DEPARTMENT OF DEFENSE

Department of the Navy

Record of Decision for the Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility Final Environmental Impact Statement

AGENCY: Department of the Navy, Department of Defense

ACTION: Record of Decision

SUMMARY: The United States (U.S.) Department of the Navy (Navy), after carefully weighing the strategic, operational, and environmental consequences of the proposed action, announces its decision to select Alternative 4 (Preferred Alternative) from the *Final Environmental Impact Statement for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility at Joint Base Pearl Harbor-Hickam, Oahu, Hawaii* (hereafter, Final EIS). This alternative will support the Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility's (PHNSY & IMF's) mission to repair, maintain, and modernize Navy fast-attack submarines and surface ships. Additionally, this alternative will allow the Navy to provide appropriate dry dock capability to meet submarine depot maintenance mission requirements no later than January 2028, as well as build and operate a properly sized and configured waterfront production facility (WPF) to enable efficient vessel maintenance.

The selected alternative involves construction, operation, and maintenance of a graving dry dock (herein, Dry Dock [DD]5) and an adjacent multiple support concept WPF located east of DD5, as well as auxiliary facilities, a new weight-handling system (crane type), and upgraded utilities. The proposed dry dock will replace existing DD3 and will be given a new dry dock number, DD5. DD5 will be of sufficient size to support maintenance of current and future classes of fast-attack submarines. The WPF will reduce lost operational days by increasing collaboration and efficiency among the workforce. The proposed project's construction-related actions will include dredging, filling, pile driving, installing new temporary and permanent in-water structures, demolishing existing landside structures, and constructing new temporary and permanent landside facilities.

Joint Base Pearl Harbor-Hickam (JBPHH) and Program Manager Office 555, Shipyard Infrastructure Optimization Program (SIOP), (both Commands of the Navy) are the co-action proponents. During the EIS process, the Navy worked closely with the following cooperating agencies: U.S. Army Corps of Engineers (USACE), Honolulu District; U.S. Environmental Protection Agency (EPA), Region 9; and the National Marine Fisheries Service (NMFS), Pacific Islands Regional Office. In accordance with a signed Programmatic Agreement (PA) (May 25, 2022), the Navy is consulting with interested parties, including Native Hawaiian Organizations, on the selected alternative's potential to affect historic properties, pursuant to sections 106 and 110 of the National Historic Preservation Act (NHPA).

The Navy's selected alternative adopts all practicable means to avoid or minimize environmental harm. Specific provisions, best management practices (BMPs), and Navy commitments are discussed in this Record of Decision (ROD).

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A. SUPPLEMENTARY INFORMATION: Pursuant to section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969 (42 United States Code section 4321 et seq.), Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] parts 1500–1508), and Navy regulations (32 CFR part 775), the Navy announces its decision to select Alternative 4 (Preferred Alternative) as described in the Final EIS. Additionally, the Navy selects weight-handling system Option 1 (Portal Crane), Electrical Interconnect Option 3, basin water treatment system (BWTS) Option 2, and Workforce Transportation Options 1 through 5.

Under Alternative 4, the Navy will construct a new DD5 and a WPF at PHNSY & IMF. The WPF supports the new dry dock and existing DD2 thereby substantially improving efficiency and mission capability.

Weight-handling system Option 1 (Portal Crane) supports side lifting requirements at DD5, with fewer height restrictions, and is compatible with existing infrastructure. Because the existing dry docks are currently supported by portal cranes, there will be fewer impacts to utility systems, fire support systems, and support buildings than would occur if new weight-handling technology were introduced.

Electrical Interconnect Option 3 maximizes use of existing infrastructure, minimizes underground lines, and taps the existing power feeder lines within JBPHH, thereby eliminating the need for easements across City of Honolulu or State of Hawaii–owned lands. Portions of routes sited near residential areas south of South Avenue will have underground lines and will avoid mature trees.

BWTS Option 2 will not rely on the existing wastewater treatment plant (WWTP), thereby eliminating the potential for added strain on that utility. BWTS Option 2 will require a new underground pipeline to connect DD5 to the existing outfall at Mamala Bay. As noted in the Final EIS, the Navy is upgrading the existing WWTP. Once complete (expected by 2026), the Navy may reassess the need for the BWTS. Under either scenario, DD5 basin water will be treated prior to discharge and will comply with a National Pollutant Discharge Elimination System (NPDES) Discharge Permit.

Workforce Transportation Options 1 through 5 provide the Navy with maximum flexibility for traffic control to minimize construction related traffic impacts. Multiple workforce transportation options will allow the Navy to adaptively manage potential traffic-related impacts by directing construction traffic away from high-traffic areas.

The selected alternative and options best balance operational needs while minimizing environmental impacts.

B. BACKGROUND: Over the last two decades, inadequate facilities and equipment led to maintenance delays that contributed in part to more than 12,500 lost operational days for submarines. To address these deficiencies, the Secretary of the Navy established SIOP in February 2018. SIOP is a broad program of investment in shipyard infrastructure modernization and optimization. The Navy is improving infrastructure at its four aging shipyards: PHNSY & IMF, Norfolk Naval Shipyard, Portsmouth Naval Shipyard, and Puget Sound Naval Shipyard & IMF.

Depot-level maintenance such as major repair, overhaul, or modernization of current and future classes of fast-attack submarines at the PHNSY & IMF requires a minimum of four dry docks. To maintain this capability, the Navy must replace the smallest of the dry docks and consolidate maintenance shop work closer to the dry dock to increase efficiency and reduce the number of lost operational days.

Purpose of and Need for the Proposed Action

PHNSY & IMF's mission is to repair, maintain, and modernize Navy fast-attack submarines and surface ships. The purpose of the proposed action is to provide appropriate dry dock capability at PHNSY & IMF no later than January 2028 to meet submarine depot maintenance mission requirements, as well as build and operate a properly sized and configured WPF to enable efficient submarine maintenance.

The proposed action is needed because the existing DD3 at PHNSY & IMF does not have the necessary length or floor strength to accommodate current and future class fast-attack submarines. Additionally, an appropriately sized and adjacent WPF is needed to reduce lost operational days by increasing collaboration and efficiency among the workforce. The culmination of a replacement dry dock and new WPF will ensure that the Navy achieves necessary efficiencies and is capable of fulfilling scheduled maintenance requirements. The mission need date of January 2028 is driven by current projected fleet maintenance schedules.

Alternatives Considered

The Navy conducted a preliminary engineering study to evaluate design options for the dry dock type and location, weight-handling system (crane type), and WPF location and size. The Navy developed screening factors to evaluate these design options to determine which ones would meet the purpose and need for the proposed action (see Final EIS, Appendix F, for more detail). The proposed replacement dry dock location was a key driver in determining reasonable options for the WPF location and supporting infrastructure. The Navy evaluated dry dock design options through the screening process first because the type and location of the dry dock informs the range of possible WPF design options. The Navy used the following primary screening criteria to evaluate potential alternatives:

<u>Dry Dock Screening Criteria</u>

- *Operational Efficiency*
  - Support the Pacific Fleet submarine concentration area
  - Be a nuclear-certified dry dock
  - Accommodate future classes of fast-attack submarines
  - Accommodate co-location of a WPF
  - Accommodate a safe, accurate, and precise weight-handling service (capacity)
  - Meet vessel dry docking safety requirements
  - Be in service by the mission need date of January 2028
  - Meet the 100-year design life project design requirement
- *Impacts to Shipyard Operations During and After Construction* - It is critical that operational capabilities at PHNSY & IMF are maintained during the construction of a dry dock and WPF. Specifically, construction of the dry dock must:
  - Be sequenced to not disrupt scheduled availabilities of existing dry docks during construction
  - Not result in impacts to vessel traffic in the Main Channel

<u>WPF Screening Criteria</u>

- *Operational Efficiency*
  - Support the Pacific Fleet submarine concentration area

- Allocate shipyard resources to the waterfront adjacent to dry dock(s) served
- Accommodate safe, accurate, and precise weight-handling service (capacity)
- Meet the 50-year design life project design requirement

- *Impacts to Shipyard Operations During and After Construction*. Construction of the WPF must be sequenced to not disrupt shipyard operations during construction.

The screening process resulted in the development of four action alternatives (Alternatives 2 through 5) that the Navy carried forward for evaluation in the EIS. All action alternatives include construction, operation, and maintenance of a graving dry dock (DD5) and adjacent WPF. Due to space constraints at the waterfront, construction and operation of DD5 and the WPF will occur in two distinct stages, with Stage 1 construction and operation of an uncovered DD5 occurring first, followed by Stage 2 construction and operation of a covered DD5 (depending on the alternative) and the WPF. Action alternatives are differentiated in Stage 2 by the location of the WPF, the potential number of dry docks served by the WPF (single or multiple), and whether the dry dock is covered or uncovered. In addition to the varied configurations of DD5 and the WPF, the EIS considered auxiliary facility and construction workforce transportation options. Alternatives carried forward in the Final EIS and supporting options are described below.

Alternative 1 (No Action Alternative). The Navy would not implement the proposed action and there would be no change to existing facilities. This alternative does not meet the purpose and need of the proposed action. In this EIS, the No Action Alternative acts as a baseline and is used as a comparative tool to evaluate the potential impacts of the proposed action alternatives. The No Action Alternative is the environmentally preferred alternative; however, it fails to meet the Navy's purpose and need for the proposed action.

