

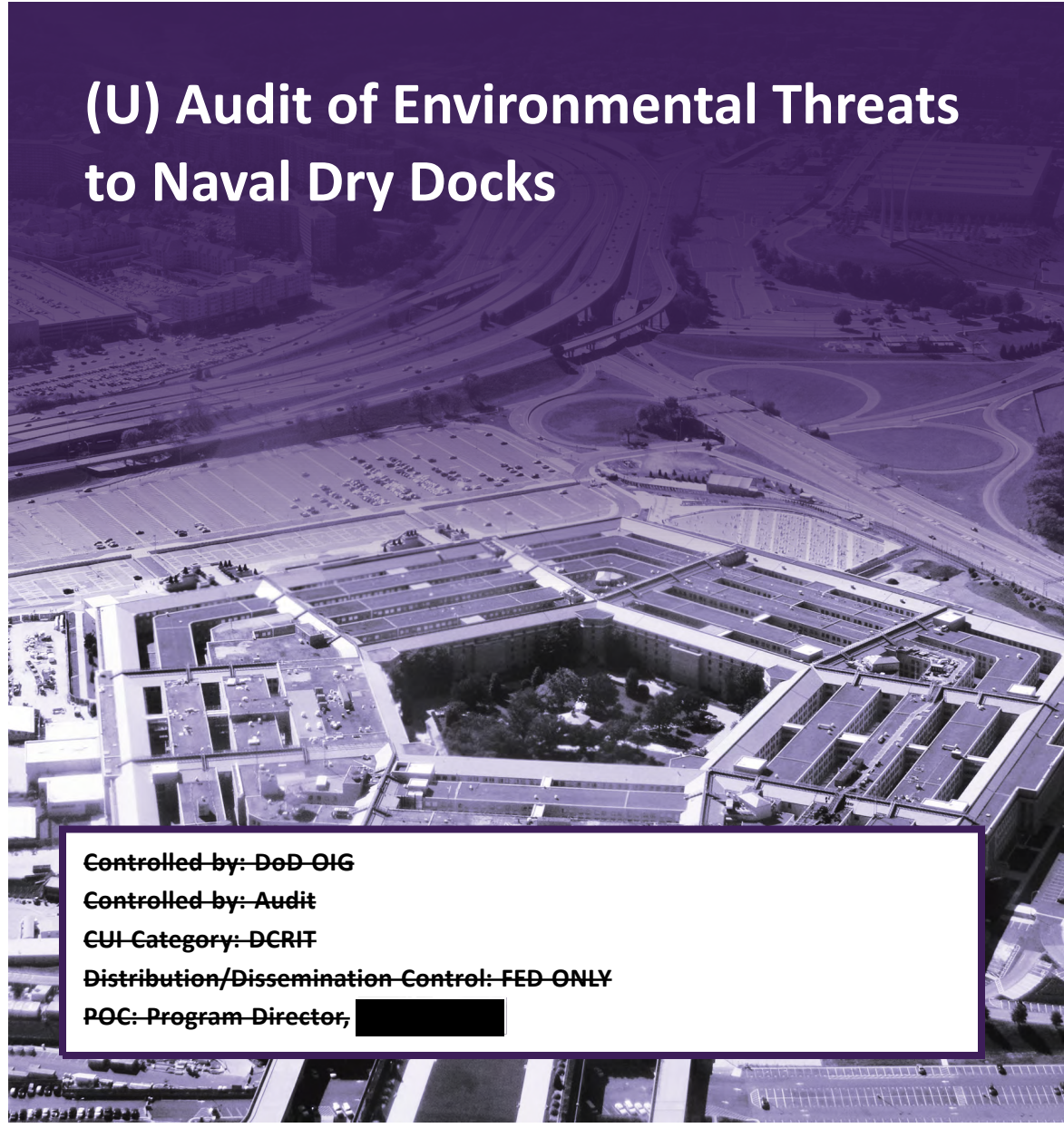


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INSPECTOR GENERAL

U.S. Department of Defense

NOVEMBER 29, 2023



(U) Audit of Environmental Threats to Naval Dry Docks

Controlled by: DoD-OIG

Controlled by: Audit

CUI Category: DCRIT

Distribution/Dissemination Control: FED-ONLY

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INTEGRITY ★ INDEPENDENCE ★ EXCELLENCE

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(U) Results in Brief

(U) Audit of Environmental Threats to Naval Dry Docks

November 29, 2023

(U) Objective

(U) The objective of this audit was to determine whether Navy officials planned for environmental threats to naval dry docks in accordance with Federal and DoD policies.

(U) Background

(U) The DoD reported that the effects of a changing climate are a national security issue that will impact DoD missions, operational plans, and installations. The effects include climate hazards such as extreme weather, floods, storms, and sea level change. Navy installations are often more susceptible to changing sea levels, coastal flooding, and riverine flooding due to their common proximity to coastlines. Naval dry docks are rectangular basins that allow access to the underside of ships and submarines, which is necessary to complete ship or submarine maintenance. Our audit focused on Navy actions to address changing sea levels and flooding at the four naval shipyards—Norfolk Naval Shipyard (NSY), Pearl Harbor NSY, Portsmouth NSY, and Puget Sound NSY.

(U) Findings

(U) Navy officials at all four shipyards complied with Federal and DoD guidance when planning for the nine dry docks included in our review. Specifically, Navy officials developed weather response plans and considered sea level change and flooding impacts, as required.

(U) Findings (cont'd)

(U) However, Navy officials at three of the four installations where the shipyards are located did not update master plans to include an installation resiliency component as required by the 2020 updates to section 2864, title 10, United States Code. This occurred because the Commander, Navy Region Mid-Atlantic elected to follow the 10-year statutory requirement for Norfolk NSY; the Commander, Navy Region Hawaii, did not provide funding for the Joint Base Pearl Harbor-Hickam master plan; and the Commander, Navy Region Northwest suspended master planning at Naval Base Kitsap to avoid duplicating the ongoing Shipyard Infrastructure Optimization Program efforts at Puget Sound NSY. The naval shipyards are subject to sea level change and flooding; therefore, without risk identification and mitigation, the shipyards are at an increased risk of sustaining catastrophic damage from environmental threats that could have been mitigated if Navy planners had properly completed installation master plans.

(U) Recommendations

(U) Among other recommendations, we recommend that the Commander, Navy Installations Command, in coordination with the Commanders, Navy Region Mid-Atlantic, Navy Region Hawaii, and Navy Region Northwest; and Commanding Officers of the regional Naval Facilities Engineering Systems Commands:

- (U) update the master plans to comply with the DoD 5-year requirement and include the installation resiliency component in accordance with Federal and DoD policies; and
- (U) document prioritization efforts for master plans to comply with Federal and DoD requirements.



(U) Results in Brief

(U) Audit of Environmental Threats to Naval Dry Docks

(U) Management Comments and Our Response

(U) The Commander, Navy Installations Command Director, responding for the regional commanders, and the Naval Sea Systems Command Acting Commander, responding for the Pearl Harbor NSY and Puget Sound NSY Commanders, agreed with the recommendations. However, the comments did not fully address two recommendations; therefore, the recommendations are unresolved and remain open.

(U) The Naval Facilities Engineering Systems Command Inspector General, responding for the regional commanding officers, generally agreed with the recommendations. However, the Inspector General's comments did not fully address five recommendations; therefore, those recommendations are unresolved and remain open.

(U) Since multiple recommendations in this report remain unresolved, we request additional comments on the final report within 30 days. Please see the Recommendations Table on the next page for the status of recommendations.

(U) Recommendations Table

(U) Management	Recommendations Unresolved	Recommendations Resolved	Recommendations Closed
Commander, Navy Installations Command	B.1.c, B.2.c	B.1.a, B.1.b, B.2.a, B.2.b, B.4.a, B.4.b	None
Commander, Naval Facilities Engineering Systems Command	None	B.6.a, B.6.b	None
Commander, Navy Region Mid-Atlantic	B.1.c	B.1.a, B.1.b	None
Commander, Navy Region Hawaii	B.2.c	B.2.a, B.2.b	None
Commander, Navy Region Northwest	None	B.4.a, B.4.b	None
Commanding Officer, Naval Facilities Engineering Systems Command Mid-Atlantic	None	B.1.a, B.1.b, B.1.c	None
Commanding Officer, Naval Facilities Engineering Systems Command Hawaii	B.2.a, B.2.b, B.2.c, B.3	None	None
Commanding Officer, Naval Facilities Engineering Systems Command Northwest	B.5	B.4.a, B.4.b	None
Program Executive Officer, Program Executive Office Industrial Infrastructure	None	B.6.a, B.6.b	None
Commander, Pearl Harbor Naval Shipyard	B.3	None	None
Commander, Puget Sound Naval Shipyard	B.5	None	None

(U)

(U) Please provide Management Comments by December 29, 2023.

(U) Note: The following categories are used to describe agency management’s comments to individual recommendations.

- **(U) Unresolved** – Management has not agreed to implement the recommendation or has not proposed actions that will address the recommendation.
- **(U) Resolved** – Management agreed to implement the recommendation or has proposed actions that will address the underlying finding that generated the recommendation.
- **(U) Closed** – The DoD OIG verified that the agreed upon corrective actions were implemented.





OFFICE OF INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500

November 29, 2023

MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE NAVY

SUBJECT: (U) Audit of Environmental Threats to Naval Dry Docks
(Report No. DODIG-2024-030)

(U) This final report provides the results of the DoD Office of Inspector General's audit. We previously provided copies of the draft report and requested written comments on the recommendations. We considered management's comments on the draft report when preparing the final report. These comments are included in the report.

(U) This report contains recommendations that are considered unresolved because the comments from the Commander, Navy Installations Command Director, Naval Sea Systems Command Acting Commander, and Naval Facilities Engineering Systems Command Inspector General did not fully address the recommendations in this report. Therefore, the recommendations remain open. We will track these recommendations until management agrees to take actions that we determine to be sufficient to meet the intent of the recommendations and management officials submit adequate documentation showing that all agreed-upon actions are completed. DoD Instruction 7650.03 requires that recommendations be resolved promptly. Therefore, please provide us within 30 days your response concerning specific actions in process or alternative corrective actions proposed on the recommendations. Send your response to audacs@dodig.mil.

(U) The Commander, Navy Installations Command Director and Naval Facilities Engineering Systems Command Inspector General agreed to address the remaining recommendations presented in the report; therefore, we consider the recommendations resolved and open. We will close the recommendations when you provide us documentation showing that all agreed-upon actions to implement the recommendations are completed. Therefore, within 90 days please provide us your response concerning specific actions in process or completed on the recommendations. Send your response to either followup@dodig.mil if unclassified or rfunet@dodig.smil.mil if classified SECRET.

(U) We appreciate the cooperation and assistance received during the audit. If you have any questions, or would like to meet to discuss the audit, please contact me at [REDACTED]

FOR THE INSPECTOR GENERAL:

A handwritten signature in black ink that reads "Carmen J. Malone".

Carmen J. Malone
Assistant Inspector General for Audit
Acquisition, Contracting, and Sustainment

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(U) Introduction

(U) Objective

(U) The objective of this audit was to determine whether Navy officials planned for environmental threats to naval dry docks in accordance with Federal and DoD policies. See Appendix A for a discussion of the scope, methodology, and prior coverage related to the objective.

(U) Background

(U) In January 2019, the Office of the Under Secretary of Defense for Acquisition and Sustainment issued a report on the changing climate. The report states that environmental threats are a national security issue that will impact DoD missions, operational plans, and installations.¹ Environmental threats include extreme weather, floods, storms, and sea level change. For example, the average sea level has risen about 9 inches since 1880 and nearly 3 of those inches occurred in the last 25 years. By the year 2100, the average global sea level is likely to rise at least 1 foot above the year 2000 levels.²

(U) Navy installations are often more susceptible than other DoD installations to changing sea levels, coastal flooding, and riverine flooding due to their proximity to coastlines. Sea level change is not uniform globally and is affected by coastal and seafloor topography, the presence of currents, and whether or not the land surface itself is rising or falling. Therefore, the projected impacts to Navy installations resulting from sea level change must be determined locally. Coastal flooding, which most commonly occurs during storm events, occurs when onshore winds push seawater up against the coast (storm surge), so that the water surface is elevated and salt water is pushed inland. Riverine flooding occurs when rivers overflow their banks or when precipitation is so heavy that existing drainage or flood runoff systems are overwhelmed. Floodwaters can damage infrastructure, equipment, materiel, vehicles, and ships, and could disrupt access to and from DoD installations.

¹ (U) Office of the Under Secretary of Defense for Acquisition and Sustainment, "Report on Effects of a Changing Climate to the Department of Defense," January 2019.

² (U) National Oceanic and Atmospheric Administration, "Climate Change: Global Sea Level," April 2020.

