



United States Government Accountability Office

Report to the Committee on Armed
Services, House of Representatives

April 2021

AIRCRAFT CARRIERS

Homeport Changes Are Primarily Determined by Maintenance Requirements

Accessible Version

GAO@100

A Century of Non-Partisan Fact-Based Work

Highlights of [GAO-21-345](#), a report to the Committee on Armed Services, House of Representatives

AIRCRAFT CARRIERS

Homeport Changes Are Primarily Determined by Maintenance Requirements

Why GAO Did This Study

The Navy relies on 11 aircraft carriers homeported on the East and West Coasts and in Japan to support U.S. defense strategic objectives and operations. These nuclear-powered ships require complex infrastructure, technology, and maintenance, some of which may not be available near their homeport.

Changing an aircraft carrier's homeport means moving the ship's approximately 3,200 sailors, a fluctuation of 5,000 or more people depending on the number of family members involved. In House Report 116-120, accompanying a bill for the National Defense Authorization Act for Fiscal Year 2020, the House Armed Services Committee noted that the Navy reversed previous plans to homeport an aircraft carrier at Naval Station Everett, Washington.

The House Report also included a provision for GAO to review the Navy's process to assign aircraft carriers' homeports. This report examines, for Navy aircraft carriers, (1) the extent to which the Navy has a process for making homeport changes, and considers local installation and other factors in the homeporting process, and (2) homeport changes from fiscal years 2011 through 2020 and the reasons for them.

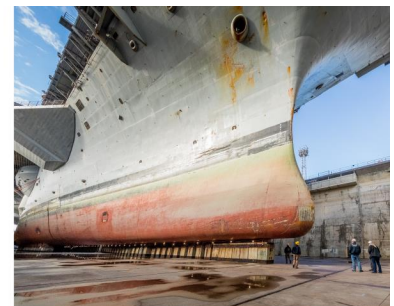
GAO analyzed Navy instructions and related policies, laws, and regulations; homeport plans and maintenance schedules; and fiscal years 2011–2020 documentation of homeport changes. GAO also interviewed Navy officials, including from relevant commands and homeports.

View [GAO-21-345](#). For more information, contact Diana Maurer at (202) 512-9627 or MaurerD@gao.gov.

What GAO Found

The Navy has a process for proposing and implementing homeport changes that considers a range of factors. The first key step in this process involves the Navy developing and updating an annual plan, known as the Strategic Laydown and Dispersal Plan, that guides the Navy's positioning of operating forces worldwide. Based on the plan, fleet commanders then identify requirements for any changes to homeports and submit requests to schedule a homeport change. Throughout the process, Navy leadership and a working group of stakeholders from across the Navy provide input and analysis. Among other things, the working group develops and assesses proposed changes among the possible aircraft carrier homeports based on their expertise and evaluates various homeport installation factors, such as maintenance dry docks (see figure) or ship power and maintenance facilities. The Navy also considers local factors including crew support and quality of life, such as schools and morale, and possible impacts to the natural and physical environment. The Navy has strengthened its process by implementing prior GAO recommendations, and has other planned actions underway to further improve and update its guidance.

Recent Navy Aircraft Carrier Homeport Locations and Dry Dock at Puget Sound Naval Shipyard



Source: GAO analysis of Navy information; Map Resources (map); U.S. Navy/T. Nguyen (photo). | GAO-21-345

The Navy made 15 aircraft carrier homeport changes in fiscal years 2011 through 2020 among the five available homeports. The driving factor for all 15 changes was maintenance. For example, 10 of the 15 changes involved ships moving to or returning from shipyards in Bremerton or Norfolk for planned dry-dock maintenance or midlife refueling. In 2015 and 2019, the Navy decided to homeport aircraft carriers in Bremerton and San Diego because Everett lacked nuclear maintenance facilities, which were available at the Navy's other aircraft carrier homeport locations. Previously, carriers homeported in Everett received regularly scheduled maintenance at the shipyard in Bremerton but did not conduct an official homeport change. The Navy reported that during these maintenance periods that lasted 6 months or more, the crew commuted 3 to 4 hours daily, which negatively affected maintenance and crew morale. As a result, the Navy decided not to return an aircraft carrier to Everett. According to Navy officials, factors in addition to maintenance needs also informed the changes, including a long-held plan to homeport three aircraft carriers in San Diego.