Alternative 2. Stage 1 includes construction and operation of an uncovered DD5 west of DD3, auxiliary facilities, a weight-handling system, and upgraded utilities. Stage 2 includes construction and operation of a covered DD5 with a two-story multiple support concept WPF located east of DD5.

Alternative 2, Stage 1 components (Note: Stage 1 construction activities are common to all action alternatives):

- Construction of an uncovered DD5 located west of the existing DD3
- Dry dock operation using one of three weight-handling systems described in the "Auxiliary Facility and Workforce Transportation Options" section of this ROD
- Installation of new electrical, telecommunications, and mechanical utilities
    - Electrical interconnect through one of the three route options from Makalapa Substation to a new proposed substation at PHNSY & IMF, as described in the "Auxiliary Facility and Workforce Transportation Options" section of this ROD
    - BWTS as described in the "Auxiliary Facility and Workforce Transportation Options" section of this ROD
- In-water work, including: (1) demolishing existing structures at DD5, (2) dredging, filling, and installing in-water structures at DD5 and construction support facilities located at PHNSY & IMF, Waipio Peninsula, and Pearl City Peninsula, (3) installing in-water structures at Ford Island, and (4) removing Phase 1 construction support facilities

- Dredging occurs 24 hours per day, 7 days per week, except in areas where Navy believes there is a potential for munitions and explosives of concern (MEC) dredging, where dredging occurs for up to a 12-hour duration at night due to the potential to encounter MEC - durations for dredge activity by location are approximately 15 months at DD5 and 2 months for the Waipio Peninsula and Pearl City Peninsula
- Dredging within the Pearl Harbor Naval Complex, identified on the National Priority List under the EPA's Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Disposal of dredge material at a designated landfill (capacity reserved) or via ocean disposal (for sediments collected outside of the CERCLA area) if determined to be suitable; the Navy has implemented sediment sampling and testing in accordance with an approved Sampling and Analysis Plan and anticipates a suitability determination from EPA in Spring 2023
- Pile driving activity would occur during daylight hours for the following durations at each site:
  - DD5: 7 days per week, approximately 14 months (but could extend longer if unusual conditions are encountered)
  - Waipio Peninsula: 7 days per week, 3 to 4 months
  - Pearl City Peninsula: 7 days per week, 2 to 3 months
  - Ford Island: 7 days per week, 1 month

- Landside work, including: (1) installation of new security fencing, excavation, trenching, paving and road resurfacing, (2) building and facility demolition (20 permanent and 22 temporary facilities), (3) relocation of the crane maintenance area, (4) construction of the weight-handling system and new auxiliary buildings, and (5) landside pile driving
- Construction workforce of an estimated 700 workers, with approximately 375 workers per shift (two shifts per day)
  - Construction workforce shifts are 7 days per week for 10 to 12 hours; for flexibility in traffic control, workforce transportation includes one or a combination of the five routes described in the "Auxiliary Facility Options" section of this ROD
- Construction period of 65 months - although the Final EIS assumes a 65-month construction period as a bounding case, the construction period could be reduced through refinements made during the project design process

Alternative 2, Stage 2 components:

- Construction of a dry dock cover that connects DD5 to the WPF
- Construction and operation of a two-story WPF located east of DD5, serving both DD2 and DD5
- Modification of the weight handling system (as needed)
- Decommissioning, demolishing, and filling the existing DD3
- In-water work, including installation of construction support facilities at the Waipio Peninsula, Pearl City Peninsula, and Ford Island as described under Stage 1, and approximately 4 months of additional pile driving near the PHNSY & IMF WPF construction site; construction support facilities would be removed following construction of the WPF and DD cover
- Landside work, including: (1) installation of temporary construction support facilities at Waipio Peninsula and Pearl City Peninsula, (2) building and facility demolition (17 facilities), (3) installation

of the weight-handling system, (4) installation of a concrete wall landside of the opening (caisson) of DD3, and (5) fill

- Construction workforce of an estimated 300 workers - for flexibility in traffic control, workforce transportation would be through one or a combination of the five routes described in the "Auxiliary Facility Options" section of this ROD
- A construction period of 42 months

Alternative 3. Stage 1 includes construction and operation of an uncovered DD5 and auxiliary facilities, a weight-handling system, and upgraded utilities. Stage 2 includes construction and operation of a covered DD5 with two-story single support concept WPF located west of DD5.

Alternative 3, Stage 1 components are the same as described for Alternative 2.

The primary difference between Alternative 3 and Alternative 2 during Stage 2 is the WPF is located west of DD5, the WPF is smaller, and only serves DD5. Another key difference is that DD3 is decommissioned and not demolished or filled.

Alternative 3, Stage 2 components:

- Construction of a dry dock cover that connects DD5 to the WPF
- Construction and operation of a two-story WPF located west of DD5, serving only DD5
- Modification of the weight handling system (as needed)
- Decommissioning the existing DD3
- In-water work is the same as described for Alternative 2
- Landside work is the same as described for Alternative 2, except there is no demolition of facilities under Stage 2, and no installation of a concrete wall and fill of DD3 as part of WPF construction
- Construction workforce and workforce transportation options are the same as described for Alternative 2
- Construction period of 35 months (7 months shorter than Alternative 2)

Alternative 4 (Preferred and Selected Alternative). Stage 1 includes construction and operation of an uncovered DD5 and auxiliary facilities, a weight-handling system, and upgraded utilities. Stage 2 includes construction and operation of an uncovered DD5 with a three-story multiple support concept WPF located east of DD5.

Alternative 4, Stage 1 components are the same as described for Alternative 2. In addition, the Navy selects the following:

- Weight-handling system Option 1 (Portal Crane)
- Electrical Interconnect Option 3
- BWTS Option 2
- Workforce Transportation Options 1 through 5

The primary differences between Alternative 4 and Alternative 2 during Stage 2 are the WPF is three stories rather than two, and the dry dock is uncovered.

Alternative 4, Stage 2 components:

- Construction and operation of a three-story WPF located east of DD5, serving both DD2 and DD5
- Decommissioning, demolishing, and filling DD3 (the same as described for Alternative 2)

- In-water work is the same as described for Alternative 2
- Landside work is the same as described for Alternative 2
- Construction workforce the same as described for Alternative 2
- Construction period the same as described for Alternative 2 (42 months)

Alternative 5. Stage 1 includes construction and operation of an uncovered DD5 and auxiliary facilities, a weight-handling system, and upgraded utilities. Stage 2 includes construction and operation of the uncovered DD5 with two-story single support concept WPF located west of DD5.

Alternative 5, Stage 1 components are the same as described for Alternative 2.

The primary difference between Alternative 5 and Alternative 2 during Stage 2 is that the WPF is located west of DD5, is slightly smaller and only serves DD5. Other key differences include an uncovered dry dock, and DD3 would be decommissioned but not demolished or filled.

Alternative 5, Stage 2 components:

- Construction and operation of a two-story WPF located west of DD5, serving only DD5
- Operation of DD5 using the same weight-handling system options as described for Alternative 2
- Decommissioning the existing DD3
- In-water work is the same as described for Alternative 2
- Landside work is the same as described for Alternative 2, except there is no demolition of facilities under Stage 2, and no installation of a concrete wall and fill of DD3 as part of WPF construction
- Construction workforce and workforce transportation options are the same as described for Alternative 2
- Construction period of 35 months (7 months shorter than Alternative 2)

Auxiliary Facility and Workforce Transportation Options

In addition to the varied configurations of DD5 and the WPF, the Navy also considered the following:

- Three weight-handling systems:
    - Option 1 – Portal Crane: PHNSY & IMF currently uses portal cranes that consist of a boom section with controls, winches, and engines mounted atop a four-point portal structure; the portal crane tracks would run the length of DD5, along either side of the dry dock, and a rail system would allow cranes to be relocated to other dry docks as needed
    - Option 2 – Gantry Crane: Gantry cranes consist of a single or double bridge beam spanning a desired location; bridge beams are equipped with a trolley and winch that are used to hoist the load and traverse parallel to the bridge beams; vertical supports elevate the lift system, and end trucks containing large drive bogies facilitate travel perpendicular to the bridge
    - Option 3 – Hybrid Gantry/Bridge Crane: Hybrid gantry/bridge cranes consist of two heavy-lift cranes running on a single elevated rail; DD5 would accommodate two bridge cranes and one gantry crane
- Three electrical interconnect options from Makalapa Substation to a new proposed substation at PHNSY & IMF:
    - Option 1 – Combination of underground and overhead lines from Makalapa Substation to a new substation; Line 1 and Line 2 would run parallel; each approximately 3 miles (4.8 kilometers)

- Option 2 – Combination of underground and overhead lines from Makalapa Substation to a new substation; Line 1 and Line 2 would run parallel; each approximately 3.2 miles (5.2 kilometers)
- Option 3 – Taps existing Makalapa 42 and 43 lines and uses existing poles and lines of Makalapa 44 and 45, where possible, along the route from Makalapa Station to a new substation; Line 1 is 1.8 miles (2.9 kilometers), and Line 2 is 1.4 miles (2.2 kilometers)