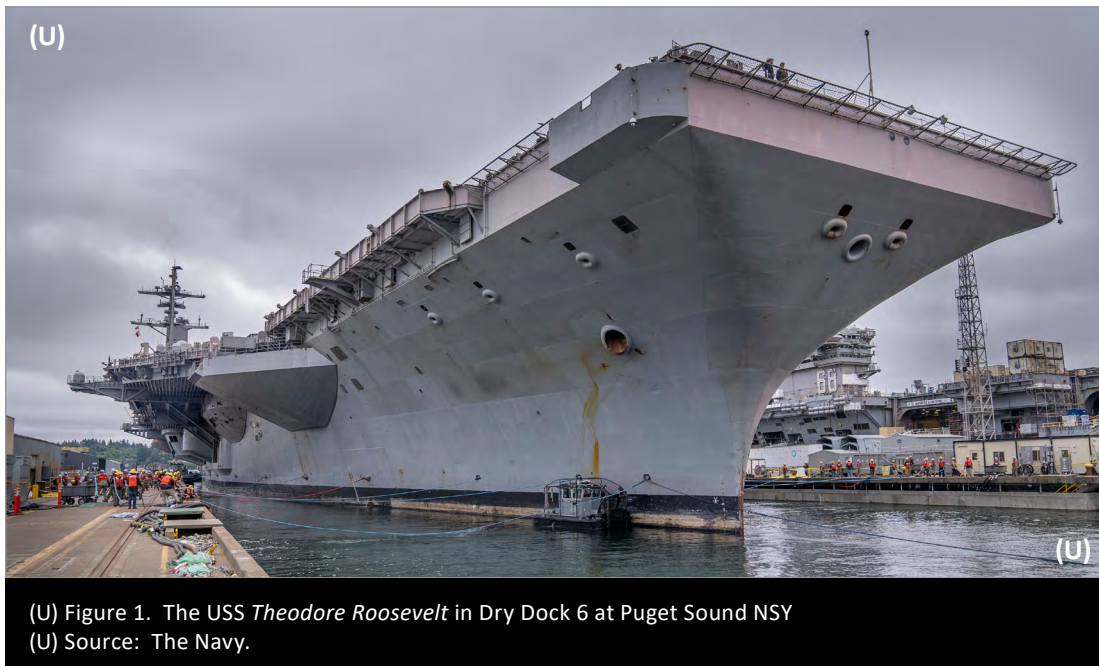
(U) U.S. Naval Shipyards

(U) The Navy has four shipyards in the United States where naval and contractor personnel execute maintenance on submarines and surface ships, which include aircraft carriers, to provide combat-ready ships to the fleet.

The four shipyards are:

- (U) Norfolk Naval Shipyard (NSY), located in Portsmouth, Virginia;
- (U) Pearl Harbor NSY and Intermediate Maintenance Facility, located on Joint Base Pearl Harbor-Hickam (JBPHH) in Honolulu, Hawaii;³
- (U) Portsmouth NSY, located in Kittery, Maine; and
- (U) Puget Sound NSY and Intermediate Maintenance Facility, located on Naval Base Kitsap (NBK) in Bremerton, Washington.

(U) The shipyards have 18 dry docks that are certified for docking Navy ships and submarines.⁴ Dry docks are rectangular basins dug into the shore of a body of water that allow access to the underside of ships and submarines, which is necessary to complete ship or submarine maintenance and overhaul. See Figure 1 for a photo of the USS *Theodore Roosevelt* in Dry Dock 6 at Puget Sound NSY.



³ (U) Intermediate maintenance facilities provide intermediate-level maintenance, which consists of calibration, repair, or replacement of damaged or unserviceable parts, components, or assemblies.

⁴ (U) The four shipyards are required to maintain a certification for each dry dock issued by the Naval Sea Systems Command before dry docking any Navy ship to ensure the safety of ships in accordance with Military Standard 1625D(SH), "Safety Certification Program for Dry Docking Facilities and Shipbuilding Ways for U.S. Navy Ships," August 27, 2009. The certification process includes an evaluation of a dry dock's condition and assessment of operating procedures.

(U) Because all four shipyards are located along coastlines, the dry docks are vulnerable to the risks associated with sea level change. According to the report from the Office of the Under Secretary of Defense for Acquisition and Sustainment, coastal flooding risks are greater on the East Coast and Hawaii, and the four shipyards are projected to experience from 7.2 to 12.7 feet of sea level change by the year 2100.

(U) Environmental Planning Guidance

(U) Federal and DoD environmental planning guidance requires installation commanders to consider and plan for environmental threats when developing Installation Master Plans (master plans) and plans for infrastructure projects, which includes dry dock projects.⁵ Section 2864, title 10, United States Code (10 U.S.C. § 2864) is the primary Federal guidance for environmental master planning and it directs commanders of major military installations to develop a master plan that addresses environmental planning, real property master planning, and military installation resilience. Section 2864, title 10, United States Code, requires that master plans be updated at least once every 10 years and defers to the Secretary concerned to further define the time interval.

(U) Public Law 116-92 amended 10 U.S.C. § 2864 to require commanders to include climate resiliency and military installation resilience as an aspect of their master plans.⁶ Specifically, commanders are required to consider risks of extreme weather events, mean sea level fluctuation, flooding, and other environmental changes on the installations and how installation assets and current and planned infrastructure projects are vulnerable to those risks. Once the risks are identified, commanders are required to develop plans to mitigate the impacts of the risks. Public Law 116-92 also requires the DoD to include how projects will be impacted by projected mean sea level rise. See Appendix B for a list of the seven climate elements commanders are required to assess related to military installation resilience. Additionally, DoD Instruction 4165.70 implements 10 U.S.C. § 2864 for all major military installations and requires all installations to update their master plans every 5 years (more often if necessary). In the master plan update, the installations must include a specific, annual listing of all major repair, sustainment, restoration, and modernization projects planned by fiscal year, for at least the next 10 years.

⁵ (U) Master plans are products of a comprehensive planning process to address environmental, sustainable design and development, real property, and military installation resilience planning efforts, among others for an installation. Master plans aid in project planning for short-range (0 to 5 years), mid-range (6 to 10 years) and long-range (11 to 20 years) projects. The Navy uses multiple document titles to meet the installation master plan requirement, such as installation development plans or master plans.

⁶ (U) Public Law 116-92, "The Fiscal Year 2020 National Defense Authorization Act," December 20, 2019.

(U) DoD Directive 4715.21 requires the DoD to adapt operations to address the impact of climate change and identify and assess the effects of climate change on the DoD mission and consider those effects when developing plans and implementing procedures to address climate change risks.⁷ The Directive states that the DoD must anticipate and manage any risks that develop as a result of climate change to build resilience.

(U) The Unified Facilities Criteria (UFC) provides planning, design, construction, sustainment, restoration, and modernization criteria for DoD projects. UFC are applicable to all DoD-led construction projects and include planning and design requirements for those projects. Table 1 outlines the UFC requirements applicable to environmental threats and master planning.

(U) Table 1. UFC Requirements Applicable to Environmental Threats Planning

(U) UFC	Environmental Threats Planning Requirements
UFC 1-200-02, "High Performance and Sustainable Building Requirements," December 1, 2016 ¹	Requires DoD officials to provide design solutions in response to environmental threat projections to projects
UFC 2-100-01, "Installation Master Planning," September 30, 2020 ¹	Requires master plans to include an Installation Climate Resilience Plan, which outlines seven climate elements that must be addressed and requires planning officials to use the DRSL database when planning for projects at coastal or tidally-influenced installations ²
UFC 3-201-01, "Civil Engineering," Change 4, September 28, 2020 ¹	Requires planning officials to use the DRSL database when planning for projects at coastal or tidally-influenced installations
UFC 4-213-10, "Graving Dry Docks," May 18, 2020	Requires planning officials to determine a design flood elevation in order to set coping elevations to protect dry docks from flooding ³

(U)

¹ (U) The most current versions of UFC 1-200-02, UFC 2-100-01, and UFC 3-201-01 are dated June 1, 2022, April 8, 2022, and December 20, 2022, respectively.

² (U) The seven climate elements were incorporated into the September 2020 update to UFC 2-100-01 from 10 U.S.C. § 2864. See Appendix B for the specific seven climate elements. The DoD Regional Sea Level (DRSL) database provides sea level scenarios for three future time horizons (2035, 2065, and 2100) for 1,774 DoD sites worldwide.

³ (U) Coping is an elevated, curb-like structure constructed around dry docks and other infrastructure to raise the height.

(U) Source: The DoD OIG.

⁷ (U) DoD Directive 4715.21, "Climate Change Adaptation and Resilience," January 14, 2016, Change 1, August 31, 2018.

(U) Roles and Responsibilities

(U) The Naval Sea Systems Command (NAVSEA) designs, builds, delivers, and maintains the Navy's ships, submarines, and combat systems. NAVSEA has 42 field activities, including the four naval shipyards, and provides engineering, scientific, technical, and logistical expertise and products to the Navy Fleet, the DoD, and other customers. In addition, NAVSEA has operational control of and is the technical authority for the shipyards.

(U) The Commander, Navy Installations Command (CNIC) is responsible for Navy installation management and providing funding to manage and oversee shore installation support to the fleet. While master planning is a CNIC requirement, the CNIC delegates the setting of priorities to its regional commands for executing master planning efforts for all Navy installations in their respective regions. The CNIC has 10 regional commands. The Commander, Navy Region Mid-Atlantic (CNRMA) oversees the Norfolk NSY and Portsmouth NSY installations; the Commander, Navy Region Northwest (CNRNW) oversees the Puget Sound NSY installation; and the Commander, Navy Region Hawaii oversees the Pearl Harbor NSY installation. The CNIC relies on support from the Naval Facilities Engineering Systems Command (NAVFAC) to update master plans.

(U) NAVFAC provides facilities engineering and acquisition services for the Navy and is responsible for planning, designing, and constructing facilities, and updating the master plans. In January 2017, NAVFAC issued the "Naval Facilities Engineering Command Climate Change Planning Handbook: Installation Adaptation and Resilience" (The Climate Change Handbook).⁸ The Handbook provides a framework and methodology to help Navy planners understand how to consider climate change in their master plans and projects. The Handbook also guides planners through the process of adapting to the impacts of climate change and provides tools that can be used to understand the possible impacts of environmental threats. For example, the Handbook references the National Oceanic and Atmospheric Administration (NOAA) U.S. Climate Resilience Toolkit, which provides training courses and specific climate data to support planning efforts.

⁸ (U) "Naval Facilities Engineering Command Climate Change Planning Handbook: Installation Adaptation and Resilience," January 2017.

(U) Shipyard Infrastructure Optimization Program

(U) The Shipyard Infrastructure Optimization Program (SIOP) is a joint effort initiated in 2018 between CNIC, NAVFAC, and NAVSEA, and is overseen by the Program Executive Office Industrial Infrastructure (PEO II).⁹ SIOP's mission is to execute the Navy's plan to reconfigure, modernize, and optimize its four aging naval shipyards into modern facilities capable of meeting future needs. SIOP personnel plan to increase dry dock capacity by building new dry docks, upgrading old equipment, and identifying projects to address environmental threats, such as flooding, at each shipyard. SIOP personnel are conducting advanced planning assessments to identify specific investments needed at each shipyard that will address resiliency, durability, and climate change impacts. Navy planners are expected to use the results from the SIOP assessments to develop their master plans and identify projects necessary to mitigate risks of sea level change and flooding to dry docks. SIOP personnel are executing their mission in the following three phases.

- (U) Phase 1 – Study the major processes and associated facilities at the four naval shipyards and develop a digital shipyard information model to replicate the shipyards' footprint.
- (U) Phase 2 – Complete Advanced Planning Studies (APs), which provide more detailed planning and engineering analyses to complete a shipyard master plan, called an Area Development Plan (ADP), for the four naval shipyards.
- (U) Phase 3 – Develop, prioritize, and execute projects to implement the ADPs at a future date.

(U) SIOP experienced multiple organizational changes since 2018. NAVSEA originally functioned as the lead organization responsible for executing SIOP's mission; however, in 2021, the Assistant Secretary of the Navy (Research, Development, and Acquisition) updated reporting relationships for SIOP and reassigned that function to NAVFAC.

(U) Dry Docks Reviewed

(U) This audit focused on Navy actions to address changing sea levels and flooding at all four naval shipyards—Norfolk NSY, Pearl Harbor NSY, Portsmouth NSY, and Puget Sound NSY. We reviewed a nonstatistical sample of 7 of the 18 certified dry docks and 2 planned dry docks, located at all four U.S. NSYs to determine whether Navy officials planned for environmental threats to the dry docks in accordance

⁹ (U) PEO II is responsible for exercising technical, contracting, and financial authorities for SIOP.

(U) with Federal and DoD policies. Table 2 shows the number of certified dry docks, dry docks reviewed, and the DRSL database projected maximum sea level change by 2100 for each shipyard and location.¹⁰

(U) Table 2. Total Number of Dry Docks and Projected Maximum Sea Level Change by Shipyard

(U) Shipyard	Location	Number of Certified Dry Docks	Number of Dry Docks Reviewed	Projected Maximum 2100 Scenario for Sea Level Change (in feet)
Norfolk NSY	Portsmouth, Virginia	5	2	8.6
Pearl Harbor NSY	Honolulu, Hawaii	4	3*	7.9
Portsmouth NSY	Kittery, Maine	3	1	12.7
Puget Sound NSY	Bremerton, Washington	6	3*	7.2

* (U) Includes one dry dock that is in the planning phase.

(U) Source: The DoD OIG.

(U)

¹⁰ (U) The DRSL database provides sea level scenarios for three future time horizons (2035, 2065, and 2100) for 1,774 DoD sites worldwide.

(U) Finding A

(U) Navy Officials Planned for Environmental Threats to Naval Dry Docks

(U) Navy officials at all four shipyards complied with Federal and DoD guidance when planning for the nine dry docks included in our review. Specifically, Navy officials:

- (U) developed weather response plans while planning for environmental threats to the nine dry docks;
- (U) considered sea-level change and flooding impacts when planning projects for five of the nine dry docks to protect the dry docks from environmental threats; and
- (U) were not required to consider sea-level change and flooding impacts when planning projects for the other four dry docks, because those projects did not meet the DoD thresholds for design, cost, and type of work that prompts that consideration.

(U) The four naval shipyards and their dry docks perform a vital role in national defense by executing maintenance on surface ships and submarines. Compliance with environmental threat planning ensures that Navy officials at the four shipyards maintain dry docks that are ready for use in maintaining combat-ready ships.

(U) Navy Officials Developed Weather Response Plans and Considered Sea Level Change and Flooding Impacts to Naval Dry Docks

(U) Navy officials at all four shipyards complied with Federal and DoD guidance when planning for the nine dry docks included in our review. Table 3 shows a list of the naval dry docks reviewed and whether Navy officials incorporated environmental threat (weather response plans and flooding or sea level) considerations when planning dry dock projects.