Contents

GAO Highlights		2
	Why GAO Did This Study	2
	What GAO Found	2
Letter		1
	Background	4
	The Navy Has a Process for Making Ship Homeport Changes and Has Taken Steps to Strengthen That Process	8
	The Navy Considers Infrastructure, Crew Quality of Life, Environment, and Other Factors When Making Aircraft Carrier Homeport Changes	14
	The Navy Made 15 Aircraft Carrier Homeport Changes from Fiscal Years 2011 through 2020, All for Maintenance Reasons	19
	Agency Comments	25
Appendix I: Organizations Contacted		27
Appendix II: GAO Contact and Staff Acknowledgments		29
Related GAO Products		30
Table		
	Text of Figure 3: The Navy's Process for Making Ship Homeport Changes	10
	Table 1: Aircraft Carrier Homeport Changes and Maintenance Reasons	20
	Text of Figure 4: Recent Navy Aircraft Carrier Homeport Locations and Maintenance Capabilities	22
Figures		
	Figure 1: Recent Navy Aircraft Carrier Homeport and Shipyard Locations	6
	Figure 2: 36-Month Aircraft Carrier Maintenance Cycle over the 50-Year Expected Service Life	7
	Figure 3: The Navy's Process for Making Ship Homeport Changes	10
	Figure 4: Recent Navy Aircraft Carrier Homeport Locations and Maintenance Capabilities	22

Abbreviations

aircraft carriers

DOD

midlife refueling

strategic laydown plan

nuclear-powered aircraft carriers

Department of Defense

refueling complex overhaul

Strategic Laydown and Dispersal Plan

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

April 22, 2021

The Honorable Adam Smith
Chairman
The Honorable Mike Rogers
Ranking Member
Committee on Armed Services
House of Representatives

The Navy relies on 11 nuclear-powered aircraft carriers homeported on the East and West Coasts and in Japan to support U.S. defense strategic objectives and operations. These ships are critical platforms for sea and air operations. As the centerpiece of Navy forces, nuclear-powered aircraft carriers are essential elements of U.S. naval strategy and operations.

Homeporting and maintaining nuclear-powered aircraft carriers (aircraft carriers) involves specific infrastructure, technology, and maintenance requirements at or near homeports. For maintenance and repair services unavailable in a particular area, ships must relocate to access the required maintenance infrastructure and capabilities. Approximately 3,200 sailors crew each aircraft carrier, so homeport changes can mean the fluctuation of 5,000 people or more to an area, depending on the number of family members involved. Unlike the Navy's more than 160 active surface ships and 60 submarines, which can each be homeported at as many as 10 locations, since the late 1990s the Navy has homeported its 11 nuclear-powered aircraft carriers at only four locations in the U.S. and at one in Japan. Ten of these ships are homeported in the U.S.: five or six homeported or receiving maintenance in the Norfolk, Virginia area on the East Coast, and the remaining ships on the West Coast—in either the Pacific Northwest or Southern California.

In House Report 116-120, accompanying a bill for the Fiscal Year 2020 National Defense Authorization Act, the Committee on Armed Services noted that the Navy's 2018 Strategic Laydown and Dispersal Plan reversed a previous Navy decision to homeport an aircraft carrier at Naval Station Everett, Washington, in fiscal year 2019.¹ The report included a provision for us to review the Navy's process to assign aircraft carriers' homeports and recent changes to the Navy's West Coast aircraft carrier homeporting, among other issues. In our report we examine, for Navy

¹H.R. Rep. No. 116-120, at 91 (2019).

aircraft carriers, (1) the extent to which the Navy has a process for making homeport changes, (2) the extent to which the Navy considers local installation and other factors in the homeporting process, and (3) homeport changes the Navy made from fiscal years 2011 through 2020 and the reasons for them.

For our first objective, we analyzed Navy policies that establish and guide the development of the Strategic Laydown and Dispersal Plan (strategic laydown plan) for the Navy's operating forces. This plan provides the rationale and guidance for any homeport changes, and designates the planned locations (including homeport changes) of all of the Navy's operating forces—surface ships, submarines, aircraft carriers, other logistics and support ships, and aircraft. We also reviewed the Navy's organization change request process, which is the process for scheduling a homeport change.² To identify any substantial changes to the Navy's process over time, we reviewed prior versions of these policies, our 2010 and 2015 work evaluating the Navy's homeporting processes, Navy actions and documentation in response to our prior recommendations, and other analyses of the processes.³ We also examined how the Navy implemented this process for the recent aircraft carrier homeport changes we analyze as part of this report.