- Two BWTS options (both subject to NPDES Discharge Permit):
  - Option 1 – DD5 basin water is sent to the BWTS at DD5 for storage and then conveyed to the sanitary sewer collection system before discharge to an existing ocean outfall in Mamala Bay; this option uses existing infrastructure to treat water at the WWTP
  - Option 2 – DD5 basin water would be sent to the BWTS for storage and then treated before conveying to an existing ocean outfall in Mamala Bay; this option requires a new pipeline to carry basin water to the ocean outfall

- Five construction workforce transportation options:
  - Option 1 – Nimitz Main Gate: Personnel enter solely through the Nimitz Main Gate and park in unrestricted areas
  - Option 2 – Iroquois Point Route and Ferry: Personnel ferried to and from the construction site from a boat landing at Iroquois Point
  - Option 3 – Navy Exchange (NEX) or Honolulu Authority for Rapid Transit (HART) Rail to Nimitz Main Gate: Personnel shuttled to and from the construction site from NEX or HART
  - Option 4 – Waipio Point Route and Ferry Transport: Personnel ferried to and from the construction site from a new boat landing (either the material offloading pier or the ramp for precast offloading) at Waipio Peninsula
  - Option 5 – Ford Island and Ferry Transport: Personnel ferried to and from the construction site from an existing boat landing at Ford Island

Alternatives Considered but Not Carried Forward for Detailed Analysis in the EIS

The Navy evaluated three additional dry dock design options during the alternatives screening process described above that it eliminated from further consideration in the EIS (see Final EIS, Appendix F, for more detail).

Option 1: Lengthen, Deepen, Widen, and Reconfigure DD3. This option does not meet the mission need date, and it would introduce risk to the continuity of existing DD2 operations. Additionally, it is not possible to construct a replacement dry dock at DD3 and meet the mission need date without disruption to planned maintenance and repair schedules, which could conflict with the Navy mission and result in increased risk to national security.

Option 2: Construct Superflood Basin in Front of DD3. This option does not meet the mission need date, introduces risks to the construction schedule and continuity of DD2 operations, and may impede marine traffic in the Main Channel.

Option 3: Construct Floating Dry Dock in Basin Adjacent to DD3. This option does not meet the 100-year design life and would not readily accommodate a WPF.

Public Involvement

Scoping

The Navy published a Notice of Intent to prepare an EIS and to announce public engagement opportunities in the Federal Register on September 15, 2020 (85 Federal Register 57194). The Navy

published a revised Notice of Intent in the Federal Register on September 18, 2020 (85 Federal Register 58345). Through the notices, the Navy also invited public input and participation under the NHPA.

The Navy placed advertisements announcing the scoping period and opportunities for public comment in the *Honolulu Star-Advertiser* on September 11, 16, 18, and 20, 2020. The Navy issued a press release on September 15, 2020, and distributed it to local and regional media representatives to announce the scoping period and opportunities for public comment. Media recipients included *Honolulu Star-Advertiser*, *Stars and Stripes*, Associated Press, *Midweek*, Hawaiireporter.com, Honolulu Civil Beat, Hawaiistar.com, Pacific Basin Communications, Reuters, Pacific Business News, iHeart Radio, Hawaii Public Radio, Hawaii News Now, KHON, and KITV. The Navy posted social media announcements from September 15 through October 18 through the PHNSY & IMF Facebook page and Twitter account (@JointBasePHH).

On September 15, 2020, the Navy mailed a stakeholder letter to 135 recipients, including elected officials, potential cooperating agencies, non-government organizations, Native Hawaiian Organizations, and state and federal agencies. In addition, the Navy mailed postcards to 385 recipients, including all stakeholder letter recipients as well as a broader agency distribution list. The stakeholder engagement letter and postcards provided information regarding announcement of the Notice of Intent, NEPA scoping period and opportunities for public comment, and an overview of the purpose and need for the proposed action.

Due to the COVID-19 pandemic and the associated public health guidance advising against holding in-person meetings, the Navy provided three web-based platforms for the public to learn about the proposed action and provide comments: (1) a Virtual Open House from 12:00 AM Hawaii Standard Time (HST) on September 11, 2020, to 11:59 PM HST on October 19, 2020, (2) a Virtual Public Scoping meeting on September 29, 2020, from 4:30 to 6:00 PM HST, and (3) a project EIS website (https://www.PearlHarborDryDockEIS.org/) launched on September 11, 2020, and available throughout the NEPA process.

The Navy received a total of 18 comment submissions (with one duplicate submission). In total, the Navy identified and considered all 80 substantive comments from the 18 submissions during preparation of the Draft EIS.

Draft EIS

The Navy released the Draft EIS for public review and comment on February 4, 2022. Concurrent with the publication in the Federal Register, the Navy uploaded the Draft EIS to the project website for public access and made copies available at the following public libraries: Hawaii State Public Library and Salt Lake-Moanalua Public Library. The Draft EIS review period began with publication of the Notice of Availability (87 Federal Register 6536) and Notice of Public Meeting (87 Federal Register 6515). In addition to the Federal Register notices, the Navy provided notification of the Draft EIS and locations to view or access the document through newspaper advertisements and social media messages. The Navy placed advertisements announcing the public comment period and opportunities for public comment in the *Honolulu Star-Advertiser* on February 4, 6, and 9, 2022. The Navy published social media announcements from February 4 through March 21 through the PHNSY & IMF Facebook page and Twitter account (@JointBasePHH).

On February 4, 2022, the Navy mailed a stakeholder letter to 143 recipients, including elected officials, cooperating agencies, non-government organizations, and state and federal agencies. The Navy also

emailed a stakeholder letter to recipients that had an email address on file. In addition, the Navy mailed postcards to 385 recipients, including all stakeholder letter recipients as well as a broader agency distribution list. The stakeholder engagement letter and postcards provided information regarding availability of the Draft EIS, opportunities for public comment, and an overview of alternatives evaluated in the Draft EIS.

The public comment period ran from February 4, 2022, to March 21, 2022. Similar to the scoping period, the Navy provided three web-based platforms for the public to learn about the proposed action and provide comments: (1) a Virtual Open House from 12:00 AM HST on February 4, 2022, to 11:59 PM HST on March 21, 2022, (2) a Virtual Public Meeting on February 24, 2022, from 4:30 to 6:30 PM HST, and (3) the project EIS website (https://www.PearlHarborDryDockEIS.org/). The Navy also invited public engagement and comment under the NHPA.

The Navy received a total of 24 comment submissions. In total, the Navy identified and considered all 136 substantive comments from the 24 submissions during preparation of the Final EIS.

Final EIS

In response to the comments received through the Draft EIS public comment process, as well as through consultations with regulators, the Navy included additional BMPs, monitoring, and potential mitigation measures to minimize impacts on the environment. Specific measures are discussed later in this ROD.

The Navy published the Notice of Availability for the Final EIS in the Federal Register on October 14, 2022 (87 Federal Register 62407). Concurrent with the publication in the Federal Register, the Navy uploaded the Final EIS to the project website for public access and made copies available at the following public libraries: Hawaii State Public Library and Salt Lake-Moanalua Public Library. The Navy notified the public of the publication of the Final EIS through the project website, letters, postcards, newspaper advertisements, and social media posts. The Navy sent notification letters via mail (and email for recipients with an email address on file in the mailing list) to 147 stakeholders and mailed 405 postcards to inform the public of the Final EIS release.

The Navy accepted comments by mail, email, and through the project website during the 30-day wait period from October 14, 2022 through November 14, 2022. The Navy received one comment submittal from EPA Region 9 during the Final EIS wait period. EPA's comments and the Navy's responses are provided later in this ROD.

Environmental Impacts

The Final EIS addressed the following resource areas: hazardous materials and wastes, marine navigation, traffic, air quality and greenhouse gases, water resources, geological resources, noise, cultural resources, terrestrial biological resources, marine biological resources, utilities, land use, visual resources, public health and safety, socioeconomics, and environmental justice and protection of children. The following summary of impacts focuses on the Navy's selected alternative (Alternative 4), weight-handling system Option 1 (Portal Crane), Electrical Interconnect Option 3, BWTS Option 2, and Workforce Transportation Options 1 through 5.

The Navy consulted with resource agencies in accordance with applicable statutes. The results of those consultations are included in the "Agency Consultation and Coordination" section of this ROD. The Navy will implement mitigation as listed in "Mitigation Measures and Other Navy Commitments" section of this ROD.

Hazardous Materials and Wastes. The project will result in localized, short-term increase in human health risk or environmental exposure as a result of resuspension and potential dispersion of contaminated soil and sediments due to in-water work or landside ground disturbance and facility demolition. Areas of known contamination are detailed in Section 3.2.4.4 of the Final EIS. Activities will comply with CERCLA requirements for construction activities at Installation Restoration Sites (and associated health and safety plans), Resource Conservation and Recovery Act requirements for hazardous waste tracking and disposal, the Navy Region Hawaii Hazardous Waste Management Plan, and any permit requirements.

The project will be beneficial to human health and the environment as a result of the removal of 35,120 cubic yards (26,851 cubic meters) of contaminated sediment (CERCLA) and MEC during dredging. The Navy will remove and properly dispose of potentially hazardous materials (e.g., asbestos, lead) as a result of demolition of facilities. The Navy will minimize impacts associated with hazardous materials and wastes through implementation of BMPs HAZ MGMT-1 through HAZ MGMT-9, as described in Chapter 2 (Table 2.4-1) of the Final EIS.