(U) Table 3. Naval Dry Docks Reviewed and Whether Environmental Threat Considerations Were Incorporated

(U) Shipyard	Developed Weather Response Plans	Dry Dock	Incorporated Environmental Threats (Flooding and Sea Level) in Planning
Norfolk NSY	Yes	Dry Dock 4	Yes
		Dry Dock 8	Yes
Pearl Harbor NSY	Yes	Dry Dock 2	No ¹
		Dry Dock 4	No ¹
		Dry Dock 5 ²	Yes
Portsmouth NSY	Yes	Dry Dock 1	Yes
Puget Sound NSY	Yes	Dry Dock 3 ³	Yes
		Dry Dock 4	No ¹
		Dry Dock 6	No ¹

(U)

¹ (U) Navy officials were not required to consider such impacts for these projects because the projects did not meet the DoD thresholds for design, cost, and type of work that prompts that consideration.

² (U) Planned dry dock, Military Construction Project P-209.

³ (U) Planned dry dock, Military Construction Project P-454.

(U) Source: The DoD OIG.

(U) Navy Officials Developed Weather Response Plans to Protect Dry Docks from Environmental Threats

(U) Navy officials at all four shipyards developed weather response plans in accordance with Navy policy to protect naval dry docks when responding to environmental threats.¹¹ CNIC Manual 3440.17 requires Installation Emergency Management Officers to develop and maintain checklists to prepare for, mitigate, respond to, and recover from natural hazards such as hurricanes or other extreme weather events. To meet this requirement, Navy officials at all four naval shipyards developed weather response plans to implement when responding to a storm and other extreme weather event.

(U) While the shipyards develop their own approach for testing their plans, as part of their Weather Response Plan, Pearl Harbor NSY officials developed a 13-step checklist that requires actions from seven different Pearl Harbor NSY offices to protect the dry docks.¹² The checklist includes actions such as lowering hurricane flaps over pipes, closing and securing all watertight covers, and placing

¹¹ (U) CNIC Manual 3440.17, "Navy Installations Emergency Management Program," May 19, 2022. Code 980 Destructive Weather Plan, 2019. Naval Shipyard and Intermediate Maintenance Facility Pearl Harbor Instruction 3440.17, May 13, 2019. Naval Shipyard Portsmouth Instruction 11420.5K, "Dry Dock Operations Manual," undated. Puget Sound Naval Shipyard and Intermediate Maintenance Facility Instruction 3010.5, "Hazardous Weather Plan," June 24, 2022.

¹² (U) Naval Shipyard and Intermediate Maintenance Facility Pearl Harbor Instruction 3440.17, "Advance Change Notice to Pearl Harbor Naval Shipyard Emergency Management Plan, Hazard Specific Appendices 3-2," May 13, 2019.

(U) sandbags around certain areas. According to Pearl Harbor NSY officials, they conducted exercises to test the effectiveness of their plan. The officials stated that the exercises allowed them to identify efficiencies and areas for improvement, and to ensure the plan was effective in the event of a storm or extreme weather event.

(U) Navy Officials Planned for Environmental Threats in Five of the Nine Dry Docks Reviewed

(U) Navy officials at all four shipyards planned and incorporated sea level change and flooding impacts into the project design for five of the nine naval dry docks we reviewed. DoD Directive 4715.21 requires the DoD to adapt current and future operations to address the impact of climate change. UFC 2-100-01 and UFC 3-201-01 require DoD planners to use the DRSL database. The DRSL database provides sea level scenarios for three future time horizons (2035, 2065, and 2100) for 1,774 DoD sites worldwide. DoD and Navy planners can use the data from these scenarios when planning for projects at coastal or tidally influenced installations. Navy officials used the DRSL database to determine design elevations when designing dry dock projects. For example, when designing a caisson replacement for Dry Dock 1 at Portsmouth NSY, officials used 2100 data from the DRSL database to help determine the elevation of the caisson.¹³ The coping height of the caisson is 12.7 feet, which according to the DRSL database, will account for sea level rise until 2100. Portsmouth NSY officials stated that Portsmouth NSY is taking a proactive approach to addressing environmental threats by designing projects to the 2100 expected sea level.

(U) Additionally, for five of the nine dry docks reviewed, Navy officials identified and considered the impact of flooding in their planned, ongoing, or completed dry dock projects. For example, in 2015, Norfolk NSY contracted for a review that identified and evaluated multiple flood mitigation strategies for Dry Dock 4, and other dry docks.¹⁴ The review concluded that a continuous floodwall with an elevation of 106.2 feet surrounding Dry Dock 4 would be the best option for protecting the dry dock. Norfolk NSY officials corroborated the review with changing sea level data from the NOAA, and the officials elected to build the floodwall with an elevation of 106 feet above the datum.¹⁵ See Figure 2 for a picture of the floodwall surrounding Dry Dock 4.

¹³ (U) Caissons are watertight structures placed across the entrance of a dry dock to prevent water from entering the dry dock.

¹⁴ (U) Flood mitigation strategies for Dry Docks 1, 2 and 3 were also included as part of the review; however, we did not include those dry docks in our sample.

¹⁵ (U) In general, a datum is a base elevation used as a reference point from which to measure heights or depths.



(~~CUI~~) Furthermore, Navy officials at Norfolk NSY and Portsmouth NSY proactively developed and used tools to aid in responding to environmental threats to dry docks, as suggested in the Climate Change Handbook. The Handbook highlights resources for Navy planners to use when planning for environmental threats, such as the NOAA U.S. Climate Resilience Toolkit. The Toolkit provides data-driven tools, information, and subject-matter expertise for decision-makers to increase their environmental resilience. For example, Norfolk NSY and Portsmouth NSY engineers developed a flood warning analysis tool that uses NOAA and other data sources to compare the elevation of various Norfolk NSY and Portsmouth NSY areas, buildings, and structures to projected storm surge. In addition, Portsmouth NSY planners developed a critical facilities prediction tool that aligns the current condition of critical facilities, including the dry docks, with current DoD design guidance for sea level change. The tool then predicts when the critical infrastructure will require updates and helps planners develop appropriate mitigation projects.

For example, Portsmouth NSY planners identified that [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

According to Portsmouth NSY officials, the tool allows them to make informed decisions in the event of extreme weather and to focus their resources to the most at-risk areas of the shipyard.

(U) Pearl Harbor NSY and Puget Sound NSY Officials Were Not Required to Plan for Environmental Threats for Four of the Nine Naval Dry Docks Reviewed

(U) Navy planners at Pearl Harbor NSY and Puget Sound NSY were not required to consider sea level change and flooding impacts when designing projects for four of the nine naval dry docks we reviewed, because those projects did not meet the DoD thresholds for design, cost, and type of work that prompt that consideration. Section 2864, title 10, United States Code, requires DoD officials to identify projects to infrastructure, such as naval dry docks, that will mitigate impacts from environmental threats. Section 2864, title 10, United States Code requires the DoD to include how projects will be impacted by projected mean sea level rise. In addition, DoD policies identify requirements DoD officials must follow to ensure naval dry docks are able to withstand environmental threats such as sea level rise and flooding. UFC provide specific guidelines for DoD officials and are required for all DoD construction projects. Specifically:

- (U) UFC 4-213-10, “Graving Dry Docks,” requires officials to determine a design flood elevation in order to set coping elevations to protect dry docks from flooding;
- (U) UFC 3-201-01, “Civil Engineering,” requires officials to use the DRSL database for coastal facility projects, and to develop a flood risk design for projects located within a flood hazard area;
- (U) UFC 2-100-01, “Installation Master Planning,” requires officials to assess the risks of weather events and climate change applicable to projects, including flooding and sea level change, using the DRSL database;
- (U) UFC 1-200-02, “High Performance and Sustainable Building Requirements,” requires officials to provide design solutions in response to any environmental threats to projects. Additionally, for a project located in a floodplain, it requires officials to provide design solutions that mitigate the impact of the floodplain on the project and the impact of the design flood event on personnel;¹⁶ and
- (U) UFC 1-200-01, “DoD Building Code,” requires that design-bid-build projects achieving 35 percent design completion comply with all current UFC, codes, and criteria.¹⁷

¹⁶ (U) Floodplains are geographic zones of area that are low, flat land near a river that are subject to varying levels of flood risks.

¹⁷ (U) A design-bid-build project is the traditional construction project process that requires the completion of each construction phase (design, bid, and build) before the next starts.

(U) While Navy officials incorporated these policies when designing projects for five of the nine naval dry docks we reviewed, they did not for the remaining four naval dry docks. The DoD requires DoD officials to apply all applicable UFC, codes, and criteria when planning and designing projects, including the 2020 environmental threat planning updates to the UFC; however, UFC also provide thresholds for compliance.

(U) UFC 1-200-01 requires that design-bid-build projects achieving 35 percent design completion comply with all current UFC, codes, and criteria.¹⁸ For example, we found that one project for Dry Dock 6 at Puget Sound NSY that did not consider environmental threats achieved 35 percent design completion in September 2014. However, the UFC we reviewed were updated to include environmental threat requirements between December 2016 and September 2020 and therefore, were not applicable to the dry dock project for Dry Dock 6 at Puget Sound NSY.

(U) Furthermore, UFC 1-200-02 requires UFC compliance, including compliance with environmental threat requirements, when project costs are greater than 50 percent of a dry dock's estimated replacement cost.¹⁹ For example, four Pearl Harbor NSY and Puget Sound NSY dry docks had estimated replacement costs that ranged from \$351.9 million to \$875 million. However, four projects associated with these dry docks that did not consider environmental threats only cost between \$9.1 million and \$51 million. This equates to only 1.1 percent to 14.5 percent of the estimated replacement cost of the dry docks, respectively. Therefore, in accordance with UFC 1-200-02, Navy officials were not required to incorporate the environmental threat requirements identified in UFC into those four projects associated with the four dry docks in our sample.

(U) In addition, Pearl Harbor NSY and Puget Sound NSY officials stated that the type of projects completed addressed smaller scoped problems, such as repairing an adjacent wharf or addressing an electrical issue within the dry docks, and not on the dry docks themselves. Specifically, Pearl Harbor NSY officials stated that they did not plan for environmental threats for two dry docks in our review because they focused on projects to maintain dry dock certification or were for smaller scoped repair projects to address a specific problem, such as a wharf repair, which would not meet the threshold for UFC compliance. Pearl Harbor NSY officials stated that the new Dry Dock 5 major construction project is the first project for which Navy planners at Pearl Harbor NSY have considered the updated 2020 UFC environmental threat requirements, such as use of the DRSL database, during planning and designing phases for a dry dock.

¹⁸ (U) UFC 1-200-01, "DoD Building Code," October 8, 2019. Project planners must apply current UFC criteria for all design-bid-build projects that have not proceeded beyond 35 percent design completion.

¹⁹ (U) Estimated replacement cost is the cost of replacing the current physical plant with modern facilities built at today's construction cost using today's construction standards.

(U) The dry docks at the four shipyards, including those at Pearl Harbor NSY and Puget Sound NSY, were originally designed and built in the 19th and 20th centuries and were not constructed to meet current and future impacts of climate change. A key part for installations to plan for current and future environmental threats occurs during their comprehensive master planning process, which addresses environmental, sustainable design and development, real property, and military installation resilience planning efforts, among others. See Figure 3 for a picture of Pearl Harbor NSY's Dry Dock 4, which has not been required to incorporate environmental threat requirements.

(U) The dry docks at the four shipyards were originally designed and built in the 19th and 20th centuries and were not constructed to meet current and future impacts of climate change.



(U) Figure 3. Pearl Harbor NSY Dry Dock 4 Docking the Guided Missile Cruiser USS Port Royal
 (U) Source: The Navy.

(~~CUI~~) While DoD policies for addressing environmental threats may not have applied during Pearl Harbor NSY and Puget Sound NSY project development for their existing dry docks, the DoD and Navy have updated multiple policies for planners to consider when developing projects, as well as when performing installation planning efforts.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(U) [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED] Not considering current

(U) Not considering current and future impacts of climate change, such as sea level change and flooding, to the dry docks, leaves the Navy’s most critical infrastructure vulnerable to these threats.

and future impacts of climate change, such as sea level change and flooding, to the dry docks, leaves the Navy’s most critical infrastructure vulnerable to these threats. However, because project requirements for four of the nine naval dry docks did not meet the thresholds for DoD environmental threat planning policy, we are not making a recommendation to the Navy to develop projects outside of the master planning process. If Navy personnel implement the recommendations in Finding B, the Navy would address current environmental threat planning policies to assess for risks and threats at each installation and develop projects to mitigate those risks.

(U) Compliance with Environmental Threat Planning Policies Ensures That Dry Docks Are Ready To Maintain Ships

(U) The four naval shipyards perform a vital role in national defense by executing maintenance on submarines and surface ships thereby providing combat-ready ships to the fleet. To continue to perform this vital role, the Navy must develop and manage the shipyards through thoughtful and thorough project planning. This process provides a means for sustainable, resilient, and efficient installations that support mission requirements. Without proper planning and risk mitigation, the naval installations where the shipyards are located are subject to sea level change and flooding, which could negatively affect readiness. Compliance with environmental threat planning policies ensures that Navy officials at the four shipyards maintain dry docks that are ready for use in maintaining combat-ready ships and can withstand current and future extreme weather events.

(U) Finding B

(U) Navy Officials Planned For Environmental Threats to Individual Dry Docks, but Did Not Update Master Plans

(U) Although Navy officials at all four shipyards complied with Federal and DoD guidance when planning projects for the nine dry docks we reviewed, Navy officials at three of the four installations where the shipyards were located did not update their master plans to include an installation resiliency component as required by the 2020 update to 10 U.S.C. § 2864. Specifically:

- (U) Navy officials at Norfolk NSY did not update their master plan because the Commander, Navy Region Mid-Atlantic (CNRMA), elected to comply with the 10-year master plan development required in 10 U.S.C. § 2864 and did not comply with the 5-year master plan update required in DoD Instruction 4165.70;
- (U) Navy officials at Joint Base Pearl Harbor-Hickam (JBPHH) did not update their master plan because the Commander, Navy Region Hawaii, did not provide the funding needed to hire a contractor to develop the plan; and
- (U) Navy officials at Naval Base Kitsap (NBK) did not update their master plan because the Commander, Navy Region Northwest (CNRNW) suspended master planning at NBK to avoid duplicating the ongoing Shipyard Infrastructure Optimization Program (SIOP) efforts at Puget Sound NSY.