For our second objective, we analyzed Navy instructions and related policies, laws, and regulations to identify local installation and other factors that pertain to homeports and surrounding areas considered in the policies and homeporting process—such as installation infrastructure, local housing and schools, and environmental impacts of homeporting

²See OPNAV Instruction 3111.17B, *Strategic Laydown and Dispersal Plan for the Operating Forces of the United States Navy* (Nov. 13, 2020) and OPNAV Instruction 5400.44A, *Navy Organization Change Manual* (Oct. 13, 2011). The strategic laydown plan also includes assignments and changes to Navy aircraft homebases as well as locations for support and logistics ships, such as Military Sealift Command vessels. This report focuses on the Navy's decision-making and actions for aircraft carrier homeports within that process.

³See GAO, *Defense Infrastructure: Opportunities Exist to Improve the Navy's Basing Decision Process and DOD Oversight*, [GAO-10-482](#) (Washington, D.C.: May 11, 2010) and *Navy Force Structure: Sustainable Plan and Comprehensive Assessment Needed to Mitigate Long-Term Risks to Ships Assigned to Overseas Homeports*, [GAO-15-329](#) (Washington, D.C.: May 29, 2015); and CNA, *USN Strategic Laydown and Dispersal: Creating a More Transparent Process* (February 2012).

decisions.⁴ We also analyzed documentation the Navy uses to develop the strategic laydown plan, the resulting annual strategic laydown plans, and organization change request documentation to understand how local factors are considered for aircraft carrier homeporting decisions, including for aircraft carrier homeport changes we analyze as part of this report. We discussed this process with officials, including those responsible for different elements of the process, such as assessing local installation information.

For our third objective, we analyzed available unclassified strategic laydown plans and organization change request documentation for each homeport change during fiscal years 2011 through 2020, and related documents including aircraft carrier maintenance requirements, schedules, and policies. We chose this 10-year period to examine the homeporting process since our 2010 report, and to provide a sufficient time frame to analyze homeport changes given the Navy's small number of aircraft carriers.⁵ We also reviewed findings and cost estimates from our past work analyzing the Navy's prior plans to homeport an aircraft carrier in Mayport, Florida, and related information provided by the Navy.⁶

For all three objectives, we interviewed officials from across Navy headquarters, fleets and other commands, installations, and others to understand how these processes work in practice and the reasons for aircraft carrier homeport changes. See appendix I for a list of the offices we contacted during our review.

⁴National Environmental Policy Act of 1969, Pub. L. No. 91-190 (1970), *codified at* 42 U.S.C. §§ 4321-4347; 10 U.S.C. §§ 8013 and 8032; SECNAV Instruction 5450.4G, *Establishment and Disestablishment of Shore (Field) Activities, Change to Homeport Assignment, and Assignment and Distribution of Authority and Responsibility in the Department of the Navy* (Oct. 9, 2018); OPNAV Instruction 5090.1E, *Environmental Readiness Program* (Sept. 3, 2019); and CNIC Instruction 3111.1A *Navy Installations Command Support to Strategic Laydown and Dispersal Planning* (July 17, 2018).

⁵[GAO-10-482](#).

⁶We issued a number of reports reviewing the Navy's efforts to analyze, estimate, and plan for the costs and risks associated with homeporting a nuclear aircraft carrier in Mayport before the Navy canceled those plans. See GAO, *Defense Infrastructure: Ability of Ship Maintenance Industrial Base to Support a Nuclear Aircraft Carrier at Naval Station Mayport*, [GAO-11-388R](#) (Washington, D.C.: Mar. 29, 2011); *Defense Infrastructure: Navy Can Improve the Quality of Its Cost Estimate to Homeport an Aircraft Carrier at Naval Station Mayport*, [GAO-11-309](#) (Washington, D.C.: Mar. 3, 2011); and *Depot Maintenance: Navy Has Revised Its Estimated Workforce Cost for Basing an Aircraft Carrier at Mayport, Florida*, [GAO-11-257R](#) (Washington, D.C.: Mar. 3, 2011).