Marine Navigation. The project could result in longer transit times to allow safe navigation around construction equipment and materials and workforce transport vessels. The Navy will minimize impacts to marine navigation through implementation of BMPs MARINE NAV MGMT-1 through MARINE NAV MGMT-4, as described in Chapter 2 (Table 2.4-1) of the Final EIS. The Navy will further minimize local vessel-related impacts through mitigations outlined in the "Mitigation Measures and Other Navy Commitments" section of this ROD.

Traffic. The project could temporarily increase vehicle delays at intersections during AM and PM peak hours, congestion and travel times, and peak hour transit loads during construction due to material and workforce transport. The Navy considered five workforce transportation options, and traffic delays vary across the five options. Option 1 will result in the greatest level of overall impact according to the evaluated traffic metrics and will increase demand for existing parking spaces at PHNSY & IMF because no dedicated construction parking lot will be provided. Options 2, 3, 4, and 5 will lessen the increase in traffic congestion within JBPHH and at the entry-control facilities (i.e., gates) but could result in increased congestion at the off-site staging areas for construction worker transport. The Navy has selected all workforce transportation options to provide the greatest flexibility in traffic control by allowing for combinations of workforce transportation options as needed to adaptively manage traffic-related impacts that could result from implementation of Alternative 4. In addition, the Navy will engage Aloha stadium developers and other stakeholders to coordinate traffic control plans.

Potential impacts will last for the duration of construction of DD5 (65 months) and the WPF (42 months). The Navy will minimize impacts from construction activity through implementation of traffic control plans (BMP TRAFFIC-1), as described in Chapter 2 (Table 2.4-1) of the Final EIS. The Navy will further minimize local traffic-related impacts through mitigation outlined in the "Mitigation Measures and Other Navy Commitments" section of this ROD.

Air Quality and Greenhouse Gases. The project is not expected to interfere with the attainment status of ambient air quality standards or appreciably increase human health risks from hazardous air pollutant exposure in areas where sensitive receptors or public presence are expected.

Stage 1 construction greenhouse gas (GHG) emissions generated exclusively within Hawaii during the 65-month construction period are estimated to be approximately 247,487 tons (224,516 metric tons).

Additionally, approximately 1,136 tons (1,030 metric tons) of carbon storage will be lost due to vegetation clearing as a result of construction activities and will not return until vegetation has recovered to its previous natural state (approximately 3 years). Estimated Stage 2 GHG construction emissions are expected to be less than Stage 1, because construction will only occur for 42 months. Hawaii has established GHG emission reduction goals in an effort to address climate change. The increase in expected emissions from the project will not be large enough to affect Hawaii's GHG reduction goals.

The Navy will minimize air quality impacts through implementation of fugitive dust and emission control BMPs AQ-1 through AQ-5, as described in Chapter 2 (Table 2.4-1) of the Final EIS. The Navy will further minimize localized increases in vehicle emissions associated with project-related traffic through mitigation outlined in the "Mitigation Measures and Other Navy Commitments" section of this ROD.

Water Resources. The project will impact water resources. In-water work includes construction activities such as dredging, the placement or installation of structures (e.g., pilings, piers), and the discharge of dredged or fill materials (e.g., dredged sediments, concrete, rock) into estuarine waters and wetlands (collectively referred to as Waters of the U.S. (WOTUS)). Dredging would occur at the DD5 footprint and would include the entrance channel and areas of the rock revetment and construction support facilities.

Stage 1 construction of DD5 and construction support facilities will result in the following permanent impacts to estuarine waters:

- DD5: 8.0 acres (3.2 hectares)
- Waipio Peninsula: 1.2 acres (0.5 hectares)
- Ford Island: 0.08 acres (0.03 hectares)

Stage 1 construction of DD5 and construction support facilities will result in the following permanent impacts to estuarine wetlands:

- DD5: 0.1 acres (0.05 hectares) of scrub-shrub wetlands
- Waipio Peninsula: 0.1 acres (0.05 hectares) of scrub-shrub wetlands
- Pearl City Peninsula: 0.5 acres (0.2 hectares) of scrub-shrub/emergent wetlands

Both Stage 1 and Stage 2 dredging activities will result in temporary impacts to navigable waters, as quantified below:

- DD5: 7.7 acres (3.1 hectares)
- Waipio Peninsula: 4.2 acres (1.7 hectares)
- Pearl City Peninsula: 8.1 acres (3.3 hectares)

As part of regular operations, the Navy will perform periodic maintenance dredging on a cycle of every 10 to 20 years to maintain the depth required for vessels using DD5.

During dredging, mobilization of sediments will increase turbidity-related impacts to WOTUS. Dredging of soft sediments during construction, particularly in areas containing CERCLA sediment, could also mobilize contaminants of concern contained in these sediments. The Navy will employ silt curtains (including highly protective silt curtains for CERCLA sediments) and other BMPs to reduce potential for migration of a dredge plume and resulting turbidity. Water quality impacts from increased turbidity will be localized within and adjacent to areas contained by the silt curtain and could persist for days to months depending on the level of continuous activity but are not considered substantial. Reinstallation

and removal (in/over water) of construction support facilities as well as any potential dredging at DD5, Waipio Peninsula, Pearl City Peninsula, and Ford Island will result in increased turbidity, as described above.

Operation of DD5 and the WPF will increase peak stormwater runoff. A new stormwater management system, including retention basins, gravel, and infiltration trenches, will reduce impacts. Due to regrading, the new stormwater system will increase capacity to also serve other dry docks. Stormwater that enters DD5 will be directed to the BWTS for treatment before being discharged to Mamala Bay. Submarine cooling water that is discharged during docking or undocking will be collected with dewatering flows for discharge through the dewatering outfall to Pearl Harbor. Following docking procedures and dewatering, cooling water will operate as a closed system (without discharge) while docked at DD5. Stormwater discharge will be managed through appropriate stipulations of an NPDES permit. Therefore, stormwater impacts from DD5 operations on estuarine waters are expected to be negligible.

Long-term beneficial impacts to water quality will result from removal of contaminants of concern and MEC within the dredge footprint. Additionally, the Navy has avoided and minimized impacts to WOTUS to the extent practicable through design optimizations and enhancements, as described in Chapter 4 (Section 4.1) of the Final EIS, and through implementation of BMPs WATER MGMT-1 through WATER MGMT-16, as described in Chapter 2 (Table 2.4-1) of the Final EIS. This includes avoiding approximately 24 acres (9.7 hectares) of estuarine waters and wetlands by reducing the size of the dredge footprint and adjusting the location and design of construction support facilities (see Final EIS, Chapter 4 for more detail). In addition, the Navy will install a concrete wall at the opening to DD3 (landside of the caisson) prior to filling, eliminating potential for sedimentation of WOTUS.

The Navy will coordinate with appropriate regulatory agencies to obtain required permits and certifications for project activities impacting WOTUS. Compensatory mitigation to offset unavoidable impacts to WOTUS, including wetlands, will be detailed in the final Compensatory Mitigation Plan (CMP) prepared in accordance with USACE regulatory program requirements (see the "Mitigation Measures and Other Navy Commitments" section of this ROD).

Geological Resources. The project will permanently alter topography and soils within the footprint of these facilities; however, topography will remain level and similar to existing conditions. Dredging and filling will also permanently alter bathymetry of Pearl Harbor at DD5 by expanding and raising the elevation of landside areas and creating a new approach channel. Installation of in-water construction support facilities at Waipio Peninsula and Pearl City Peninsula will also alter bathymetry as a result of dredging approach channels to these facilities. There will be no increased potential for landslides or risks related to geologic hazards.

During construction, the Navy will implement a project-specific Stormwater Pollution Prevention Plan to minimize effects of erosion and sedimentation. Impacts to farmland of statewide or local importance on Waipio Peninsula during project construction will not be permanent; landside areas will return to their natural state over time after project completion. During Stage 2, bathymetry will remain similar to existing conditions, and the concrete wall installed at the opening of DD3 would prevent fill of WOTUS. The Navy will implement BMP GEO MGMT-1 as described in Chapter 2 (Table 2.4-1) of the Final EIS to comply with seismic design criteria to minimize impacts on geological resources.

Noise. The project will result in airborne and underwater noise created by in-water and landside construction work that could affect noise-sensitive human receptors. Installation and removal of piles during pile driving periods (during daylight hours and 7 days per week) will result in noise impacts for the following durations:

- Stage 1: 14 months (DD5); 3 to 4 months (Waipio Peninsula); 2 to 3 months (Pearl City Peninsula); and 1 month (Ford Island)
- Stage 2: up to 4 months (DD5); 3 to 4 months (Waipio Peninsula); 2 to 3 months (Pearl City Peninsula); and 1 month (Ford Island)

The following noise-sensitive receptors are within the 65 decibel (dB) Day-Night Average Sound Level (DNL) noise zone and will experience elevated maximum sound level (Lmax) values (based on modeling):

- Hospital Point Housing: Elevated exterior noise levels with an expected Lmax of up to 86 dB
- Pearl City Housing: Elevated exterior noise levels with an expected Lmax up to 78 dB
- Lehua Elementary School: Elevated exterior noise levels with an expected Lmax of up to 76 dB; potential for elevated interior noise levels exceeding the 50 dB Lmax threshold for classroom learning interference if windows are left open during times of pile driving

Eleven sensitive receptor locations (one healthcare facility, three residential areas, three schools, and four places of worship) will potentially experience elevated noise between 61 and 65 dB DNL with Lmax values of 66 to 73 dB. This noise level is considered compatible with schools, residential areas, and places of worship and healthcare facilities; however, individuals at these locations may be disturbed by the repetitive nature of pile driving activities.