(U) Including the installation resiliency component in master plans is critical as the planners use this information to identify the environmental risks and threats to the entire military installation and plan projects to mitigate those identified risks and threats. Without that risk identification and mitigation, the Navy installations where the naval shipyards are located, are at an increased risk of sustaining catastrophic damage from environmental threats that could have been mitigated if Navy planners had properly completed installation master plans. These environmental threats may have a prolonged, negative effect on the readiness of the naval fleet.

(U) Master Plans at Three of the Four Shipyards Were Not Updated

(U) Although Navy officials at all four shipyards complied with Federal and DoD guidance when planning projects for the nine dry docks we reviewed, Navy officials at three of the four installations where the shipyards were located did not update their master plans to include an installation resiliency component as required by Federal and DoD policies.²⁰ Section 2864, title 10, United States Code, requires that master plans be developed at least once every 10 years and defers to the Secretary of Defense to further define the time interval. The Secretary further defined the requirement in DoD Instruction 4165.70, which requires master plans to be updated every 5 years. In addition, DoD Directive 4715.21 requires the DoD to adapt current and future operations to address the impact of climate change. In 2020, 10 U.S.C. § 2864 added the requirement for installation planners to include a climate resiliency component that identifies current and projected risks and threats to military installation resiliency, such as sea level change and flooding. UFC 2-100-01 reiterates that master plans must be updated every 5 years and requires that master plans include a list of ongoing or planned projects designed to address specific environmental threats at the installation. See Table 4 for the year of the last update to the master plan for each shipyard’s installation, along with the year that the master plan should have been updated to comply with Federal and DoD policies.²¹

(U) Table 4. Year of Current Master Plan and Year of Required Update

(U) Installation	Year of Current Master Plan	Year the Master Plan Should Have Been Updated
Norfolk NSY	2016	2021
Joint Base Pearl Harbor-Hickam (Pearl Harbor NSY)	2013	2018
Portsmouth NSY	2018	2023
Naval Base Kitsap (Puget Sound NSY)	2016	2021

(U)

(U) Source: The DoD OIG.

²⁰ (U) 10 U.S.C. § 2864, DoD Instruction 4165.70, and UFC 2-100-01.

²¹ (U) Because Puget Sound NSY and Pearl Harbor NSY are tenant commands, they are included in the master plans for NBK and JBPHH, respectively.

(U) Commander, Navy Region Mid-Atlantic Officials Recognized Statutory Requirements Rather Than DoD Requirements

(U) Navy officials at Norfolk NSY did not update their master plan because the CNRMA elected to comply with the 10-year master plan development requirement in 10 U.S.C. § 2864 instead of the 5-year master plan update requirement in DoD Instruction 4165.70. According to CNRMA officials, they adhere to the 10-year U.S.C. requirement rather than the 5-year DoD requirement for updating master plans and viewed a 5-year update to master plans as a “best-case scenario.” Because Norfolk NSY’s master plan was last updated in February 2016, CNRMA officials considered their master plan as compliant with Federal policies and stated that the master plan did not need to be updated until February 2026. However, to comply with DoD requirements, CNRMA officials should have updated the Norfolk NSY 2016 master plan in 2021. Therefore, the CNIC, in coordination with the CNRMA and the Commanding Officer, NAVFAC Mid-Atlantic, should update the Norfolk NSY master plan to comply with the 5-year requirement, and include an installation resiliency component in accordance with 10 U.S.C. § 2864, DoD Instruction 4165.70, and UFC 2-100-01. In addition, the CNIC, in coordination with the CNRMA and the Commanding Officer, NAVFAC Mid-Atlantic, should review and document the prioritization of Norfolk NSY’s future master planning efforts to ensure compliance with Federal and DoD requirements.

(U) Commander, Navy Region Hawaii Did Not Provide the Funding Needed to Update the Joint Base Pearl Harbor-Hickam Master Plan

(U) Navy officials at JBPHH did not update their master plan because the Commander, Navy Region Hawaii, did not provide the funding needed to hire a contractor to update the plan. According to the Commander, Navy Region Hawaii and JBPHH officials, the 2013 master plan required a significant level of effort for a complete re-development in 2018 to meet the 5-year DoD requirement and comply with UFC requirements. For example, UFC 2-100-01 requires installations to identify and assess risks related to extreme weather and climate change when updating master plans. However, Pearl Harbor NSY officials stated that when their master plan was developed in 2013, Navy planners did not have installation studies and assessments to use for planning projects to mitigate impacts of risks and threats to Pearl Harbor NSY infrastructure, such as the dry docks. Navy planners at JBPHH stated that NAVFAC Hawaii requested additional resources and funding to complete the update through a contractor in 2018, but according to Navy officials, the Commander, Navy Region Hawaii, did not have funding available,

(U) and the update was not completed.²² Commander, Navy Region Hawaii officials did not provide resourcing to support an update to JBPHH's master plan until FY 2022, 4 years after the master plan should have been updated. According to Navy officials, as of June 2023, NAVFAC Hawaii officials started the JBPHH master plan update, and Navy officials plan to complete the update in FY 2025. Therefore, the CNIC, in coordination with the Commander, Navy Region Hawaii, and the Commanding Officer, NAVFAC Hawaii, should update the JBPHH master plan to comply with the 5-year requirement, and include an installation resiliency component, in accordance with 10 U.S.C. § 2864, DoD Instruction 4165.70, and UFC 2-100-01. In addition, the CNIC, in coordination with the Commander, Navy Region Hawaii, and the Commanding Officer, NAVFAC Hawaii, should review and document the prioritization of JBPHH's future master planning efforts to ensure compliance with Federal and DoD requirements. Furthermore, the Commanding Officer, NAVFAC Hawaii, in coordination with the Commander, Pearl Harbor NSY, should direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant UFC, when developing and executing projects to address the risks identified during the master planning process for the existing dry docks at Pearl Harbor NSY.

(U) Commander, Navy Region Northwest Suspended Master Planning Efforts Until Completion of SIOP

(U) Navy officials at NBK did not update their master plan because in October 2020, the CNRNW suspended master planning efforts at NBK until the completion of ongoing SIOP efforts at Puget Sound NSY.²³ NBK's current master plan is dated September 2016 and therefore, to comply with DoD policies, CNRNW officials should have updated their master plan by September 2021. In June 2021, Puget Sound NSY started Phase 2, conducting APSs, part of the SIOP Area Development Plan (ADP) process.²⁴ According to CNRNW and NAVFAC officials, NBK did not update its master plan because the information included in the APSs and SIOP ADP would be similar to the information needed to develop portions of the NBK master plan. The CNRNW officials stated that it would have duplicated efforts and significantly wasted resources to update the NBK master plan before the completion of the SIOP APS and ADP development at Puget Sound NSY. For example, master planners are required to identify and assess risks from

²² (U) According to NAVFAC Hawaii officials, JBPHH's master plan would be updated as a contracted effort due to the significant updates required. However, JBPHH would return to in-house NAVFAC updates following the contracted effort.

²³ (U) SIOP personnel are responsible for conducting advanced planning assessments, which identify specific investments needed at each shipyard.

²⁴ (U) APSs provide more detailed planning and engineering analyses to complete a shipyard master plan, called an ADP. An ADP presents a detailed development master plan for a specific area within the installation, such as waterfront operations, where dry docks are located. The ADP shows both the short-term and long-term development plans and supports the master plan by addressing and resolving comprehensive planning issues within a localized area.

(U) the effects of extreme weather and climate change.²⁵ As part of the SIOP ADP process, SIOP planners conduct many comprehensive assessments, including a floodplain, tsunami, and sea level rise study, which would have supported complying with the DoD requirement for assessing these environmental threats and used in the master plan development. The information from SIOP's ADP process is critical to NBK master and project planning for environmental threats to Puget Sound NSY dry docks.

(U) According to Navy officials, NBK plans to complete its master plan update in FY 2025. Therefore, once the SIOP Puget Sound NSY ADP has been completed, the CNIC, in coordination with the CNRNW and the Commanding Officer, NAVFAC Northwest, should incorporate the results of the SIOP Puget Sound NSY ADP into the NBK master plan to comply with the 5-year requirement, and include an installation resiliency component in accordance with 10 U.S.C. § 2864, DoD Instruction 4165.70, and UFC 2-100-01. In addition, the Commanding Officer, NAVFAC Northwest, in coordination with the Commander, Puget Sound NSY, should direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant UFC, when developing and executing projects to address the risks identified during the master planning process for the existing dry docks at Puget Sound NSY.

(U) Clarity in SIOP's Role on Project and Master Planning Is Needed

(U) SIOP is a coordinated effort between NAVSEA, NAVFAC, and the CNIC and is integral to planning for environmental threats and master planning efforts. SIOP is executing the Navy's plan to construct and recapitalize dry docks, optimize infrastructure, and modernize industrial plant equipment at its four aging public naval shipyards to meet future needs. Through extensive advanced planning and engineering studies, SIOP is generating an ADP for each shipyard that, if implemented, will address operational efficiencies, current and future risks and threats, and aging infrastructure, at the shipyards. The impact SIOP has on Navy planners and the need for SIOP to issue key decisions within the program and establish clarity in roles and responsibilities between

(U) The impact SIOP has on Navy planners and the need for SIOP to issue key decisions within the program and establish clarity in roles and responsibilities between NAVSEA, NAVFAC, SIOP, and CNIC officials is critical to master planning efforts.

²⁵ (U) UFC 2-100-01, "Installation Master Planning," September 30, 2020.

(U) NAVSEA, NAVFAC, SIOP, and CNIC officials is critical to master planning efforts. The Chief of Naval Operations issued a roles and responsibilities memorandum that realigned the Program Executive Office Industrial Infrastructure (PEO II) with NAVFAC and realigned Program Management Office (PMO) 555 under PEO II.²⁶ The memorandum also included the following action items for NAVFAC and PEO II to complete by April and May 2022.

- (U) NAVFAC was to coordinate an agreement between CNIC, NAVSEA, and NAVFAC for lead support of PEO II; and
- (U) PEO II was to develop a SIOP Strategic Framework to communicate program objectives and implementation strategy, which would form the basis for overall SIOP execution at each shipyard.

(U) However, NAVFAC officials did not complete a lead support agreement for SIOP program execution until September 2022, and the agreement did not include CNIC, even though CNIC has shared, or led, aspects of responsibility for SIOP execution. NAVFAC also did not define the roles and responsibilities for the CNIC in relation to SIOP.²⁷ According to one NAVFAC official, although SIOP issued initial program guidance after four years, there has been a lack of transparency in leadership decision-making and clarity in defining SIOP versus NAVFAC project and master planning responsibilities. SIOP PMO 555 officials stated that the agreement between NAVSEA, NAVFAC, and the CNIC on how to execute the SIOP mission was delayed because there were “complexities to establishing a new program,” such as the process required for establishing SIOP as a Major Defense Acquisition Program, among other reasons.²⁸ A NAVFAC official stated that due to delays in issuing the roles and responsibilities memorandum discussed above and lack of clarity on roles and responsibilities, shipyards are taking a reactionary approach to planning efforts. For instance, the NAVFAC official stated that planners are developing projects that respond to a specific problem instead of developing projects that proactively mitigate the risk, and at times, duplicating planning efforts among the shipyards.

²⁶ (U) “Roles and Responsibilities for the Shipyard Infrastructure Optimization Program,” April 21, 2022.

²⁷ (U) “Operating Agreement for the Shipyard Infrastructure Optimization Program Within PEO Industrial Infrastructure,” September 30, 2022.

²⁸ (U) A Major Defense Acquisition Program is an acquisition program that is designated by the Secretary of Defense; or is estimated to require an eventual total expenditure of \$525 million for Research, Development, Test, Evaluation, or \$3.06 billion for procurement. The process involves multiple decision points that require approval prior to proceeding to the next phase before the overall program can be recognized, such as technology maturation and risk reduction phase and production and deployment phase.

~~(U)~~ NAVFAC planners at all four shipyards expressed frustration that they were unclear on what their role would be with project and master planning efforts. For example, in regards to master planning responsibilities, one NAVFAC official stated that they do not work for SIOP but played a significant role in executing SIOP's APS, including developing the scope of work requirements for the contract. As part of the SIOP implementation strategy, in October 2022, SIOP PMO 555 officials issued a concept of operations. The concept of operations included an accountability matrix that delegates tasks and responsibilities between organizations involved in executing SIOP's mission, including CNIC, NAVFAC, NAVSEA, and SIOP PMO 555 field office personnel.

[REDACTED]

(U) In addition to unclear roles and responsibilities for master planning, NAVFAC and SIOP officials could not clearly define a "SIOP" versus a regular shipyard project, which affected how projects were developed and approved among SIOP, NAVSEA, NAVFAC, and CNIC officials. For example, a NAVFAC official stated that it is a common practice for high-visibility projects to immediately be turned into SIOP projects, which then makes it difficult to determine who has planning responsibilities for the project. As of October 2022, the SIOP concept of operations provides some guidance to help Navy planners distinguish between what defines a SIOP project versus a non-SIOP project. However, according to NAVFAC officials, the definition of a SIOP project changes every year, which affects who is required to perform tasks. NAVFAC officials stated that only high-visibility projects were SIOP projects; however, now the concept of operations includes projects to maintain dry dock certifications as SIOP projects. Additionally, according to shipyard officials, the October 2022 guidance still does not provide the clarity needed to designate what planning roles and responsibilities exist among SIOP, NAVSEA, NAVFAC, and CNIC.