We conducted this performance audit from March 2020 to April 2021 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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives

Background

Key Organizations Involved in Determining and Supporting Ship Homeports

The Navy's organizational structure consists of a two-pronged chain of command. The administrative commands conduct all affairs of the Department of the Navy, including recruiting, organizing, maintaining, equipping, and training Navy forces. The operational commands deploy ships and carry out specific missions. Within each of these chains of command are organizations with responsibilities for and reliance on Navy homeporting decisions. Offices with key responsibilities related to making ship homeporting decisions and supporting aircraft carriers include:

- **Secretary of the Navy and Chief of Naval Operations.** The Secretary of the Navy oversees all activities of the Navy, including the construction, outfitting, and repair of naval ships, equipment, and facilities. The Chief of Naval Operations is responsible to the Secretary for the command, utilization of resources, and efficiency of operating forces and shore activities (e.g., installations such as Navy bases and naval stations). Within each of their offices and under their chains of command are organizations with responsibilities for Navy efforts including developing key strategies and plans; developing Navy policy regarding ship maintenance, infrastructure, and installations; and issuing and promulgating Navy directives and doctrine.
- **U.S. Pacific Fleet and U.S. Fleet Forces Command.** Pacific Fleet and Fleet Forces Command are both operational Navy component commands that carry out operations within their combatant commands' areas of responsibility (i.e., U.S. Indo-Pacific Command and U.S. Northern Command, respectively), as well as administrative commands responsible for ensuring that forces are trained and ready for operations worldwide.

- **Navy administrative commands responsible for installations and facilities.** Various administrative commands under the Chief of Naval Operations, including Navy Installations Command and the Naval Facilities Engineering Systems Command, are responsible for shore base and installation support, including bases homeporting aircraft carriers. For example, Commander, Navy Installations Command manages 70 naval installations across subordinate regional commands, such as Navy Regions Southwest and Northwest.
- **Navy maintenance organizations.** The Naval Sea Systems Command consists of numerous activities that provide engineering, scientific, technical, maintenance, and other expertise and support to the fleet. In particular, the command oversees the naval shipyards, including the two capable of dry-docking aircraft carriers, and the shipyard detachments and repair facilities in San Diego and Yokosuka. Additionally, other affiliated maintenance organizations plan maintenance schedules, develop and track requirements, and provide nuclear expertise over the ships' 50-year expected service life.

Navy Homeports and Maintenance Cycles for Nuclear-Powered Aircraft Carriers

The Navy introduced the world's first nuclear-powered aircraft carrier in 1961, but it was not until the 1990s that the Navy shifted from a largely conventional (i.e., non-nuclear-powered) fleet to a more nuclear-powered one.⁷ Also since the mid-1990s, the Navy has experienced a reduction in homeports and other installations, including for homeporting aircraft carriers. For example, the 1993 Defense Base Closure and Realignment Commission recommended the Navy close a naval air station near San Francisco, California, thus requiring the Navy to redistribute the aircraft carriers located there to other homeports on the West Coast. The Navy analyzed alternatives on the West Coast and in the Pacific, including the facilities and other infrastructure needed to maintain and support the relocated ships and a future increase in the number of nuclear-powered aircraft carriers in the Pacific, and has since used five homeports: Bremerton, Washington; Everett, Washington; Norfolk, Virginia; San

⁷The Navy decommissioned the last conventional carrier, the USS *Kitty Hawk*, in January 2009.

Diego, California; and Yokosuka, Japan.⁸ Figure 1 shows the Navy's recent aircraft carrier homeport and shipyard locations.

Figure 1: Recent Navy Aircraft Carrier Homeport and Shipyard Locations



Source: GAO analysis of Navy information; Map Resources (map). | GAO-21-345

To ensure aircraft carriers predictably receive needed maintenance and sufficient time dedicated to training and operations over the 50-year expected service life, the Navy set forth a regular maintenance schedule along with the required facilities, infrastructure, and technology. The aircraft carrier class maintenance plan lays out three major maintenance periods, known as “availabilities,” that take place about every 36 months. The level and complexity of this maintenance can vary, and these periods may last from 6 months for regularly scheduled maintenance to almost 4 years for a major overhaul.⁹ As illustrated in figure 2, the three major aircraft carrier maintenance periods are: (1) “planned incremental

⁸We refer to these cities when describing aircraft carrier homeports to reflect Navy practice. However, the physical location of the Navy homeport or maintenance location, while in that metropolitan area, may be outside city limits. For example, aircraft carriers in San Diego are homeported at Naval Air Station North Island, in Coronado, California, and Norfolk Naval Shipyard is in Portsmouth, Virginia. Additionally, aircraft carriers may visit other Navy installations or other ports around the world during their deployments. These five homeports, however, are the only recent locations where the Navy has homeported nuclear aircraft carriers, and where the crews and their families live.