Prior to construction, the Navy will collect baseline noise level data and monitor noise levels during construction. The Navy is committed to protecting human health and the environment and will engage with stakeholders to implement BMPs NOISE MGMT-1 through NOISE MGMT-3, as described in Chapter 2 (Table 2.4-1) of the Final EIS, and mitigation outlined in the "Mitigation Measures and Other Navy Commitments" section of this ROD to further reduce noise impacts.

Cultural Resources. The project will result in permanent impacts to cultural resources from the demolition of historic properties, which includes Pearl Harbor National Historic Landmark (PHNHL)-contributing facilities. During construction of DD5, the Navy will demolish four PHNHL-contributing facilities and one small-scale cultural landscape feature, and three additional PHNHL-contributing facilities during construction of the WPF. Demolition of these facilities and construction of the new dry dock and WPF, which will be visible from public points of interest, will alter the PHNHL (including the viewshed) and cause adverse effects to historic properties pursuant to sections 106 and 110(f) of the NHPA.

Cultural resources impacts will be avoided or minimized through implementation of BMPs CULT MGMT-1 through CULT MGMT-10, as described in Chapter 2 (Table 2.4-1) of the Final EIS. Consultation on and definition of measures to resolve adverse effects will be in accordance with the May 25, 2022 *Programmatic Agreement Regarding the Facilities Modernization Plan for the Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Joint Base Pearl Harbor-Hickam, Honolulu County, Island of Oahu, Hawaii* (referred to herein as the Shipyard Modernization PA). The Navy will document the results of the consultation in a binding Memorandum of Record. The Memorandum of Record will document the determination of effects, consultations to reach agreement, and the Navy's final

commitments to avoid, minimize, and mitigate adverse effects to historic properties (see the "Agency Consultation and Coordination" section of this ROD).

Terrestrial Biological Resources. The project will result in habitat removal or modification, long-term visual and auditory impacts associated with use of construction equipment and human presence, physical disturbance or striking of wildlife during demolition or transportation, disruption of wildlife from night lighting, exposure to contaminants that may be in dredge spoils, and bird collisions with buildings, fences, and structures.

Site preparation and landside construction for construction support facilities at Waipio Peninsula and Pearl City Peninsula will require vegetation removal and clearing for staging/laydown. At Waipio Peninsula, approximately 114.6 acres (46.4 hectares) of non-native kiawe forest/shrubland and a minimal amount of non-native wetland vegetation (0.1 acres [0.05 hectares]) will be impacted. At Pearl City Peninsula, approximately 13.6 acres (5.5 hectares) of non-native kiawe forest/shrubland, 0.01 acres (0.004 hectares) of non-native grassland, and 0.5 acres (0.2 hectares) of non-native wetland vegetation will be impacted. Approximately 0.1 acres (0.05 hectares) of non-native wetland vegetation will be permanently impacted at PHNSY & IMF. Construction activities will result in long-term adverse impacts (up to 9 years total for Stage 1 and Stage 2) to non-native vegetation; however, non-native landside areas and wetlands will be allowed to revegetate following project activities, and there will be no disturbance to native vegetation.

Noise, night lighting, and human presence associated with construction could cause adverse impacts to terrestrial species that forage, nest, or fly over the area, including State of Hawaii–listed species, species protected under the Migratory Bird Treaty Act, and species protected under the Endangered Species Act (ESA) such as Hawaiian waterbirds and seabirds. Impacts will extend for the duration of construction activity (65 months during Stage 1; 42 months during Stage 2). The Navy will minimize impacts through implementation of BMPs that include limiting lighting-related impacts, reducing potential impacts to nesting waterbird species by implementing nest surveys prior to construction, and planning tree-trimming outside of the bat pupping season or surveying to ensure bats are not present prior to initiating work.

The Navy will minimize impacts to terrestrial biological resources through implementation of BMPs TERR BIO MGMT-1 through TERR BIO MGMT-9, as described in Chapter 2 (Table 2.4-1) of the Final EIS. The Navy consulted with the U.S. Fish and Wildlife Service (USFWS) on ESA-listed terrestrial species (see the "Agency Consultation and Coordination" section of this ROD).

Marine Biological Resources. The project will result in permanent impacts to the benthic environment by permanently removing substrate during Stage 1 dredging, in-water demolition, fill, and pile driving activities. Impacts include the following:

- Loss of approximately 352 square feet (33 square meters) of corals
- Loss of approximately 33 sea turtle resting caves at PHNSY & IMF (37 percent of identified available resting caves of the focused survey area) and potential effects to 3 resting caves located at Waipio Point, which has the potential to displace ESA-listed sea turtles from resting habitat - however, other suitable and abundant resting caves are located within the green sea turtle's known home range, so the impact on individual green sea turtle fitness is expected to be low
- Physical removal of approximately 8.2 acres (3.3 hectares) benthic habitat, conversion of portions of the shelf and sloping bottom to deeper harbor bottom habitat, and alteration of the dredge cut wall

Outside of the construction footprint, impacts to benthic organisms from covering/smothering during soft sediment dredging will be short-term (days and up to months) and occur primarily within 400 feet (121 meters) of dredge activity. Life stages such as eggs and post-hatch pelagic species will experience short-term impacts just outside the silt curtain but may experience mortality within the enclosed area of the curtain. The Navy will reduce turbidity and related effects to marine biota through implementation of silt curtains and other BMPs.

Marine fauna, including protected species, will be exposed to elevated underwater noise from impact pile driving. Potential acoustic effects may result in temporary adverse impacts to hawksbill and green sea turtles and behavioral impacts to Hawaiian monk seal. Impacts will be minimized through implementation of BMPs such as soft-start approach, monitoring of pre-determined shutdown zones, and real-time underwater sound level monitoring.

Impacts to marine vegetation could result from direct removal, covering from sedimentation, nighttime lighting, decreased lighting from increased sedimentation, and chemical changes. Impacts will be localized and are not expected to result in appreciable change.

Installation of new barge moorings and corresponding increase in moored construction barges where they do not currently occur will result in localized and short-term turbidity during mooring install. There will be additional effects from overwater shading from moored barges, and increased construction-related night lighting. Lighting and shade will not be permanent, as conditions will be returned to pre-existing with removal of moorings and construction barges.

Although there has never been an explosion during dredging in Pearl Harbor, the project may result in impacts from accidental detonation of unexploded ordnance/MEC. The Navy will implement BMPs to minimize the risk to marine species while in-water activities are occurring.

Impacts from DD5 operations include potential for impingement and entrainment of marine species during flooding and dewatering activities. However, potential impacts will be reduced through application of BMPs such as a screened flood-tube on the dry dock caisson and the use of an air curtain around the dry dock to prevent entrainment.

The Navy will minimize impacts to marine biological resources thought implementation of BMPs MARINE BIO MGMT-1 through MARINE BIO MGMT-21, as described in Chapter 2 (Table 2.4-1) of the Final EIS. The Navy consulted with NMFS on ESA-listed marine species and Essential Fish Habitat (EFH) (see the "Agency Consultation and Coordination" section of this ROD). The Navy will further minimize impacts on marine biological resources through mitigation outlined in the "Mitigation Measures and Other Navy Commitments" section of this ROD.

Utilities. The project will result in disruption of service due to relocating utilities or when connecting or disconnecting utilities. Impacts will be short-term (up to 96 hours during Stage 1 and less than 12 hours during Stage 2) and localized to areas at PHNSY & IMF where work is occurring. New utility demand will be accommodated by the project and will not conflict with existing demand or exceed capacity. The Navy will minimize impacts to existing utility services and shipyard operations through implementation of BMPs UTILITIES-1 through UTILITIES-3, as described in Chapter 2 (Table 2.4-1) of the Final EIS.

Land Use. The project will occur primarily on lands designated as Category 2 (highly developed or industrialized areas with limited natural value), with a small portion (less than 2 percent) on lands designated as Category 1 (areas of significant natural resource value).

As described in the "Water Resources" summary above, construction of DD5 will result in permanent loss of 0.1 acres (0.05 hectares) of Category 1 land (wetlands) at PHNSY & IMF, which is not consistent with Category 1 land use. Construction of support facilities at Waipio Peninsula and Pearl City Peninsula will result in long-term changes to 0.1 acres (0.05 hectares) and 0.5 acres (0.2 hectares) of Category 1 land (wetlands), respectively. The impacts at Waipio Peninsula and Pearl City Peninsula will not result in permanent change to land use.

Where construction support facilities proposed at Waipio Peninsula and Pearl City Peninsula will be consistent with existing land use (Category 2). The project will tap existing feeder lines and eliminate the need to create easements through lands owned by Hawaii Department of Transportation and the City and County of Honolulu.