(U) SIOP encountered numerous challenges, including changes in organizational structure, reporting relationships, and limited resourcing. According to NAVSEA, NAVFAC, and SIOP PMO 555 officials, the multiple organizational changes in SIOP created confusion among NAVFAC and SIOP planners, and may have contributed to SIOP's delay in issuing key program documents. As the Navy plans to spend more than \$25 billion to improve the four aging shipyards, investments in critical infrastructure projects are integral to ensuring the Navy has the capacity to repair and in a timely manner, return ships and submarines to the fleet. Without

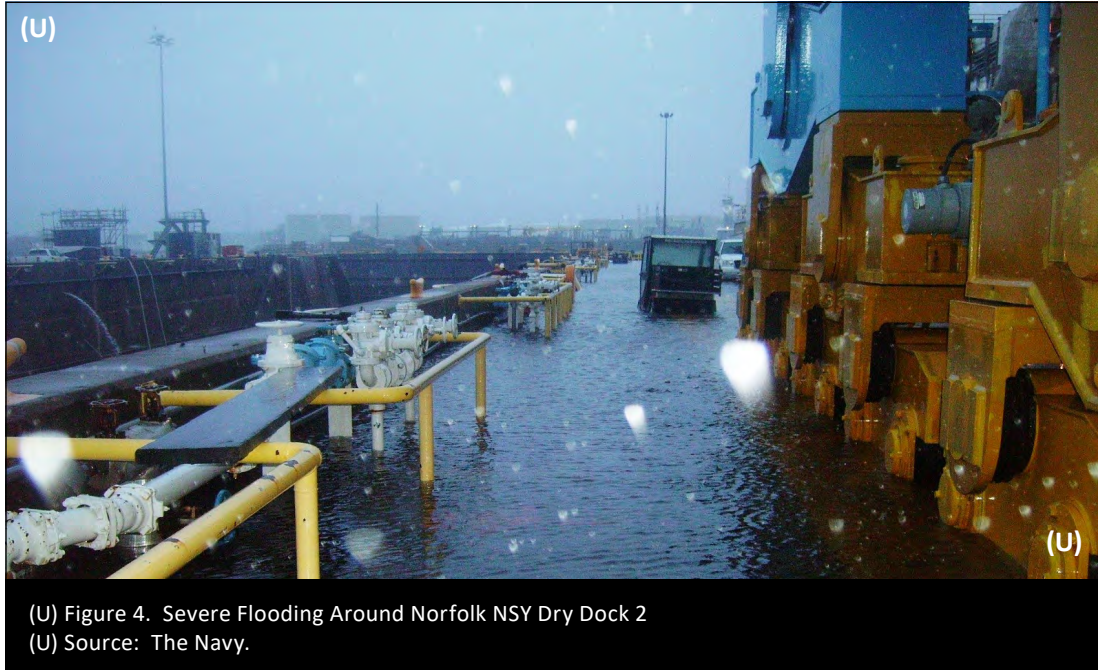
(U) providing clear guidance to SIOP and NAVFAC planners, SIOP and shipyard officials experienced inconsistent direction in master planning and individual project development. According to Navy planners, the inconsistent direction impacted the development and approval of critical infrastructure projects. Delayed investments in critical infrastructure projects leave the shipyards susceptible to further degradation and eventual obsolescence of equipment and facilities, hindering each shipyard’s ability to meet its mission in maintaining the Navy’s fleet, as well as degrading the Navy’s readiness. Therefore, the Program Executive Officer, PEO II, in coordination with the Commander, NAVFAC, should issue clear and comprehensive guidance that, at a minimum, identifies and defines Navy planner roles, responsibilities, tasks, and expectations within NAVFAC to execute SIOP master and project planning processes. Additionally, the guidance should establish a defined structure to communicate decisions on master planning and project development processes to all Navy planners located at the shipyards.

(U) Delayed investments in critical infrastructure projects leave the shipyards susceptible to further degradation and eventual obsolescence of equipment and facilities, hindering each shipyard’s ability to meet its mission in maintaining the Navy’s fleet, as well as degrading the Navy’s readiness.

(U) Naval Shipyards Are at an Increased Risk of Damage from Environmental Threats Without Proper Planning for Sea Level Change and Flooding

(U) Including the installation resiliency component in master plans is critical as the planners identify the environmental risks and threats to the military installation and plan projects to mitigate those identified risks and threats. Without having current, comprehensive master plans that include installation resilience components, naval shipyards are at an increased risk of sustaining catastrophic damage from environmental threats. For example, a 2009 storm in Portsmouth, Virginia caused significant flooding at Norfolk NSY that damaged Dry Dock 4 while a ship was undergoing maintenance, that could have resulted in catastrophic damage to the ship in dry dock. Therefore, planners developed projects that considered storm surge and flooding risks into the 2016 Norfolk NSY master plan. Had Navy officials properly planned and executed projects to mitigate these risks, Navy officials could have potentially reduced the damage that hindered the Navy’s ability to fulfil its mission. Updating master plans and including installation resilience components ensures that installation officials are regularly evaluating threats and identifying actions to improve their resilience against risks and threats, such as sea level change and flooding that could

(U) adversely impact mission readiness. See Figure 4 for severe flooding that Norfolk NSY experienced, specifically at Dry Dock 2, during an extreme weather event that caused nearly 8 feet of flooding in Norfolk, and widespread damage along the United States' east coast.



(U) Figure 4. Severe Flooding Around Norfolk NSY Dry Dock 2
(U) Source: The Navy.

(U) Recommendations, Management Comments, and Our Response

(U) Recommendation B.1

(U) We recommend that the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Mid-Atlantic, and the Commanding Officer, Naval Facilities Engineering Systems Command Mid-Atlantic:

- a. **(U) Update the Norfolk Naval Shipyard master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).**

(U) Commander, Navy Installations Command Comments

(U) The CNIC Director, Facilities and Environmental (N4), responding for the CNIC Commander and CNRMA Commander, agreed with the recommendation, stating that CNIC intends to fund the Norfolk NSY master plan update to satisfy DoD Instruction 4165.70 requirements. The Director stated that the Norfolk NSY master plan update would be complete by September 30, 2026.

(U) Our Response

(U) Comments from the Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive a copy of the updated Norfolk NSY master plan and verify that the master plan complies with DoD Instruction 4165.70 requirements.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, who was directed by the NAVFAC Commander to respond on behalf of the NAVFAC Mid-Atlantic Commanding Officer, partially agreed with the recommendation, stating that the CNRMA needs to prioritize and fund the master planning effort in order for NAVFAC to perform the update. In addition, the Inspector General requested that we amend Recommendation B.1.a with similar wording as Recommendation B.4 to require that the Norfolk NSY master plan update include the results from the SIOP ADP for Norfolk NSY.

(U) The Inspector General stated that the SIOP started the Norfolk NSY ADP effort in July 2023, and that the results of the SIOP ADP will be incorporated into the Norfolk NSY master plan to comply with the 5-year requirement in DoD Instruction 4165.70. The Inspector General also stated that the Public Works Department supports completion of the Norfolk NSY master plan update to comply with DoD Instruction 4165.70.

(U) Our Response

(U) Comments from the Inspector General addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive a copy of the updated Norfolk NSY master plan and verify that the master plan complies with DoD Instruction 4165.70 requirements.

(U) In response to the Inspector General's request to amend Recommendation B.1.a, we determined that the amendment would not be appropriate because the CNRMA's rationale for not updating the 2016 Norfolk NSY master plan in 2021 was not related to the SIOP's ongoing ADP efforts. In addition, the CNRMA elected to comply with the 10-year statutory requirement and not the 5-year DoD requirement. However, we recognize that the ongoing SIOP ADP efforts occurring at Norfolk NSY now affect completion of the Norfolk NSY master plan and encourage NAVFAC planners to include the results of the Norfolk NSY's SIOP ADP when developing the Norfolk NSY master plan.

- b. (U) Update the Norfolk Naval Shipyard master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code, and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022).**

(U) Commander, Navy Installations Command Comments

(U) The CNIC Director, Facilities and Environmental (N4), responding for the CNIC Commander and CNRMA Commander, agreed with the recommendation, stating that CNIC intends to fund the inclusion of the military installation resiliency component as part of the next update to the Norfolk NSY master plan, in accordance with 10 U.S.C. § 2864 and UFC 2-100-01. The Director stated that the Norfolk NSY master plan update would be complete by September 30, 2026.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Mid-Atlantic Commanding Officer, agreed with the recommendation, stating that Norfolk NSY will integrate military installation resiliency within the Norfolk NSY SIOP ADP and future Norfolk NSY master planning efforts in accordance with 10 U.S.C. § 2864 and UFC 2-100-01. The Inspector General stated that the Norfolk NSY master plan update, which would include the military installation resiliency component, would be completed in calendar year 2026.

(U) Our Response

(U) Comments from the Director and Inspector General addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive a copy of Norfolk NSY's military installation resiliency component and verify that the military installation resiliency component complies with Federal and DoD policy.

- c. (U) Review and document the prioritization of Norfolk Naval Shipyard's future master planning efforts to ensure compliance with Federal and DoD requirements.**

(U) Commander, Navy Installations Command Comments

(U) The CNIC Director, Facilities and Environmental (N4), responding for the CNIC Commander and CNRMA Commander, agreed with the recommendation, stating that CNIC intends to issue a CNIC Instruction to reinforce required funding of Federal and DoD master planning update requirements. In addition, the Director stated that CNIC and NAVFAC officials are developing guidance to ensure required

(U) master plan updates are clear to the master planning community and comply with Federal and DoD requirements. The Director also stated that the CNIC Instruction and additional guidance would be completed by March 30, 2024.

(U) Our Response

(U) Comments from the Director partially addressed the recommendation; therefore, the recommendation is unresolved. We agree that issuing policy to clarify the 5-year DoD requirement for updating master plans to the master planning community could help improve compliance with DoD Instruction 4165.70, as the timing of the Director's concurrence for updating the Norfolk NSY master plan, aligns with compliance with the 10 U.S.C. § 2864 10-year requirement rather than the more stringent DoD 5-year requirement.

(U) However, while the Director stated that CNIC would issue guidance to reinforce master plan update requirements in accordance with Federal and DoD policy, the Director did not specify how CNIC intends to review the prioritization of Norfolk NSY's master plan to ensure compliance with DoD Instruction 4165.70's requirement to update master plans every 5 years. Therefore, we request that, within 30 days of the final report, the CNIC Commander provide additional comments to clarify how the CNIC guidance and policy will address the prioritization of Norfolk NSY's future master planning efforts to ensure compliance with Federal and DoD requirements to update the Norfolk NSY master plan every 5 years.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Mid-Atlantic Commanding Officer, agreed with the recommendation, stating that Norfolk NSY officials will update local procedures for master planning and regularly scheduled master planning efforts, in accordance with Federal and DoD requirements. The Inspector General stated that the estimated completion date for the Norfolk NSY master plan would be in calendar year 2026.

(U) Our Response

(U) Comments from the Inspector General addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive the local Norfolk NSY guidance and regularly scheduled master planning efforts to verify that the Norfolk NSY master plan is prioritized and regularly planned for updating every 5 years, in accordance with Federal and DoD requirements.

(U) Recommendation B.2

(U) We recommend that the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Hawaii, and the Commanding Officer, Naval Facilities Engineering Systems Command Hawaii:

- a. **(U) Update the Joint Base Pearl Harbor-Hickam master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).**

(U) Commander, Navy Installations Command Comments

(U) The CNIC Director, Facilities and Environmental (N4), responding for the CNIC Commander and CNRH Commander, agreed with the recommendation, stating that CNIC funded and NAVFAC awarded a contract for a major update of the JBPHH master plan update on September 24, 2022. The Director stated that the JBPHH master plan update would be complete by September 15, 2025.

(U) Our Response

(U) Comments from the Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive a copy of the updated JBPHH master plan and verify that the master plan complies with DoD Instruction 4165.70 requirements.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Hawaii Commanding Officer, agreed with the recommendation and deferred to CNIC and the CNRH for ownership of the recommendation.

(U) Our Response

(U) Comments from the Inspector General did not address the specifics of the recommendation; therefore, the recommendation is unresolved. While we recognize that the CNIC Director agreed with the recommendation, NAVFAC officials execute the JBPHH master plan contract. Although CNIC may take ownership of the JBPHH master plan, NAVFAC officials have a critical role and are responsible for updating the JBPHH master plan and ensuring compliance with policy. Therefore, we request that within 30 days of the final report, the NAVFAC Hawaii Commanding Officer clarify the corrective actions NAVFAC Hawaii officials have taken or plan to take to update the JBPHH master plan to comply with DoD Instruction 4165.70.

- b. **(U) Update the Joint Base Pearl Harbor-Hickam master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code, and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022).**

(U) Commander, Navy Installations Command Comments

(U) The CNIC Director, Facilities and Environmental (N4), responding for the CNIC Commander and CNRH Commander, agreed with the recommendation, stating that CNIC funded and NAVFAC officials awarded a contract for a major update of the JBPHH master plan on September 24, 2022. NAVFAC officials awarded a modification to the JBPHH master plan update contract on September 15, 2023 that incorporated a military installation resiliency component. According to the Director, the military installation resiliency component will be completed in accordance with 10 U.S.C. § 2864 and UFC 2-100-01. The Director estimated that the JBPHH master plan update will be completed on September 15, 2025.

(U) Our Response

(U) Comments from the Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive a copy of JBPHH's military installation resiliency component and verify that the military installation resiliency component complies with Federal and DoD policy.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Hawaii Commanding Officer, agreed with the recommendation and deferred to CNIC and the CNRH for ownership of the recommendation.

(U) Our Response

(U) Comments from the Inspector General did not address the specifics of the recommendation; therefore, the recommendation is unresolved. NAVFAC officials have a critical role and are responsible for completing the resiliency assessments and ensuring compliance with Federal and DoD policy. While we recognize that the CNIC Director agreed with the recommendation, NAVFAC officials execute the JBPHH master plan contract, including completion of the military installation resiliency component. Therefore, we request that within 30 days of the final report, the NAVFAC Hawaii Commanding Officer clarify the corrective actions they have taken or plan to take to complete JBPHH's military installation resilience component to comply with 10 U.S.C. § 2864 and UFC 2-100-01.

