that fully operational. That slows down work.

      So there are issues in each one of these areas that we have got to get after. And there is lot of that that, frankly, is under my control to go fix, and we are doing that. We are working Admiral McClellan through the SIOP program. We are getting out the industrial plan equipment.
I will tell you another area is the information technology. We have not rally talked too much about that. That continues to be a challenge inside the shipyards. We have gotten some tremendous help from Navy leadership over the last couple of months to upgrade some of the computers and the networks going to the shipyards.

So those are the things that we are getting after today to improve the productive capacity inside our shipyards.

Senator Hirono: So in determining how to enable the workers to be more efficient in the work do you also question the workers? Do you get their input, and od they see that you are making changes? And some of the changes may be very simple such as locating the equipment closer to where the repair work is being done. So are you -- I have to assume that you listen to them.

Admiral Galinis: We absolutely are, ma'am. So a couple of ways that we are doing that. You know, through the process that we have right now -- and you are familiar with poll surveys, right? So we target the workforce for specific things in terms of where do they see the barriers? Where do they see the roadblocks? You know, leadership within my organization, and me personally, you know, getting into the shipyards, down to the waterfront, and sitting down in, I will say, small groups of mechanics and supervisors, to just kind of have a discussion, talk about what this
Naval Sustainment System shipyard really, what we are trying to get after, and does it really match with some of the challenges that they are seeing day-to-day in the work that they are doing? In some cases we are seeing that close lash-up. In other cases we are not.

The other piece that you mentioned I think really is the ownership, and we are starting to really see, at the trade level down at the waterfront the supervisors really starting to embrace some of the improvement initiatives that we are putting in place. And that, frankly, is where it really needs to start to sustain what we are doing.

Senator Hirono: I think that is really important. I visited our Pearl Harbor Naval Shipyard a number of times and I know it means a lot to them to be listened to and to have the changes made that will enable them to meet their deadlines.

Ms. Maurer, I am looking at your 2017 GAO recommendations and there were a number of recommendations that were met. But there were a bunch of these that have not been met, such as include metrics for assessing progress toward meeting each of its SIOP goals. It is indicated that that has not been met. Is that accurate?

Ms. Maurer: Yes, that is correct, Senator.

Senator Hirono: Do they have a way to go on that point?
Ms. Maurer: They --

Senator Hirono: How about include all -- I am sorry.

Ms. Maurer: They still have some work there, yes.

Senator Hirono: Include all costs such as inflation program, office activities, utilities, roads, environmental remediation when developing a cost estimate. Has that been done?

Ms. Maurer: That has not been done completely, no.

Senator Hirono: What about using cost estimate best practices and developing a second cost estimate?

Ms. Maurer: That has not been completed yet either.

Senator Hirono: And obtain an independent cost estimate of the naval shipyard's program prior to the start of project prioritization.

Ms. Maurer: That is something that the Navy says they have efforts underway to address, and we will be assessing that as part of our new work that starts later this month.

Senator Hirono: I think they are doing that with regard to the dry dock that is being built at Pearl Harbor Naval Shipyard.

Thank you. The other questions I have I will just submit for the record.

Senator Kaine, do you have a second round?

Senator Kaine: Madam Chair, I just have a couple, but if you want to go vote I can handle it from here if you want
Senator Hirono: Please go ahead.

Senator Kaine: Actually, you know what? I am going to submit my second round for the record.

Senator Hirono: Senator Hawley, did you have a second round?

Senator Hawley: I just have one or two questions, briefly, Madam Chair, just on the AUKUS deal. I think this is for you, Mr. Stefany, but anybody. As part of that deal we pledged industrial support to our allies, haven't we?

Mr. Stefany: Yes, Senator. As part of the AUKUS deal we will support them out and what exactly we do versus the UK versus Australia is to be determined. But yes, we will be supporting that.

Senator Hawley: Okay. So here is where I am going with this. Back to this maintenance issue, given how tight we are on maintenance support for our own ships and subs currently, how are we going to meet our pledges under the AUKUS deal and do what we need to do to clear our own maintenance backlog?

Mr. Stefany: Yes, sir. The AUKUS effort, frankly, is 15, 20 years out before those requirements come into fruition, and by then that is the period of time that we expect that the SIOP-type efforts will have matured for ourselves and provide some capacity.
Senator Hawley: Okay. So in other words, I mean, being able to execute on the AUKUS deal, as to these particular terms, depends on us really knuckling down here and in this next window clearing this backlog and getting up to speed. Is that fair to say?

Mr. Stefany: Both of the private and public yards, yes, sir.

Senator Hawley: Yeah. Okay. Thank you, Madam Chair.

Senator Hirono: I just want to note that when I asked series of questions as to whether the GAO's recommendation had been met I would ask the Navy witnesses but particular Admiral McClellan, who is overseeing SIOP, that you will meet those recommendations, unless you disagree with the recommendations. So I should ask, do you agree with these recommendations that you have not met as yet?

Admiral McClellan: So, Senator, certainly from a lessons-learned perspective many of the item GAO notes are also in our lessons learned, and active plans are being developed and put in place, and in some instances we will immediately see some implementation relative to, as you mentioned, Senator, the work out at Pearl Harbor, for example, dry dock and other places. So very much are actively leaning forward on the recommendations and creating the processes to implement those recommendations, Senator, and look forward to doing so.
Senator Hirono: So as we continue to focus on SIOP I, for one, would like to see the Navy meet these other recommendations of GAO.

And with that I am going to leave the record open for 5 days for additional questions from members, and with that this hearing is closed. Thank you very much.

[Whereupon, at 3:47 p.m., the hearing were adjourned.]