Visual Resources. The project will result in changes to the landscape character of the shipyard, and the project will create varying degrees of visual impacts from Key Observation Points at Hospital Point, along the Ford Island Historical Trail Interpretive Points, Battleship *Missouri* Memorial, USS *Arizona* Memorial, and Pearl Harbor National Memorial. The Navy will minimize impacts on visual resources through implementation of BMPs VIS MGMT-1 through VIS MGMT-4, as described in Chapter 2 (Table 2.4-1) of the Final EIS.

Public Health and Safety. The project poses a low risk to public health and safety. Through the use of standard construction and operations safety practices, the Navy will ensure construction emissions or dust, exposure to COCs, demand on emergency services, effects from night lighting, and construction-related traffic are minimized. The temporary increase in construction noise will be monitored and appropriate mitigation employed to reduce the potential for public health and safety impacts. The Navy will implement BMPs PH&S-1 through PH&S-3 and BMPs NOISE MGMT-1 through NOISE MGMT-3, as described in Chapter 2 (Table 2.4-1) of the Final EIS, and employ mitigation as outlined in the "Mitigation Measures and Other Navy Commitments" section of this ROD.

Socioeconomics. The project will increase demand for housing and services from a non-local workforce and could lead to long-term increases in home sale and rental prices. The temporary increase in population will also increase demand on public services such as schools, health and safety services, and roads. Construction activities will result in increased employment and income for residents and non-local workers, which will have a beneficial impact on the local economy. Construction activities will increase state and local tax revenues by $17.9 million for the State of Hawaii and $5.7 million for the City and County of Honolulu, resulting in a beneficial impact on the local government. The Navy will minimize the demand on housing and local services through implementation of BMP ECON-1 for hiring local workforce to the extent practicable, as described in Chapter 2 (Table 2.4-1) of the Final EIS.

Environmental Justice and Protection of Children. Marginal increases in air emissions related to construction traffic will disproportionately impact low-income and minority areas; however, because of the transient nature of commuter traffic, potential increases in emissions will be short-term and are not anticipated to affect human health, regional ambient air quality, or the area's attainment status.

Children may be impacted by noise from pile driving activities (see "Noise" summary above). Classroom settings at Lehua Elementary School could experience interior noise levels above the criteria threshold of 50 dB Lmax if windows are open during pile driving activities (2-3 months during both Stage 1 and 2). Two additional locations (Hospital Point Housing and Pearl City Peninsula Housing) will experience exterior noise levels above the noise-sensitive land use compatibility recommendation of 65 dB DNL.

Children comprise a large portion of residents in both Hospital Point Housing and Pearl City Peninsula Housing, and, therefore, could be disproportionately impacted by elevated noise levels during construction.

Eleven additional locations where children could be present (a healthcare facility, three residential areas, three schools, four places of worship) could experience elevated noise between 61 and 65 dB DNL, with exterior Lmax of 66 to 73 dB. Hickam Elementary could experience elevated noise levels up to an exterior Lmax of 66 dB, with a DNL of 60 dB. Although noise levels at these 11 additional locations are below the criteria threshold of 65 dB DNL, they could experience interior noise levels above the criteria threshold of 50 dB Lmax for classroom learning interference if windows are open during pile driving activities. This level of noise, particularly due to the repetitive nature of pile driving, can be disruptive. With classroom windows closed, the schools are not expected to experience interior noise above the criteria threshold of 50 dB Lmax. Noise levels during pile driving will be monitored, and the Navy will work proactively with affected schools and residential housing areas to identify potential noise-reducing mitigation measures.

The Navy will minimize impacts associated with environmental justice and protection of children through implementation of BMPs AQ-1 through AQ-5, TRAFFIC-1, PH&S-1 through PH&S-3, and NOISE MGMT-1 through NOISE MGMT-3, as described in Chapter 2 (Table 2.4-1) of the Final EIS. The Navy will further minimize impacts to this resource through noise mitigation measures outlined in the "Mitigation Measures and Other Navy Commitments" section of this ROD.

Agency Consultation and Coordination

Throughout preparation of the EIS, the Navy has corresponded and consulted with government agencies. A summary of the results or the current status of each consultation and coordination process is included below. Cooperating agencies for this EIS, pursuant to 40 CFR section 1508.5, include the USACE, Honolulu District; EPA, Region 9; and NMFS, Pacific Islands Regional Office.

National Historic Preservation Act Section 106 Consultation. On May 1, 2020, the Navy initiated NHPA section 106 consultation to address shipyard modernization. In May 2022, the Navy, the Hawaii State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation executed the Shipyard Modernization PA. The National Park Service signed as a concurring party on the Shipyard Modernization PA. The Aiea Community Association, the Alii Pauahi Hawaiian Civic Club, the Historic Hawaii Foundation, the National Trust for Historic Preservation, the Oahu Council of Hawaiian Civic Clubs, the Office of Hawaiian Affairs, and the Pearl Harbor Aviation Museum are consulting parties and invited concurring parties on the Shipyard Modernization PA.

Consistent with Stipulation III of the Shipyard Modernization PA, the Navy will prepare and consult on determinations of effect for modernization projects prior to authorization of construction, demolition, excavation, or any activities with the potential to cause effects on historic properties. Currently, the Navy plans to provide a determination of adverse effect for the Navy's selected alternative, as documented in this ROD, to the Hawaii SHPO and the consulting parties to the Shipyard Modernization PA in Spring 2023. The Navy will document the results of the consultation in a binding Memorandum of Record. The Memorandum of Record will document the determination of effects, consultations to reach agreement, and the Navy's final commitments to avoid, minimize, and mitigate adverse effects to historic properties.

Endangered Species Act Section 7 Consultation. The Navy determined the project may have the potential to impact threatened or endangered species protected under the ESA; therefore, the Navy conducted formal consultation with the USFWS and NMFS (collectively, the Services).

USFWS Consultation

The Navy developed a Biological Assessment (BA) for federally listed terrestrial species and submitted it to the USFWS on July 22, 2022. The USFWS issued a Biological Opinion (BO) on November 4, 2022. A summary of the effects determinations from the BO is provided below:

- The Navy's proposed action is not likely to jeopardize the continued existence of the Hawaiian stilt (*Himantopus mexicanus knudseni*), and no critical habitat has been designated for this species; therefore, none will be affected
- The Navy's proposed action may affect, but is not likely to adversely affect: (1) Hawaiian waterbirds: Hawaiian coot (*Fulica alai*), Hawaiian gallinule (*Gallinula chloropus sandvicensis*), and Hawaiian duck (Anas wyvilliana); (2) Hawaiian hoary bat (*Lasiurus cinereus semotus*); and (3) Hawaiian seabirds: Newell's Townsend's shearwater (*Puffinus auricularis newelli*), Hawaiian petrel (*Pterodroma sandwichensis*), and Hawaii distinct population segment (DPS) of the band-rumped storm petrel (*Oceanodroma castro*)

The USFWS BO outlines the required conservation measures, conditions of incidental take of Hawaiian stilt nests and associated eggs, and reasonable and prudent measures to minimize impacts of incidental take. The Navy will implement all conservation measures and reasonable and prudent measures specified in the USFWS's BO and will adhere to the terms and conditions of the incidental take statement.

NMFS Consultation

The Navy developed a BA for marine species and submitted it to NMFS in May 2022. NMFS issued a BO on November 12, 2022. A summary of the effects determinations from the BO is provided below:

- The Navy's proposed action is not likely to jeopardize the continued existence of the Central North Pacific green sea turtle or hawksbill sea turtle
- The Navy's proposed action is not likely to adversely affect the following threatened and endangered species: East Pacific green sea turtle; North Atlantic green sea turtle; leatherback sea turtle; North Pacific loggerhead sea turtle; Northwest Atlantic loggerhead sea turtle; olive ridley sea turtle (Mexican breeding population); olive ridley sea turtle (all other populations); Kemp's ridley sea turtle; Hawaiian monk seal; blue whale; fin whale; sei whale; sperm whale; Mexico humpback whale; Central America humpback whale; Main Hawaiian Island insular false killer whale; North Pacific right whale; North Atlantic right whale; giant manta ray; Central & Southwest Atlantic scalloped hammerhead shark; Eastern Pacific scalloped hammerhead shark; oceanic whitetip shark; Carolina Atlantic sturgeon; Chesapeake Bay Atlantic sturgeon; New York Bight Atlantic sturgeon; and South Atlantic sturgeon

The Navy's proposed action will not cause adverse effects to any critical habitat designated in the action area. The NMFS BO outlines the required conservation measures, conditions of incidental take of the Central North Pacific green sea turtles and hawksbill turtles, and reasonable and prudent measures to minimize impacts of incidental take. The Navy will implement all conservation measures and reasonable and prudent measures specified in the NMFS BO and will adhere to the terms and conditions of the incidental take statement.