- c. **(U) Review and document the prioritization of Joint Base Pearl Harbor-Hickam’s future master planning efforts to ensure compliance with Federal and DoD requirements.**

(U) Commander, Navy Installations Command Comments

(U) The CNIC Director, Facilities and Environmental (N4), responding for the CNIC Commander and CNRH Commander, agreed with the recommendation, stating that CNIC is drafting an instruction intended for Navy Regions to reinforce the need to fund master plan updates to meet Federal and DoD requirements. In addition, the Director stated that CNIC and NAVFAC are developing guidance to ensure that required master plan updates are clear to the master planning community and comply with Federal and DoD requirements. The Director stated that the guidance would be issued by March 30, 2024.

(U) Our Response

(U) Comments from the Director partially addressed the recommendation; therefore, the recommendation is unresolved. While the Director stated that CNIC would issue guidance to reinforce master plan update requirements in accordance with Federal and DoD policy, the Director did not specify how CNIC intends to review the prioritization of JBPHH’s master plan to ensure compliance with DoD Instruction 4165.70.

(U) We recognize in the report that JBPHH officials did not update their master plan in 2018 because the CNRH did not provide the resources for JBPHH to complete the update within 5 years. Therefore, we request that within 30 days of the final report, the CNIC Commander provide additional comments to clarify how the CNIC guidance will specify the prioritization of JBPHH’s future master planning efforts to ensure compliance with Federal and DoD requirements to update the JBPHH master plan every 5 years.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Hawaii Commanding Officer, agreed with the recommendation and deferred to CNIC and the CNRH for ownership of the recommendation.

(U) Our Response

(U) Comments from the Inspector General did not address the specifics of the recommendation; therefore, the recommendation is unresolved. While we recognize that the CNIC Director agreed with the recommendation, as the executors for completing master planning efforts for CNIC, NAVFAC officials have a critical role

(U) and responsibility for performing these updates. Specifically, NAVFAC officials are responsible for serving as the technical authority over Navy infrastructure and real property planning efforts. Therefore, we request that, within 30 days of the final report, the NAVFAC Hawaii Commanding Officer clarify the corrective actions they have taken or plan to take to ensure that JBPHH's future master planning efforts are completed in accordance with Federal and DoD policy.

(U) Recommendation B.3

(U) We recommend that the Commanding Officer, Naval Facilities Engineering Systems Command Hawaii, in coordination with the Commander, Pearl Harbor Naval Shipyard, direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant Unified Facilities Criteria, when developing and executing projects to address the risks identified during the master planning process for the existing dry docks at Pearl Harbor Naval Shipyard.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Hawaii Commanding Officer, agreed with the recommendation, stating that on December 8, 2022, NAVFAC established the 2023 NAVFAC Designer Handbook, which provides guidance and requirements related to project management during the design phase of Military Construction and non-Military Construction projects.

(U) The Inspector General stated that the Designer Handbook emphasizes that all Navy and Marine Corps facilities are designed to meet DoD and Navy criteria, including the UFC. In addition, the Inspector General stated that the guidance directs program managers to coordinate within NAVFAC for using the most current military construction guidance. Furthermore, the Inspector General stated that on August 30, 2023, NAVFAC incorporated DoD Directive 4715.21 into the Designer Handbook that was issued to Pearl Harbor NSY planners, and DoD Directive 4715.21 was also re-emphasized to NAVFAC Hawaii planners. Finally, the Inspector General stated that the office considers the recommendation to be complete.

(U) Our Response

(U) Comments from the Inspector General partially addressed the recommendation; therefore, the recommendation is unresolved. The Inspector General stated that a NAVFAC Designer Handbook provides guidance for designing projects to ensure compliance with UFC and other DoD and Navy criteria. In addition, the Inspector General stated that DoD Directive 4715.21 was re-emphasized to NAVFAC Hawaii

(U) planners. However, the Inspector General did not provide support that they directed planning officials to reassess or that they developed any projects that specifically address environmental risks identified during the master planning process for their existing dry docks.

(U) According to Navy officials, as of September 2023, Navy officials plan to complete the JBPHH master plan update in FY 2025. Therefore, we request that, within 30 days of the final report, the NAVFAC Hawaii Commanding Officer provide additional comments that address directing NAVFAC planning officials to apply environmental threat policies when developing and executing projects that incorporated environmental threat risks for the existing dry docks at Pearl Harbor NSY.

(U) Naval Sea Systems Command Comments

(U) The Acting Commander, NAVSEA, responding for the Pearl Harbor NSY Commander, agreed with the recommendation.

(U) Our Response

(U) Although the Acting Commander agreed to the recommendation, he did not provide corrective actions to implement the recommendation or estimated completion dates. Therefore, the recommendation is unresolved. We request that within 30 days of the final report, the Pearl Harbor NSY Commander provide comments on the final report of planned actions to implement the recommendation and completion dates.

(U) Pearl Harbor Naval Shipyard Program Management Office Comments

(U) Although not required to comment, the Pearl Harbor NSY PMO SIOP Director stated that they agreed with the recommendation and requested clarification in which planning officials NAVFAC was directing.

(U) Our Response

(U) We appreciate the comments provided by the Director. Our intent is that the NAVFAC Hawaii Commanding Officer would direct NAVFAC planning officials to coordinate across NAVFAC and Pearl Harbor NSY planning officials to ensure that relevant environmental threat policies are incorporated into projects so that the Pearl Harbor NSY dry docks are able to meet their mission and are not left vulnerable to current and future environmental threats.

(U) Recommendation B.4

(U) We recommend that once the Shipyard Infrastructure Optimization Program Area Development Plan has been completed, the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Northwest and the Commanding Officer, Naval Facilities Engineering Systems Command Northwest:

- a. **(U) Incorporate the results of the Shipyard Infrastructure Optimization Program Puget Sound Naval Shipyard Area Development Plan into the Naval Base Kitsap master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, “Real Property Management,” April 6, 2005 (Incorporating Change 1, August 31, 2018).**

(U) Commander, Navy Installations Command Comments

(U) The CNIC Director, Facilities and Environmental (N4), responding for the CNIC Commander and CNRNW Commander, agreed with the recommendation, stating that CNIC intends to fund and update the NBK master plan and Puget Sound NSY ADP by September 30, 2026.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Northwest Commanding Officer, agreed with the recommendation, stating that the SIOP ADP will be incorporated into the NBK master plan when updated. The Inspector General stated that the NBK master plan update is planned for execution in FY 2025, contingent upon resources and funding from the CNRNW.

(U) Our Response

(U) Comments from the Director and Inspector General addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive a copy of the updated NBK master plan, Puget Sound NSY SIOP ADP, and verify that the master plan incorporates results of the Puget Sound SIOP ADP, as well as complies with DoD Instruction 4165.70 requirements.

- b. **(U) Update the Naval Base Kitsap master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code and Unified Facilities Criteria 2-100-01, “Installation Master Planning,” September 30, 2020 (Change 1, April 8, 2022).**

(U) Commander, Navy Installations Command Comments

(U) The CNIC Director Facilities and Environmental (N4), responding for the CNIC Commander and the CNRNW Commander, agreed with the recommendation, stating that CNIC intends to fund and update the NBK master plan to include a military installation resiliency component, in accordance with 10 U.S.C. § 2864 and UFC 2-100-01. The Director stated that the NBK master plan update will be complete by September 30, 2026.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Northwest Commanding Officer, agreed with the recommendation, stating that an installation resiliency component will be incorporated into the NBK master plan when updated. The Inspector General stated that the NBK master plan update is planned for execution in FY 2025, contingent upon resources and funding from CNRNW.

(U) Our Response

(U) Comments from the Director and Inspector General addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive a copy of the NBK military installation resiliency component and verify that the military installation resiliency component complies with Federal and DoD policy.

(U) Recommendation B.5

(U) We recommend that the Commanding Officer, Naval Facilities Engineering Systems Command Northwest, in coordination with the Commander, Puget Sound Naval Shipyard, direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant Unified Facilities Criteria, when developing and executing projects to address the risks identified during the master planning process for the existing dry docks at Puget Sound Naval Shipyard.

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the NAVFAC Northwest Commanding Officer, agreed with the recommendation, stating that environmental policies, including applicable UFCs, will be applied during the master planning process. In addition, the Inspector General stated that NAVFAC plans to award the NBK master plan contract in FY 2025.

(U) Our Response

(U) Comments from the Inspector General did not address the specifics of the recommendation; therefore, the recommendation is unresolved. While the Inspector General agreed with the recommendation and stated that applicable policies will be applied during the master planning process, the Inspector General did not discuss directing NAVFAC planning officials to apply environmental threat policies during the project development and execution to ensure that such policies were incorporated for the existing dry docks at Puget Sound NSY. Therefore, we request that within 30 days of the final report, the NAVFAC Northwest Commanding Officer provide additional comments that identify specific actions that would address directing planning officials to apply environmental threat policies when developing and executing projects that incorporated environmental threat risks for the existing dry docks at Puget Sound NSY.

(U) Naval Sea Systems Command Comments

(U) The Acting Commander, NAVSEA, responding for Puget Sound NSY Commander agreed with the recommendation.

(U) Our Response

(U) Although the Acting Commander agreed to the recommendation, they did not provide corrective actions to implement the recommendation or estimated completion dates. Therefore, the recommendation is unresolved. We request that, within 30 days of the final report, the Puget Sound NSY Commander provide comments on the final report of planned actions to implement the recommendation and completion dates.

(U) Recommendation B.6

(U) We recommend that the Program Executive Officer, Program Executive Office Industrial Infrastructure, in coordination with the Commander, Naval Facilities Engineering Systems Command, issue clear and comprehensive guidance that at a minimum:

- a. **(U) Identifies and defines Navy planner roles, responsibilities, tasks, and expectations within Naval Facilities Engineering Systems Command and Shipyard Infrastructure Optimization Program to execute master and project planning processes.**

(U) Naval Facilities Engineering Systems Command Comments

(U) The NAVFAC Inspector General, responding for the Program Executive Officer for PEO II and the NAVFAC Commander, agreed with the recommendation, stating that PMO 555 will clearly codify planner roles, responsibilities, and expectations in an updated concept of operations document that will include accountability matrices to identify stakeholders with primary ownership of specific action. The concept of operations will also include sections on project development that define the governance structure of projects and how to communicate decisions. The Inspector General stated that the expected completion date is January 31, 2024.

(U) Our Response

(U) Comments from the Inspector General addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. While the Inspector General's response does not specifically differentiate between master and project planning roles as part of the updated concept of operations document, the Inspector General did state that the SIOP PMO will codify "planner" roles and responsibilities, which should include both master and project planning efforts. We will close the recommendation once we receive the updated SIOP concept of operations to verify that Navy planner roles, responsibilities, tasks, and expectations are clearly identified and defined within NAVFAC and SIOP as it relates to the master and project planning processes.

(U) Pearl Harbor Naval Shipyard Program Management Office Comments

(U) Although not required to comment, the Pearl Harbor NSY PMO SIOP Director stated that they agreed with the recommendation and requested the comprehensive guidance to include:

- (U) additional information when assigning decision authority,
- (U) defined expectations to measure quality, and
- (U) expectation boundaries to support SIOP as a Major Decision Acquisition Program.

(U) Our Response

(U) We appreciate the comments provided by the Director and agree that the suggested recommendations should be included as part of SIOP's comprehensive guidance issued.

- b. **(U) Establishes a defined structure to communicate decisions on master planning and project development processes to all Navy planners located at the shipyards.**

(U) Naval Facilities Engineering Systems Command Comments

(U) The Inspector General, responding for the Program Executive Officer for PEO II and the NAVFAC Commander, agreed with the recommendation, stating that PMO 555 will define both the governance structure of projects and how to communicate decisions in SIOP's updated concept of operations guidance. The Inspector General stated that the expected completion date is January 31, 2024.

(U) Our Response

(U) Comments from the Inspector General addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we receive the updated SIOP concept of operations and verify that the concept of operations establishes a defined structure to communicate decisions specific to the master and project planning process at the shipyards.

(U) Appendix A

(U) Scope and Methodology

(U) We conducted this performance audit from February 2022 through August 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

(U) Audit Universe and Sample Selection

(U) We identified a universe of 18 certified naval dry docks in the United States. Based on highest existing condition risks, planned or ongoing work, and mission of the dry dock, we selected a nonstatistical sample of seven dry docks to review. We also nonstatistically sampled two dry docks in the planning phase for review. The following are the nine dry docks included in our review.

- (U) Norfolk NSY – Dry Docks 4 and 8
- (U) Pearl Harbor NSY – Dry Docks 2, 4, and 5 (Dry Dock 5 is a planned dry dock)
- (U) Portsmouth NSY – Dry Dock 1
- (U) Puget Sound NSY – Dry Docks 3, 4 and 6 (Dry Dock 3 is a planned dry dock)

(U) Interviews and Documentation

(U) We interviewed officials from the Office of the Deputy Assistant Secretary of Defense (Environment and Energy Resilience), the Office of the Assistant Secretary of the Navy (Energy, Installations, and Environment), CNIC, NAVFAC, NAVSEA, and SIOP PMO 555, as well as Norfolk NSY, Pearl Harbor NSY, Portsmouth NSY, and Puget Sound NSY. We met with shipyard officials to discuss roles and responsibilities for master planning, as well as planning for and responding to environmental threats to dry docks.

(U) We obtained and reviewed master planning and project planning documents, including the following documents.

- (U) DD Form 1391, “Military Construction Project Data”²⁹
- (U) Basis of Designs

²⁹ (U) DD Form 1391, “Military Construction Project Data,” is the military construction project data sheet used to state the requirements and justifications in support of funding requests for military construction projects across the DoD. The form is submitted for all projects requiring Office of the Secretary of Defense approval, including major and minor new construction and certain projects involving operations and maintenance, restoration, and non-appropriated fund construction.

- (U) Statements of Architectural and Engineering Services
- (U) Technical specifications
- (U) Engineering drawings

(U) We also obtained and reviewed the following regulations and guidance.

