



APRIL 5, 2016

STATE OF PUBLIC SHIPYARDS TO MEET THE CURRENT MISSION NEEDS AND INVESTMENT STRATEGIES TO SUPPORT FUTURE NATIONAL SECURITY REQUIREMENTS

UNITED STATES SENATE, COMMITTEE ON ARMED SERVICES

SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT

ONE HUNDRED FOURTEENTH CONGRESS, SECOND SESSION

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Vice Admiral William H. Hilarides, USN [\[view pdf\]](#)
Commander, United States Naval Sea Systems Command

Vice Admiral Dixon R. Smith, USN [\[view pdf\]](#)
Commander, United States Navy Installations Command

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STATEMENT OF

VICE ADMIRAL WILLIAM H. HILARIDES
COMMANDER NAVAL SEA SYSTEMS COMMAND
VICE ADMIRAL DIXON R. SMITH
COMMANDER, NAVY INSTALLATIONS COMMAND
ON NAVAL SHIPYARDS

BEFORE THE
SENATE COMMITTEE ON ARMED SERVICES
SUBCOMMITTEE ON
READINESS AND MANAGEMENT SUPPORT

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Chairman Ayotte, Senator Kaine, and distinguished members of the Senate Armed Services Subcommittee on Readiness and Management Support, we appreciate the opportunity to testify about the Naval Shipyards' role in meeting Navy operational requirements. We are here representing the more than 33,000 hardworking, dedicated and patriotic professionals—both civilian and military—who work in the Naval Shipyards. Our Naval Shipyards have been challenged by an increasing workload and the effects of hiring freezes and overtime restrictions that have contributed to some ships being delivered late out of their availabilities. To address this workload-to-workforce imbalance, we increased the size of our workforce and enhanced training and apprenticeship programs to improve productive capacity. Further, we continue to recapitalize our infrastructure to improve workflow and better align the shipyard layout and tooling. The men and women, military and civilian, who work at our Naval Shipyards are right now undertaking these initiatives and tackling these challenges every day.

Overview

The four public-sector Naval Shipyards (Portsmouth, Norfolk, Puget Sound, and Pearl Harbor) are wholly government-owned. As the owner of the Naval Shipyards, the Fleets provide the funding and task the Naval Sea Systems Command to oversee their operation. The Naval Shipyards provide the essential organic capability to perform depot- and intermediate-level maintenance, modernization, refueling, emergency repair work, and inactivations on nuclear-powered aircraft carriers and submarines. They also maintain the specific core capabilities to support conventional surface ship maintenance.

Our Naval Shipyards must operate at peak efficiency. Accomplishing this requires correctly predicting the ship maintenance required; optimizing schedules with operational requirements; properly sizing the workforce; embedding the correct critical skillsets in the workforce; and enabling our people by equipping them with the right tools, facilities, and processes.

While work is primarily performed onsite at the Naval Shipyards, significant depot work is done off-station in Yokosuka, Japan, and San Diego, California. Maintenance and repairs are also performed underway and around the globe in Guam, Diego Garcia, and elsewhere. Our workforce will go wherever and whenever needed to execute repair work. On any given day, hundreds of Naval Shipyard workers are on travel to conduct critical maintenance on Navy ships.

Workload-to-Workforce Imbalance

The Navy had an increased workload and a less experienced workforce over the past three years. In fiscal year 2015, the Naval Shipyards executed 4.9 million mandays of workload which is 200,000 more mandays than fiscal year 2014 and well below the Navy's projected peak workload of 5.4 million mandays in fiscal year 2018. This steady rise has been caused in part by SSBN refueling, 688 major overhauls, introduction of the Virginia class as well as evolving Fleet composition, high operational tempo, and extended deployments.

Looking back over the past three years, hiring freezes and overtime restrictions had a significant impact on the Naval Shipyards. Additionally, we have seen a surge in retirements over the last several years and a rise in early career attrition. Combining retirements and attrition,

our shipyards lost 2,125 people in fiscal year 2013, 1,931 employees in fiscal year 2014 with 2,235 in fiscal year 2015 and 911 to date this year.

To address productive capacity, we are focusing our efforts on four specific areas:

- One, hiring to meet increased workload demand and higher-than-average retirement rates;
- Two, developing our new workforce through mentoring, trade and skill training, and leadership/management training;
- Three, recapitalizing and modernizing the Naval Shipyards' infrastructure; and
- Four, implementing modern solutions to information technology systems to address cybersecurity vulnerabilities and improve productivity.

Hiring

In fiscal year 2013, the Naval Shipyards staffing levels were about 29,000 full-time employees. With the impact of budgetary constraints, a hiring freeze, and increased workload, accelerated hiring has been necessary. We continue to aggressively hire apprentices and experienced workers to support the increased workload. We are on track to meet our 2016 goal of an average of 33,500 direct and indirect full time employees by the end of the year. These new workers need extensive training, and we continue to invest in the required workforce training and development. In conjunction with increased hiring to meet workload demands, we have increased contracting with the private sector and deferred some non-critical work.