Magnuson-Stevens Fishery Conservation and Management Act (MSA) Consultation. The Navy determined that the project has potential to adversely affect EFH and prepared an Essential Fish Habitat Assessment (EFHA), which was provided to NMFS in June 2022. A summary of the effects determinations are provided below:

- The project has the potential to impact EFH and relevant Management Unit Species (MUS; 84 Federal Register 2767) because all water and submerged lands (i.e., the water column and bottom substrates) of Pearl Harbor are designated as EFH and support various life stages for MUS, including:
    - Bottomfish MUS – eggs, post-hatch pelagic, post-settlement, and sub-adult
    - Pelagic MUS – eggs, larvae, juveniles, and adults
    - Crustacean MUS (Kona crabs) – eggs, larvae, juveniles, and adults
- There are no Habitat Areas of Particular Concern within the action area

NMFS reviewed the EFHA and provided conservation recommendations to the Navy in August 2022, that include water quality and suspended sediment monitoring, developing protocols for managing aquatic invasive species, and information sharing between NMFS and the Navy. The Navy provided an official response to NMFS on September 12, 2022. These letters are included in Appendix E-3 of the Final EIS. The Navy will implement the conservation recommendations outlined in its September 12, 2022 response letter to NMFS.

Coastal Zone Management Act Coordination. The Navy determined that project activities will have insignificant direct or indirect coastal effects and are covered under the Navy/Marine Corps Coastal Zone Management Act (CZMA) *de minimis* Activities List Item 1, New Construction (State of Hawaii CZMA letter, dated July 9, 2009). The Navy notified the Hawaii Coastal Zone Management Program office of this finding on June 8, 2022, and the state confirmed receipt of the notification on June 9, 2022. The Navy sent an updated findings notification to the state on October 28, 2022, that incorporated information on the release of the Final EIS, background information on the purpose and need of the proposed action, the status of ESA and MSA consultations, and additional relevant CZMA mitigations/conditions. The Hawaii Coastal Zone Management Program responded on October 29, 2022, acknowledging continued compliance with conditions for the use of the Navy/Marine Corps *de minimis* activities under the CZMA. As documented in the Navy's October 2022 notification to the Hawaii Coastal Zone Management Program office, the Navy will comply with all relevant mitigation and conditions.

Mitigation Measures and Other Navy Commitments

The Navy is committed to the protection of human health and the conservation of natural and cultural resources and will avoid or minimize impacts through implementation of BMPs that are inherent parts of the project and through design optimizations and enhancements. Avoidance and minimization measures are described in the Final EIS (Chapter 4, Section 4.1). The Navy will implement mitigation and other measures to further reduce and offset impacts of the PHNSY & IMF DD-WPF project. These measures are identified by resource area below. The Navy will continue to work collaboratively with appropriate regulatory agencies through consultation and permitting processes to finalize relevant documents and mitigation commitments as noted below.

Marine Navigation and Traffic. The Navy will use adaptive management to address vehicle and vessel construction impacts. The selected alternative includes Workforce Transportation Options 1 through 5 to provide maximum flexibility for traffic control and gives the Navy the ability to adaptively manage

construction related traffic impacts. In addition, the Navy will engage Aloha stadium developers and other stakeholders to coordinate traffic control plans.

Traffic mitigation implementation and monitoring methods will be documented in the project-specific construction management plans (e.g., traffic control plan [BMP TRAFFIC-1, as described in Table 2.4-1 of the Final EIS]). The Navy will implement the following mitigation measures during construction, or alternate measure(s) with a similar effect, as described in the Final EIS (Chapter 4, Table 4.2-1):

- Schedule construction materials transport to avoid AM and PM peak vehicle and vessel traffic to reduce vehicle and vessel-related conflict/congestion during peak traffic
- Identify appropriate entry points for construction workers to minimize interference with other employees at JBPHH and PHNSY & IMF
- Schedule workforce shifts to avoid AM or PM peak vehicle traffic or other events that could cause traffic delays or localized increases in vehicle emissions

Air Quality and Greenhouse Gases. The Navy will implement the same mitigation measures described above for traffic, which will help minimize localized increases in vehicle emissions.

Water Resources. In accordance with USACE regulatory program requirements, the Navy will implement mitigation outlined in the final CMP or as stipulated in the USACE Individual Permit.

Noise. The Navy will monitor noise levels and implement appropriate BMPs to reduce impacts as documented in project-specific construction management plans. If noise impact criteria outlined in BMP NOISE MGMT-2 (as described in Table 2.4-1 of the Final EIS) are exceeded during construction, the Navy will implement one or more of the following mitigation measures, or alternate measure(s) with a similar effect described in the Final EIS (Chapter 4, Table 4.2-1):

- Install temporary sound walls as a barrier between affected schools or residents and the source of the sound contributing to the exceedance
- Install portable noise screens or enclosures to shield other high-noise activities or equipment
- Install air conditioning units at affected schools or residents to regulate indoor temperatures so that windows can be closed
- Relocate Hospital Point residents: In coordination with the Public Private Ventures Partners, JBPHH will move residents to a comparable housing location for the duration of pile driving

BMP NOISE MGMT-2 provides specific parameters for when the Navy will employ mitigation. In addition, the Navy will require the construction contractor to commence installation of noise mitigation measures within 48 hours of the noise criteria exceedance.

Cultural Resources. The Navy will implement measures to avoid, minimize, and mitigate adverse effects to historic properties as outlined in the binding Memorandum of Record expected to be completed by Spring 2023.

Terrestrial Biological Resources. The Navy will implement conservation measures and reasonable and prudent measures specified in the USFWS's BO including:

- The Navy shall avoid or minimize impacts to the Hawaiian Hoary Bat through timing restrictions on tree trimming and other measures
- The Navy and its contractors shall avoid impacts to Hawaiian waterbirds by abiding by vehicle speed restrictions
- The Navy and its contractors shall avoid impacts to Hawaiian seabirds by following suggested lighting restrictions outlined in the BO.
- The Navy shall minimize impacts of incidental take of the Hawaiian Stilt by:
    - Implementing a hazing and nest destruction monitoring program
    - Implementing a nest destruction protocol

The BO is available on the project website at https://www.PearlHarborDryDockEIS.org.

Marine Biological Resources. The Navy will implement conservation measures and reasonable and prudent measures specified in the NMFS's BO including:

- The Navy shall minimize incidental take from elevated sound associated with pile driving in Pearl Harbor
- The Navy shall minimize incidental take from sea turtle entrapment in the dry dock throughout the dry dock's operational lifespan
- The Navy shall minimize take from vessel collisions within Pearl Harbor

The BO is available on the project website at https://www.PearlHarborDryDockEIS.org.

Public Health and Safety. The Navy will implement the same mitigation measures described in the "Noise" summary above.

Environmental Justice and Protection of Children. The Navy will implement the same mitigation measures described in the "Noise" summary above.

Responses to Comments Received on the Final EIS

The Navy received one comment submittal from EPA, Region 9, during the 30-day wait period following publication of the Notice of Availability for the Final EIS. The comment submittal contained multiple comments that the Navy reviewed and considered in the development of this ROD. The Navy's responses to EPA's comments are provided below.

Comment 1 (Impacts to Water Resources): The draft conceptual CMP shared previously with the USACE and EPA appears promising but incomplete. Please continue to work with Hudson Slay of our Wetlands Section to resolve these outstanding issues.

Response: The Navy continues to develop the CMP since EPA's review of the conceptual draft. The Navy will continue to coordinate with the USACE, and EPA as appropriate, to ensure the CMP meets regulatory requirements.

Comment 2 (Impacts to Water Resources): EPA has been working with the Navy, concurrent with the NEPA process and in consultation with the USACE, regarding appropriate sediment sampling and analysis to determine dredged material disposal options. We have communicated our significant concerns regarding the sampling and testing that has occurred and the Navy's conclusions from this testing. This issue requires the Navy's immediate attention to avoid delays to the project timeline. Given these remaining challenges, additional considerations may be needed regarding the sequence of dredging, possible alteration in the dredged material volumes proposed for ocean disposal, and assurances that sufficient capacity is available for increased volumes for upland disposal. Please continue to work with Juliette Chausson of our Wetlands Section to resolve these outstanding issues and to obtain approval of the Materials Separation Plan.

Response: The Navy acknowledges EPA concerns regarding appropriate sediment sampling and analysis to determine dredged material disposal options. The Navy will work with EPA to identify acceptable sediment disposal options or secure sufficient capacity for upland disposal for Navy's use.

Comment 3 (Noise Impacts to Military Families and Children): We have concerns that the proposed noise monitoring may not detect the full impact since the noise levels that would trigger mitigation all involve the use of averaging metrics—metrics that average noise levels from pile strikes with quiet periods.

Response: During development of the Final EIS, EPA (a cooperating agency), expressed concern that the use of averaging metrics for noise monitoring may not detect the full impact of pile driving noise, and, therefore, would not be sufficiently protective of children. In response, the Navy incorporated the following monitoring requirement (from BMP NOISE MGMT-2) into the Final EIS:

- At least one short-term focused Ln sound level percentile (such as L10) will be monitored at noise-sensitive receptor sites (R04-Pearl City Peninsula Housing, R06-Hospital Point Housing, and S17-Lehua Elementary School) to identify potential increases in noise relative to baseline conditions.

BMP NOISE MGMT-2 provides specific parameters for when the Navy will employ mitigation.

The Navy considered EPA's suggestion to use the single-event maximum noise level (Lmax) for monitoring. However, the Navy determined the short-term focused Ln sound level percentile was the best alternative to capture repetitive sound peaks because it focuses on the maximum sound levels and the percentage of time during the measurement period those sound levels are experienced. Further, Ln percentile is not based on averaging metrics, so quieter periods would not affect the result.