- (U) 10 U.S.C. § 2864
- (U) Public Law 116-92, “The National Defense Authorization Act for FY 2020,” December 20, 2019
- (U) DoD Instruction 4165.70, “Real Property Management,” April 6, 2005, (Incorporating Change 1, August 31, 2018)
- (U) UFC 1-200-02, “High Performance and Sustainable Building Requirements,” December 1, 2016
- (U) UFC 2-100-01, “Installation Master Planning,” September 30, 2020, (Incorporating Change 1, April 8, 2022)
- (U) UFC 3-201-01, “Civil Engineering,” April 1, 2018, (Incorporating Change 5, April 1, 2021)
- (U) UFC 4-213-10, “Graving Dry Docks,” May 18, 2020
- (U) “NAVFAC Climate Change Planning Handbook: Installation Adaptation and Resilience,” January 2017 (Updated August 2021)

(U) Internal Control Assessment and Compliance

(U) We assessed internal controls and compliance with laws and regulations necessary to satisfy the audit objective. In particular, we assessed the Navy’s internal controls related to the planning for environmental threats to naval dry docks and installation master planning. However, because our review was limited to these internal control components and underlying principles, it might not have disclosed all internal control deficiencies that could have existed at the time of this audit.

(U) Use of Computer-Processed Data

(U) We did not use computer-processed data to perform this audit.

(U) Use of Technical Assistance

(U) We received technical assistance from engineers and evaluators in the Research and Engineering Directorate, Office of the Inspector General for Evaluations. The engineers and evaluators reviewed project planning documents, such as DD Forms 1391, basis of designs, and technical specifications, to conclude whether Navy officials incorporated climate resiliency measures into project designs in accordance with Federal and DoD policies.

(U) Prior Coverage

(U) During the last 5 years, the GAO issued five reports, and the DoD Office of Inspector General (DoD OIG) issued two reports, related to environmental threats. Unrestricted GAO reports can be accessed at <https://www.gao.gov/>. Unrestricted DoD OIG reports can be accessed at <http://www.dodig.mil/reports.html/>.

(U) GAO

(U) Report No. GAO-22-105993, “Naval Shipyards: Ongoing Challenges Could Jeopardize Navy’s Ability to Improve Shipyards,” May 2022

(U) The GAO found that the Navy had taken several actions to improve its public shipyards in recent years. Specifically, in 2018, the Navy began a 20-year, \$21 billion effort to modernize and optimize its shipyards, known as SIOP. In addition, the GAO found that the Navy invested in shipyard infrastructure above the minimum level set by Congress and the average condition of facilities at Navy shipyards had improved at three of the four shipyards from 2016 to 2020. However, the GAO also found that the Navy faces several remaining challenges to improving the infrastructure at the shipyards.

(U) Report No. GAO-20-64, “Naval Shipyards: Key Actions Remain to Improve Infrastructure to Better Support Navy Operations,” November 2019

(U) The GAO found that the Navy shipyards were struggling to meet the Navy’s current needs. However, the GAO also found that the Navy was attempting to address these concerns with the development of its SIOP. In the report, the GAO stated that determining the roles and responsibilities of the organizations involved in implementing SIOP would enhance the Navy’s ability to successfully complete the effort.

(U) Report No. GAO-20-127, “Climate Resilience: A Strategic Investment Approach for High-Priority Projects Could Help Target Federal Resources,” October 2019

(U) The GAO found that the U.S. Government did not strategically identify and prioritize projects to ensure they address the Nation’s most significant climate risks. The report stated that no Federal agency, interagency collaborative effort, or other organizational arrangement had been established to implement a strategic approach to climate resilience investment that includes periodically identifying and prioritizing projects. The GAO stated that such an approach could supplement individual agency climate resilience efforts and help target Federal resources toward high-priority projects.

(U) Report No. GAO-19-453, "Climate Resilience: DoD Needs to Assess Risk and Provide Guidance on Use of Climate Projections in Installation Master Plans and Facilities Designs," June 2019

(U) The GAO found that DoD installations did not consistently assess risks from extreme weather and climate change effects or consistently use projections to anticipate future climate conditions. Specifically, the GAO found that although 15 of 23 installations had considered extreme weather or climate change in their master plans, only 2 of the 15 installations had taken steps to fully assess the risks associated with the extreme weather climate change. In addition, the GAO found that although some installations designed or implemented construction projects that incorporated resilience to extreme weather or climate change, many of the installations did not consider climate projections in planning.

(U) Report No. GAO-17-548, "Naval Shipyards: Actions Needed to Improve Poor Conditions that Affect Operations," September 2017

(U) The GAO found that the Navy shipyard's facilities and equipment remain in poor condition and that the cost of backlogged shipyard restoration and maintenance projects had grown by 41 percent, to an estimated \$4.6 billion. In addition, the GAO found that the Navy's improvement plans for capital investment in facilities and equipment were missing key elements for capital investment in facilities and equipment at the shipyards. The report stated that the Navy's dry docks required modernization and that aging dry docks posed flooding and seismic vulnerability risks to the shipyards' ability to perform their depot repair mission.

(U) DoD OIG

(U) Report No. DODIG-2023-061, "Audit of Military Department Climate Change Assessments and Adaptation Plans in the Southeastern Continental United States," March 28, 2023

(U) The DoD OIG determined that the Military Departments did not consistently develop climate resilience assessments required by UFC 2-100-01 and the FY 2020 National Defense Authorization Act at five installations. Specifically, the DoD OIG found that personnel at five installations did not use a standardized approach to conduct and document their climate assessments because DoD guidance has not been updated to reflect changes in the law. Finally, the DoD OIG determined that the Military Departments did not update their guidance to identify the seven required elements from the FY 2020 National Defense Authorization Act or require assessment to use specific climate hazards established in UFC 2-100-01.

(U) Report No. DODIG-2022-083, "Evaluation of the Department of Defense's Efforts to Address the Climate Resilience of U.S. Military Installations in the Arctic and Sub-Arctic," April 13, 2022

(U) The DoD OIG determined that U.S. military installation leaders at the six Arctic and sub-Arctic installations visited did not conduct installation resilience assessments and planning required by DoD directive and public law. In addition, the DoD OIG found that most installation leaders at the six installations the DoD OIG visited in the Arctic and sub-Arctic region were unfamiliar with military installation resilience planning requirements, processes, and tools. Finally, the DoD OIG found that installation leaders did not comply with requirements to identify current and projected climate-related environmental risks, vulnerabilities, and risk reduction measures, or incorporate these considerations into plans and operations.

(U) Appendix B

(U) Section 2864, Title 10, United States Code, Military Installation Resilience Component Elements

(U) While the DoD has required installations to develop a master plan since 2005, 10 U.S.C. § 2864 required installations to assess for military installation resilience and how climate impacts affected the DoD's mission. Specifically, according to 10 U.S.C. § 2864, the commander of each major military installation was required to have a master plan that addresses environmental planning, real property master planning, and military installation resilience. Additionally, the seven climate elements were incorporated into the September 2020 update to UFC 2-100-01. Specifically, to address military installation resilience, each installation master plan must include the following seven elements.

1. (U) Risks and threats to installation resilience that exist at the time the plan is developed and that are projected for the future, including from extreme weather events, mean sea-level fluctuation, wildfires, flooding, and other changes in environmental conditions.
2. (U) Assets or infrastructure located on the installation vulnerable to the risks and threats described in the first bullet.
3. (U) Lessons learned from the impacts of extreme weather events, including changes made to the installation to address such impacts, since the prior Master Plan was developed.
4. (U) Ongoing or planned infrastructure projects or other measures at the time the plan was developed to mitigate the impacts of the risks and threats described in the first bullet.
5. (U) Community infrastructure and resources located outside the installation (such as medical facilities, transportation systems, and energy infrastructure) that are necessary to maintain mission capability or the resilience of the installation and vulnerable to the risks and threats described in the first bullet.
6. (U) Agreements in effect or planned with public or private entities for the purpose of maintaining or enhancing installation resilience or resilience of the community infrastructure and resources described in the fifth bullet.
7. (U) Projections from recognized governmental and scientific entities such as the U.S. Census Bureau, the National Academies of Sciences, the U.S. Geological Survey, and the U.S. Global Change Research Office with respect to future risks and threats (including the risks and threats described in the first bullet above) to the resilience of any project considered in the installation Master Plan during the 50-year lifespan of the installation.

(U) Management Comments

(U) Commander, Navy Installations Command



DEPARTMENT OF THE NAVY
COMMANDER NAVY INSTALLATIONS COMMAND
716 SICARD STREET SE SUITE 100
WASHINGTON NAVY YARD DC 20374-5140

7510
Ser N4/23U058
8 Sep 23

From: Commander, Navy Installations Command
To: Deputy Inspector General, Policy and Oversight, Department of Defense Inspector General
Subj: DRAFT REPORT ON AUDIT OF ENVIRONMENTAL THREATS TO NAVAL DRY DOCKS PROJECT NO. D2022-D000AH-0098.000
Ref: (a) DODIG Utilization Draft Report D2022-D000AH-0098.000 of 10 Aug 23

1. Per reference (a), the Commander, Navy Installations Command responses to recommendations B.1.a, B.1.b, B.1.c, B.2.a, B.2.b, B.2.c and B.4.a, B.4.b follow respectively. The recommendations from reference (a) are included, followed by the response.

Recommendation B.1: We recommend that the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Mid-Atlantic, and the Commanding Officer, Naval Facilities Engineering Systems Command Mid-Atlantic:

- a. Update the Norfolk Naval Shipyard master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).
- b. Update the Norfolk Naval Shipyard master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code, and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022).
- c. Review and document the prioritization of Norfolk Naval Shipyard's future master planning efforts to ensure compliance with Federal and DoD requirements.

Management Comments for Recommendation B.1: Concur.

- a. Commander, Navy Installations Command (CNIC) intends to fund via Commander, Navy Region Mid-Atlantic a major update of the Norfolk Naval Shipyard master plan. This update will satisfy the requirements of DoDI 4165.70. Estimated completion date for the master plan update is 30 September 2026.
- b. CNIC intends to fund a military installation resiliency component along with the next major update of the Norfolk Naval Shipyard master plan in accordance with section 2864, title 10, United States Code and Unified Facilities Criteria 2-100-01. Estimated completion date for the master plan update is 30 September 2026.

(U) Commander, Navy Installations Command (cont'd)

Subj: DRAFT REPORT ON AUDIT OF ENVIRONMENTAL THREATS TO NAVAL DRY DOCKS PROJECT NO. D2022-D000AH-0098.000

c. CNIC intends to issue guidance via CNIC Instruction to reinforce required funding of US Code and DoDI master plan update requirements. In addition, CNIC and Naval Facilities Engineering Systems Command (NAVFAC) are developing guidance to ensure required updates to satisfy US Code and DoDI 4165.70 are clear to the master planning community. Estimated completion date is 30 March 2024.

Recommendation B.2: We recommend that the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Hawaii, and the Commanding Officer, Naval Facilities Engineering Systems Command Hawaii:

a. Update the Joint Base Pearl Harbor-Hickam master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).

b. Update the Joint Base Pearl Harbor-Hickam master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code, and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022).

c. Review and document the prioritization of Joint Base Pearl Harbor-Hickam's future master planning efforts to ensure compliance with Federal and DoD requirements.

Management Comments for Recommendation B.2: Concur.

a. CNIC funded, and NAVFAC awarded, a contract for a major update of the Joint Base Pearl Harbor Hickam (JBPHH) master plan on 24 September 2022. This update will satisfy the requirements of DoDI 4165.70. Estimated completion date for the master plan update is 15 September 2025.

b. CNIC funded, and NAVFAC awarded, a contract for a major update of the Joint Base Pearl Harbor Hickam (JBPHH) master plan on 24 September 2022. CNIC intends to fund and NAVFAC plans to award a modification to this contract no later than 15 September 2023 to incorporate a military installation resiliency component in accordance with section 2864, title 10, United States Code and Unified Facilities Criteria 2-100-01. Estimated completion date for the master plan update is 15 September 2025.

c. CNIC is drafting an instruction to reinforce to CNIC regions of the need to fund master plan updates to meet US Code and DoDI requirements. In addition, CNIC and NAVFAC are developing guidance to ensure required updates to satisfy US Code and DoDI 4165.70 are clear to the master planning community. Estimated completion date is 30 March 2024.

Recommendation B.4: We recommend that once the Shipyard Infrastructure Optimization Program Area Development Plan has been completed, the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Northwest and the Commanding Officer, Naval Facilities Engineering Systems Command Northwest:

(U) Commander, Navy Installations Command (cont'd)

Subj: DRAFT REPORT ON AUDIT OF ENVIRONMENTAL THREATS TO NAVAL DRY DOCKS PROJECT NO. D2022-D000AH-0098.000

- a. Incorporate the results of the Shipyard Infrastructure Optimization Program Puget Sound Naval Shipyard Area Development Plan into the Naval Base Kitsap master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).
- b. Update the Naval Base Kitsap master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022)

Management Comments for Recommendation B.4: Concur.

- a. CNIC intends to fund via Commander, Navy Region Northwest, an area development plan for the Puget Sound Naval Shipyard area during the upcoming Naval Base Kitsap master plan major update. Estimated completion date for the master plan update is 30 September 2026.
- b. CNIC intends to fund a military installation resiliency component along with the next major update of the Naval Base Kitsap master plan in accordance with section 2864, title 10, United States Code and Unified Facilities Criteria 2-100-01. Estimated completion date for the master plan update is 30 September 2026.

2. The technical point of contact is [REDACTED] or by email at [REDACTED]. The CNIC IG audit liaison is [REDACTED] at [REDACTED].