Apprenticeship Programs

The Naval Shipyard Apprenticeship Programs are some of the best in the country and have been recognized by the U.S. Department of Labor as model programs. These programs seek to produce highly skilled trades people who are capable of executing the Naval Shipyards' technical and complex maintenance needs. They are a critical investment in workforce development that builds a quality workforce for the ship repair industry today, and lays the foundation of a longer term investment in our future leaders. In fiscal year 2015, we inducted nearly 1,100 apprentices, will bring in nearly 1,000 new apprentices in fiscal year 2016, and plan to add nearly 900 more in fiscal year 2017.

Productivity Program Initiatives

The Naval Shipyards continue to invest in the following major productivity program initiatives:

- Continuous Training and Development, which uses practical hands-on training with learning centers and mock-ups to accelerate production-worker skill and proficiency development. These methods create an environment where it is safe to fail—meaning that the workers have a simulated environment where it is okay to make mistakes and to learn from them. The training method is dynamic in that it is given to new employees, mid-level mechanics, and journey-level workers for critical skills proficiency and qualifications to accelerate and leverage knowledge transfer from subject matter experts to our newly hired workforce. Continuous Training and Development improves our ability to get work right the first time.

- Industrial Processes Corporate Communities of Practice bring multi-disciplined, multi-yard groups together and create opportunities to stimulate innovation, promulgate best practices, and significantly expand knowledge sharing to improve performance. These communities have the involvement of engineering and production organizations that are aligned to similar work products and processes.
- Continuous Process Improvement efforts are focused on Lean Principles, which maps processes to identify and eliminate waste in order to improve throughput and cycle time to drive efficiency. In addition, a Cumbersome Work Practice Task Force is helping the Naval Shipyards challenge requirements to maximize efficiency and effectiveness while minimizing cost. New technology insertion is used to keep abreast of technology changes and evaluate them for incorporation into Naval Shipyard industrial processes for improvements in safety, quality, and cost performance.
- Integrated Work Teams responsible for planning and executing work with the use of Lean principles are being implemented to improve work coordination and efficiency. Project management specifies what work is required to be accomplished and when, and the integrated work teams determine who does the work and how it is accomplished. Efficiencies are created as the work teams perform the same type of work across multiple projects or availabilities. By creating stable work teams, the execution of work is improved and waste is eliminated.

Infrastructure

Naval Sea Systems Command and Commander Navy Installations Command continue to prioritize the sustainment and recapitalization of the Naval Shipyards' infrastructure.

Investments are focused on mission-critical facilities in the Controlled Industrial Area, which primarily include production shops, piers, wharfs, dry-docks, and supporting utility systems.

Other investments maintain and upgrade industrial plant equipment capabilities that are integral to performing ship and submarine maintenance. Naval Sea Systems Command is also focused on the Naval Shipyards' information technology systems. These systems are outdated and a challenge to support as we push to meet new cybersecurity standards. To address this issue, Naval Sea Systems Command is implementing solutions to the maintenance information systems which focus on improving workforce productivity and cybersecurity vulnerabilities. Overall, facility investments are prioritized to address the most critical capability, safety, and productivity deficiencies associated with mission-critical facilities.

In concert with Commander, Navy Installations Command, Naval Sea Systems Command is prioritizing military construction projects and continues to invest in Naval Shipyard facilities sustainment, restoration, and modernization at a level above the Navy facility average. The fiscal year 2017 military construction funds of \$58M will recapitalize infrastructure in the Naval Shipyards by improving utility system resiliency and reliability, aircraft carrier and ballistic missile submarine maintenance facility capabilities and efficiencies, and production shops. Restoration and modernization projects will mitigate seismic vulnerabilities, maintain dry-dock certification, improve utility system reliability, repair aged and failing facilities in the worst condition, improve energy efficiency and reconfigure shipyard layout to improve

efficiencies. The capital investment in Naval Shipyard infrastructure continues to adhere closely to the report to Congress and exceeds the minimum level required by law (10 USC 2476) for all Department of Navy Depots.

As part of the Navy's Nuclear Enterprise Review, \$42M was added in fiscal year 2016 and the President's Budget submission for fiscal year 2017 adds \$48M to accelerate shipyard infrastructure improvements from a 17-year recapitalization plan to a 15-year plan. Increased funding for sustainment and for restoration and modernization is intended to reduce the risk to the Nuclear Enterprise as supported by the shipyards.

In fiscal year 2017, the Naval Shipyard Capital Investment Program industrial plant equipment investments include a \$25M defueling complex at Portsmouth Naval Shipyard , \$9M in drydock #2 material processing improvements at Pearl Harbor Naval Shipyard & Intermediate Maintenance Facility, and \$4M in dock crane modernization projects for Puget Sound Naval Shipyard & Intermediate Maintenance Facility. These investments will help to improve Naval Shipyard performance.

Summary

Our Naval Shipyards are comprised of more than 33,000 hardworking, dedicated professionals devoted to supporting our Navy. Through our Registered Apprenticeship Programs, ongoing training, and productivity improvement initiatives, we will continue to invest in this workforce. We will gain increased efficiencies through recapitalization of our

infrastructure. Our goal each and every day is to get our Navy's ships back to sea when the Fleet needs them.

Again, thank you for the opportunity to talk about our critical Naval Shipyards and for your continued and crucial support of our Navy.