Comment 4 (Noise Impacts to Military Families and Children): Monitoring would occur at only three locations within the 1-mile study area; we are concerned that noise impacts may extend greater than 1 mile for those communities where noise will travel unattenuated over water and from multiple sources.

Response: In response to a comment provided by EPA on the Draft EIS, the Navy revised the noise analysis in the Final EIS to account for propagation paths over water. An adjustment was applied per ISO 9613-2 which resulted in an increase in 6 dB for all overwater paths and 3 dB for the combination of part water and part land propagation paths. The analysis initially screened all noise-sensitive receptors

within 2 miles and then reduced that to focus on noise-sensitive receptors within 1 mile because projected noise levels from pile driving beyond 1 mile would be below ambient levels.

Comment 5 (Noise Impacts to Military Families and Children): The EPA finds that there is sufficient information in the EIS to reasonably predict significant noise impacts that would disproportionately impact children and that would add a cumulative burden to the stress military families have experienced from contaminated drinking water. This finding considers that the typical construction noise mitigation of avoiding sensitive periods on weekends is not included. We are concerned that the current mitigation approach, whereby mitigation is tied to monitoring results using metrics that average noise with quiet periods, would not be sufficiently protective of children.

Response: The Navy is committed to the health and safety of our military families and will implement multiple noise mitigation measures to protect human health. In the Final EIS, the Navy included new noise monitoring metrics (such as Ln percentiles described in response to Comment 4) that are better suited to identify exceedance of noise impact criteria as a result of pile driving. This established criteria allows the Navy to more accurately identify when mitigation is required.

Comment 6 (Noise Impacts to Military Families and Children): For the protection of military families, we recommend noise barriers that would reduce noise at family housing sites and affected schools be installed prior to the start of construction.

Response: The noise impact analysis (detailed in Final EIS Section 3.8.5.4.1) is based on conservative model assumptions, such as continuously open classroom windows and lack of existing structures that could reduce the actual experienced noise levels. For instance, if classroom windows remain closed, anticipated noise levels would be below target criteria at the nearest school. Additionally, the installation of noise barriers prior to the start of construction could result in the unnecessary disruption of family housing sites and schools that may not experience noise impacts, and does not allow for optimal siting of these structures. The Navy will require the construction contractor to commence installation of noise mitigation measures within 48 hours of any noise criteria exceedance, thereby quickly addressing noise impacts at sensitive receptors.

Comment 7 (Noise Impacts to Military Families and Children): We recommend a commitment to up-front noise mitigation be identified in the ROD and that a relocation option be available for other affected military housing communities, if requested.

Response: The Navy proactively incorporated noise-reducing measures into the project in the form of BMPs (see previous responses). The Navy has committed to relocating Hospital Point residents to another comparable housing location for the duration of pile driving. To address potential impacts that may occur at other military housing locations outside of Hospital Point, the Navy will require the construction contractor(s) to provide a point of contact for the public to contact with questions or concerns (BMP NOISE MGMT-2, as described in Table 2.4-1 of the Final EIS). Additionally, as discussed under Mitigation Measures and Other Navy Commitments in this ROD, the Navy will monitor noise levels and implement appropriate BMPs to reduce impacts as documented in project-specific construction management plans. If noise impact criteria outlined in BMP NOISE MGMT-2 are exceeded during construction, the Navy will implement one or more mitigation measures, or alternate measure(s) with a similar effect described in the Final EIS (Chapter 4, Table 4.2-1). The Navy will require the construction contractor to commence installation of noise mitigation measures within 48 hours of any noise criteria exceedance, thereby quickly addressing noise impacts at sensitive receptors.

Comment 8 (Noise Impacts to Military Families and Children): Finally, we recommend the Navy take all steps possible to conduct consecutive construction for Stage 1 and 2 so avoidable noise impacts do not occur from removing and later reinserting the same piles for Stage 2; we recommend a commitment in the ROD to delay automatic removal of construction support facilities at the end of the Stage 1 until consecutive construction can be reassessed considering the current funding scenarios.

Response: The Navy agrees with this recommendation, however, we cannot commit to consecutive construction at this time. The execution of each project stage is based on the timing of available funding. Although only Stage 1 funding has been programmed at this time, the decision whether to remove the temporary construction facilities will be evaluated and assessed against funding scenarios prior to completion of Stage 1 construction.

Comment 9 (Traffic Impacts): We continue to have concerns regarding cumulative traffic impacts. The Final EIS indicates in Appendix E-2 that the Navy is evaluating adaptive traffic management for Workforce Option 5 using Richardson Field at the east end of the Ford Island Bridge; however, this puts a center of traffic management at the location of the Aloha Stadium, the demolition and reconstruction of which is identified in Table 3.1-4 as a reasonably foreseeable future action with demolition currently planned for Fall 2023. We continue to recommend the consideration of multiple workforce transportation options and that the traffic control plan be developed in coordination with other larger projects; especially the Aloha Stadium project, so that localized air quality impacts are avoided and emergency vehicles are not delayed in the project area.

Response: The selected alternative includes Workforce Transportation Options 1 through 5 to provide maximum flexibility for traffic control and gives the Navy the ability to adaptively manage construction related traffic impacts. In addition, the Navy will engage Aloha stadium developers and other stakeholders to coordinate traffic control plans.

Comment 10 (Terrestrial Habitat Stewardship): We continue to encourage the Navy to provide some active restoration with native species to compensate for the removal of approximately 120 acres of Kiawe Forest/Shrubland on Waipio Peninsula and Pearl City Peninsula for construction laydown areas. While Kiawe Forest/Shrubland is non-native, it has habitat value for State of Hawaii–listed species, Migratory Bird Treaty Act–protected species, and ESA-listed species such as Hawaiian waterbirds and seabirds (p. 3-218). NEPA directs federal agencies to consider the "critical importance of restoring and maintaining environmental quality" and to "attain the widest range of beneficial uses of the environment without degradation" (42 [United States Code] 4331). We recommend the ROD discuss the feasibility of some minimal restoration effects, such as ensuring fencing is removed and out-planting native dryland plants, so the Navy is not leaving these resources degraded after project construction is complete.

Response: The Navy has determined that out-planting native dryland plants on Waipio and Pearl City Peninsulas is not prudent and believes that resources should be allocated where mitigation has a higher chance of success.

Restoration of native plants would involve intensive management actions such as non-native ungulate exclusion, weed control, fire management, outplanting, and irrigation of seedlings. Restoration efforts would be impeded by the lack of water sources on Waipio Peninsula needed to irrigate newly outplanted plant species. Because the Navy does not manage freshwater sources near the disturbance

footprint, additional cost would be incurred to truck in an adequate water supply to ensure establishment of the outplanted species. Other considerations that affect the feasibility and success of dryland restoration efforts include initial invasive species control, soil preparation, consistent post-removal weeding and herbicide application, development of microclimates to ensure success of native species, and fencing to exclude invasive species that may trample or eat newly outplanted species.

Further, koa haole and kiawe are aggressive colonizers of disturbed lowland areas and have the ability to grow in harsh conditions. They impede the success of native plant restoration in areas where they have invaded and established a seedbank. Once established, these dense monotypic stands are difficult to convert back to a native or hybrid ecosystem. For example, restoration of a dryland forest at the Kaupulehu Forest Reserve on Hawaii Island recorded a 30 percent survival rate of outplanted species 10 years after establishment. Regeneration of native species within an invaded dryland forest community is challenging because seed banks are often saturated by non-native species. Without continual intervention, the ecosystem will quickly return to a non-native dominated forest.

The Navy has concluded that non-native landside areas and wetlands that are temporarily impacted will revegetate without active management following project activities. Dryland plant communities are anticipated to re-assemble with many of the same non-native species that existed prior to the anthropogenic disturbance (e.g., kiawe and koa haole in landside areas). Although considered invasive in Hawaii, these species provide habitat and foraging opportunities for native species, migratory birds, and pollinators that have adapted to naturalized species.

C. CONCLUSION: After careful consideration of the purpose and need for the project; operational and readiness requirements; the analysis of all reasonably foreseeable environmental effects in the Final EIS; relevant federal and state statutes and regulations; relevant Department of Defense and Navy policies; existing and proposed mitigation; and the comments received during the NEPA process, I have selected Alternative 4 (Preferred Alternative), as well as auxiliary facility options weight-handling system Option 1 (Portal Crane), Electrical Interconnect Option 3, BWTS Option 2, and Workforce Transportation Options 1 through 5 from the Final EIS for implementation.

I certify that the Navy has considered all of the alternatives, information, analyses, and objections submitted by State, Native Hawaiian Organization, local governments and public commenters for consideration by the Navy and its cooperating agencies in developing the EIS.

Implementation of Alternative 4 and related auxiliary facility options will enable the Navy to meet shipyard infrastructure modernization and optimization requirements at PHNSY & IMF. By applying BMPs and mitigation measures identified in the Final EIS, consultation documents, and in this ROD, the Navy has adopted all practicable means to avoid or minimize environmental harm from the selected alternative.

December 7, 2022
Date

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(Energy, Installations and Environment)