CROSBYJASON.A
LLEN. [REDACTED]

J. A. CROSBY
By direction

Copy to:
CNRMA
CNRH
CNRNW

(U) Naval Facilities Engineering Systems Command



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
1322 PATTERSON AVENUE, SE SUITE 1000
WASHINGTON NAVY YARD DC 20374-5065

7500.1
Ser 09IG/024
11 Sep 23

From: Commander, Naval Facilities Engineering Systems Command
To: Department of Defense Office of the Inspector General, Program Director for Audit Acquisition, Contracting, and Sustainment
Subj: MANAGEMENT RESPONSE TO DRAFT REPORT ON AUDIT ENVIRONMENTAL THREATS TO NAVAL DRY DOCKS, PROJECT NO. D2022-D000AH-0098.000
Ref: (a) SECNAVINST 5200.34E
Encl: (1) Management Response to D2022-D000AH-0098.000
(2) Email from Inspector General, Commander, Navy Region Hawaii

1. Per reference (a), enclosures (1) and (2) are forwarded for review. The Naval Facilities Engineering Systems Command (NAVFAC) is requesting closure for recommendation B.3.
2. NAVFAC Headquarters' point of contact is [REDACTED]. You may reach [REDACTED].


S. J. FICHTER
By direction

Copy to:
NAVFAC Pacific
NAVFAC Atlantic

(U) Naval Facilities Engineering Systems Command (cont'd)

**NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MANAGEMENT RESPONSE TO DRAFT REPORT ON AUDIT ENVIRONMENTAL
THREATS TO NAVAL DRY DOCKS, PROJECT NO. D2022-D000AH-0098.000
DATED: 10 AUGUST 2023**

(U) **RECOMMENDATION B.1:** We recommend that the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Mid-Atlantic, and the Commanding Officer, Naval Facilities Engineering Systems Command Mid-Atlantic:

- a. (U) Update the Norfolk Naval Shipyard master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).
- b. (U) Update the Norfolk Naval Shipyard master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code, and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022).
- c. (U) Review and document the prioritization of Norfolk Naval Shipyard's future master planning efforts to ensure compliance with Federal and DoD requirements.

CURRENT STATUS: Partial Concur. Request that Recommendation B.1.a be amended to be consistent with Recommendation B.4.

- a. Partial Concur. (U) As stated in the report CNRMA elected to comply with the 10-year master plan development requirement in 10 U.S.C. 2864 instead of the 5-year master plan update requirement in DoD Instruction 4165.70. Performing this planning effort would require CNRMA to fund this effort. CNRMA FP funding for master planning is subject to availability and prioritization by the Regional Commander.

(U) Shipyard Infrastructure Optimization Program (SIOP) is starting the Area Development Plan (ADP) for NNSY. Results from this plan will be incorporated into the NNSY master plan to comply with the 5-year requirement in accordance with DoD instruction 4165.70 "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).

(U) PWD Portsmouth recommends and requests the NNSY master plan which will be used to bring NNSY into compliance with DoD instruction 4165.70.

- b. Concur. (U) NNSY will integrate military installation resiliency within the NNSY SIOP ADP and future NNSY master planning efforts in accordance with section 2864, title 10, United States Code and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022). Estimated completion of the NNSY master plan is calendar year 2026.
- c. Concur. (U) NNSY will update local procedures and regularly scheduled master planning efforts in accordance with Federal and DoD requirements beginning with the completion of the NNSY SIOP ADP in 1st quarter FY26. Estimated completion of the NNSY master plan is estimated in calendar year 2026.

Enclosure (1)

(U) Naval Facilities Engineering Systems Command (cont'd)

(U) The NNSY SIOP ADP is estimated to span from July 2023 to December 2025. Accounting for potential schedule delays, a NNSY master plan will be completed in calendar year 2026.

DATE COMPLETED/ESTIMATED COMPLETION DATE: 31 December 2026

(U) **RECOMMENDATION B.2:** We recommend that the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Hawaii, and the Commanding Officer, Naval Facilities Engineering Systems Command Hawaii:

- a. (U) Update the Joint Base Pearl Harbor-Hickam master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).
- b. (U) Update the Joint Base Pearl Harbor-Hickam master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code, and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022).
- c. (U) Review and document the prioritization of Joint Base Pearl Harbor- Hickam's future master planning efforts to ensure compliance with Federal and DoD requirements.

CURRENT STATUS: Concur. Commander, Navy Installations Command, in coordination with the Commander, Navy Region Hawaii has stated ownership for this recommendation and will respond separately. See enclosure (2).

DATE COMPLETED/ESTIMATED COMPLETION DATE: TBD

(U) **RECOMMENDATION B.3:** (U) We recommend that the Commanding Officer, Naval Facilities Engineering Systems Command Hawaii, in coordination with the Commander, Pearl Harbor Naval Shipyard, direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant Unified Facilities Criteria, when developing and executing projects to address the risks identified during the master planning process for their existing dry docks.

CURRENT STATUS: Concur. On 08 December 2022, NAVFAC established the 2023 NAVFAC Designer Handbook. The handbook provides guidance and requirements pertaining to project management during the design phase of projects and addresses both Military Construction (MILCON) and non-MILCON and emphasizes that All Navy and Marine Corps facilities are designed to meet U.S. Department of Defense (DOD) and Navy criteria, including Unified Facilities Criteria (UFC), Facilities Criteria (FC), Interim Technical Guidance (ITG), as well as other types of policy and criteria documents. This guidance directs PM to coordinate with the NAVFAC Echelon III and IV MILCON Program Managers for the most current templates and examples for MILCON change documentation. The handbook provides guidance on risks and the utilization of checklist to ensure compliance. UFC will be used for all DoD projects and work for other customers

(U) Naval Facilities Engineering Systems Command (cont'd)

where appropriate. On 30 August 2023, DoD 4715.21 was incorporated and issued to PHNSY Planning Officials and re-emphasized to NAVFAC Hawaii Planners. NAVFAC considers this action complete.

COMPLETION DATE: 30 August 2023

(U) **RECOMMENDATION B.4:** We recommend that once the Shipyard Infrastructure Optimization Program Area Development Plan has been completed, the Commander, Navy Installations Command, in coordination with the Commander, Navy Region Northwest and the Commanding Officer, Naval Facilities Engineering Systems Command Northwest:

a. (U) Incorporate the results of the SIOP Puget Sound Naval Shipyard Area Development Plan into the Naval Base Kitsap master plan to comply with the 5-year requirement in accordance with DoD Instruction 4165.70, "Real Property Management," April 6, 2005 (Incorporating Change 1, August 31, 2018).

b. (U) Update the Naval Base Kitsap master plan to include a military installation resiliency component in accordance with section 2864, title 10, United States Code and Unified Facilities Criteria 2-100-01, "Installation Master Planning," September 30, 2020 (Change 1, April 8, 2022).

CURRENT STATUS: Concur. Shipyard Infrastructure Optimization Program (SIOP) Puget Sound Naval Shipyard Area Development Plan and resiliency will be incorporated in the Naval Base Kitsap (NBK) Installation Development Plan (IDP) when updated. The NBK IDP update is planned for execution in FY25. The NBK IDP update is planned for execution in FY25, contingent upon resources and funding by CNRNW is provided to support.

DATE COMPLETED/ESTIMATED COMPLETION DATE: FY25

(U) **RECOMMENDATION B.5:** (U) We recommend that the Commanding Officer, Naval Facilities Engineering Systems Command Northwest, in coordination with the Commander, Puget Sound Naval Shipyard, direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant Unified Facilities Criteria, when developing and executing projects to address the risks identified during the master planning process for their existing dry docks.

CURRENT STATUS: Concur. Environmental policies and applicable UFC will be applied in the Master Planning process when existing Installation Development Plans are updated, currently planned for award in FY25.

(U) Naval Facilities Engineering Systems Command (cont'd)

DATE COMPLETED/ESTIMATED COMPLETION DATE: FY25

(U) **RECOMMENDATION B.6:** We recommend that the Program Executive Officer, Program Executive Office Industrial Infrastructure, in coordination with the Commander, Naval Facilities Engineering Systems Command, issue clear and comprehensive guidance that at a minimum:

- a. (U) Identifies and defines Navy planner roles, responsibilities, tasks, and expectations within Naval Facilities Engineering Systems Command and Shipyard Infrastructure Optimization Program to execute master and project planning processes.
- b. (U) Establishes a defined structure to communicate decisions on master planning and project development processes to all Navy planners located at the shipyards.

CURRENT STATUS: Concur. PMO 555 will clearly codify planner roles, responsibilities, task, and expectations in SIOF's Concept of Operations (CONOPS) 2.0. The CONOPS will include accountability matrices that identify stakeholders with primary ownership of specific actions, sections that cover Programming and Development of SIOF Facility Investment Projects, Change Management which defines the governance structure of projects and how to communicate decisions, and Project Development Guidance.

DATE COMPLETED/ESTIMATED COMPLETION DATE: 31 January 2024

(U) Naval Sea Systems Command



DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
1333 ISAAC HULL AVE SE
WASHINGTON NAVY YARD DC 20376-0001

IN REPLY REFER TO
7502
Ser 00/ 440
12 Oct 23


From: Commander, Naval Sea Systems Command
To: Inspector General, Department of Defense

Subj: NAVAL SEA SYSTEMS COMMAND REVIEW OF DEPARTMENT OF DEFENSE
OFFICE OF THE INSPECTOR GENERAL DRAFT REPORT, PROJECT NO.
D2022-D000AH-0098.000

Ref: (a) DoD OIG Draft Report, Project No. D2022-D000AH-0098.000

Encl (1) Naval Sea Systems Command Recommendation Response to Department of Defense
Office of the Inspector General Draft Report, Project No. D2022-D000AH-0098.000

1. Per reference (a), enclosure (1) contains the Naval Sea Systems Command's concurrence with report recommendations B.3 and B.5 on DoD OIG Draft Report, "Audit of Environmental Threats to Naval Dry Docks" of 10 Aug 2023.
2. My point of contact for this matter is [REDACTED]. She can be reached at [REDACTED], or at [REDACTED].


THOMAS J. ANDERSON
Acting

(U) Naval Sea Systems Command (cont'd)

**NAVAL SEA SYSTEMS COMMAND RECOMMENDATION RESPONSE TO
DEPARTMENT OF DEFENSE OFFICE OF THE INSPECTOR GENERAL DRAFT
REPORT
PROJECT NO. D2022-D000AH-0098.000**

Recommendation B.3: We recommend that the Commanding Officer, Naval Facilities Engineering Systems Command Hawaii, in coordination with the Commander, Pearl Harbor Naval Shipyard, direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant Unified Facilities Criteria, when developing and executing projects to address the risks identified during the master planning process for their existing dry docks.

NAVSEA Response: NAVSEA concurs with the recommendation.

Estimated Date of Completion: Not Applicable

Recommendation B.5: We recommend that the Commanding Officer, Naval Facilities Engineering Systems Command Northwest, in coordination with the Commander, Puget Sound Naval Shipyard, direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant Unified Facilities Criteria, when developing and executing projects to address the risks identified during the master planning process for their existing dry docks .

NAVSEA Response: NAVSEA concurs with the recommendation.

Estimated Date of Completion: Not Applicable

(U) Pearl Harbor Naval Shipyard Shipyard Infrastructure Optimization Program Program Management Office



DEPARTMENT OF THE NAVY
PROGRAM EXECUTIVE OFFICE INDUSTRIAL INFRASTRUCTURE
1322 PATTERSON AVENUE SE SUITE 1000
WASHINGTON NAVY YARD DC 20374-5065

11 Sep 23

From: Director, Shipyard Infrastructure Optimization Program (SIOP) Department, Pearl Harbor Naval Shipyard (PMO 555)

Subj: DODIG Audit of Environmental Threats To Naval Drydocks, DODIG 2022-0098 - Corrective Recommendations

1. This letter provides PMO 555 PHNS Field Office comments to the subject DODIG Audit report.

(U) Recommendation B.3

(U) We recommend that the Commanding Officer, Naval Facilities Engineering Systems Command Hawaii, in coordination with the Commander, Pearl Harbor Naval Shipyard, direct planning officials to apply environmental threat policies, such as DoD Directive 4715.21 and relevant Unified Facilities Criteria, when developing and executing projects to address the risks identified during the master planning process for their existing dry docks.

PMO 555 PHNS Field Office Comment:

Agree with recommendation however, we recommend rewording “planning officials” to include a command/organization for better clarity on who is being directed to carry out the recommendation.

(U) Recommendation B.6

(U) We recommend that the Program Executive Officer, Program Executive Office Industrial Infrastructure, in coordination with the Commander, Naval Facilities Engineering Systems Command, issue clear and comprehensive guidance that at a minimum:

- a. (U) Identifies and defines Navy planner roles, responsibilities, tasks, and expectations within Naval Facilities Engineering Systems Command and Shipyard Infrastructure Optimization Program to execute master and project planning processes.
- b. (U) Establishes a defined structure to communicate decisions on master planning and project development processes to all Navy planners located at the shipyards.

PMO 555 PHNS Field Office Comment:

Agree with recommendation. Recommend “comprehensive guidance” include the following:

- additional detail to assign decision authority
- defined expectations to measure quality
- expectations boundaries to support SIOP as a Major Defense Acquisition Program

2. Submittal Approved by Joanna Victorino, Director, SIOP Department PHNS, PMO 555.

VICTORINO.JO
ANNA.T
S
J. T. S. VICTORINO

(U) Acronyms and Abbreviations

ADP	Area Development Plan
APS	Advanced Planning Study
CNIC	Commander, Navy Installations Command
CNRMA	Commander, Navy Region Mid-Atlantic
CNRNW	Commander, Navy Region Northwest
JBPHH	Joint Base Pearl Harbor-Hickam
NAVFAC	Naval Facilities Engineering Systems Command
NAVSEA	Naval Sea Systems Command
NBK	Naval Base Kitsap
NOAA	National Oceanic and Atmospheric Administration
NSY	Naval Shipyard
PEO II	Program Executive Office Industrial Infrastructure
PMO	Program Manager Office
SIOP	Shipyard Infrastructure Optimization Program
UFC	Unified Facilities Criteria
U.S.C.	United States Code



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703.604.8324

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public.affairs@dodig.mil; 703.604.8324

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