⁹There are smaller availabilities for continuous maintenance that generally last 45 days or less, and ships homeported in Japan follow a separate 12-month maintenance cycle in which the ship is in maintenance for about 4 months per year while homeported overseas. For more information on maintenance and operational cycles, see GAO, *Military Readiness: Progress and Challenges in Implementing the Navy’s Optimized Fleet Response Plan*, [GAO-16-466R](#) (Washington, D.C.: May 2, 2016).

availabilities”—regularly scheduled maintenance planned to last 6 months or less; (2) “docking planned incremental availabilities”—dry-dock maintenance planned to last 16 months or less; and (3) a “refueling complex overhaul” (midlife refueling) that occurs halfway through an aircraft carrier’s service life and lasts nearly 4 years.

Figure 2: 36-Month Aircraft Carrier Maintenance Cycle over the 50-Year Expected Service Life



Source: GAO analysis of Navy information; U.S. Navy/Petty Officer 1st Class D. Mercil; U.S. Navy/W. Hallmark; U.S. Navy/Petty Officer 1st Class J. Wahl. | GAO-21-345

Note: The two classes of aircraft carriers, the *Nimitz*- and *Ford*-class, generally have the same deployment cycles and maintenance durations over the 36-month cycle, though the Navy plans for *Ford*-class ships to have scheduled dry-dock maintenance about every 12 years. The forward-deployed aircraft carrier is maintained under a different cycle while homeported in Japan. All three maintenance periods require specific infrastructure, technology, and facilities, such as the dry docks and midlife refueling capabilities available at few shipyards. For example, aircraft carriers undergo dry-dock maintenance about every 9 years in Bremerton, Washington, or Norfolk, Virginia, the only two Navy shipyards with dry docks that can accommodate an aircraft carrier.¹⁰ These maintenance periods involve industrial-level, labor-intensive repairs and modernization. Putting a ship in a dry dock allows for rudder and hull inspections and repair, and other critical maintenance that cannot be conducted when a ship is in the water.

Midlife refueling is a multi-year overhaul of the ship and its systems that notionally begins around year 23 of an aircraft carrier’s 50-year expected

¹⁰The Navy operates two classes of aircraft carriers: the *Nimitz*-class, introduced in 1975, and the *Ford*-class, introduced in 2017. Of the Navy’s 11 aircraft carriers, 10 are *Nimitz*-class. As of December 2020, the Navy plans three more *Ford*-class aircraft carriers to begin to replace *Nimitz*-class ships. *Ford*-class aircraft carriers will operate under a 12-year dry-dock maintenance cycle.

service life at the shipbuilder's shipyard in the Norfolk area. During midlife refueling, the ship's nuclear reactors are refueled; reactor and steam plants are repaired; the ship's hull, mechanical, and electrical systems are repaired and upgraded; and a significant amount of maintenance and modernization is performed on the entire ship to restore material condition, ready the ship for future technologies, and ensure that it reaches its expected service life.

The most frequent maintenance periods, planned incremental availabilities, are regularly scheduled periods that also involve industrial-level, labor-intensive maintenance and modernization performed pier-side while a ship is in the water. Repairs and modernization are performed on the ship to, among other things, ensure the safety of the crew and mission and provide a predictable level of reliability and readiness throughout an aircraft carrier's life. While this regularly scheduled maintenance is usually shorter in duration and does not require a shipyard dry dock, it does require nuclear and other technology and facilities, including a:

- controlled industrial facility used for inspection, modification, and repair of radiologically controlled equipment and components associated with naval nuclear propulsion plants;
- ship maintenance facility to perform non-nuclear maintenance; and
- maintenance support facility for receiving, inspecting, shipping, and storing materials.

The Navy Has a Process for Making Ship Homeport Changes and Has Taken Steps to Strengthen That Process

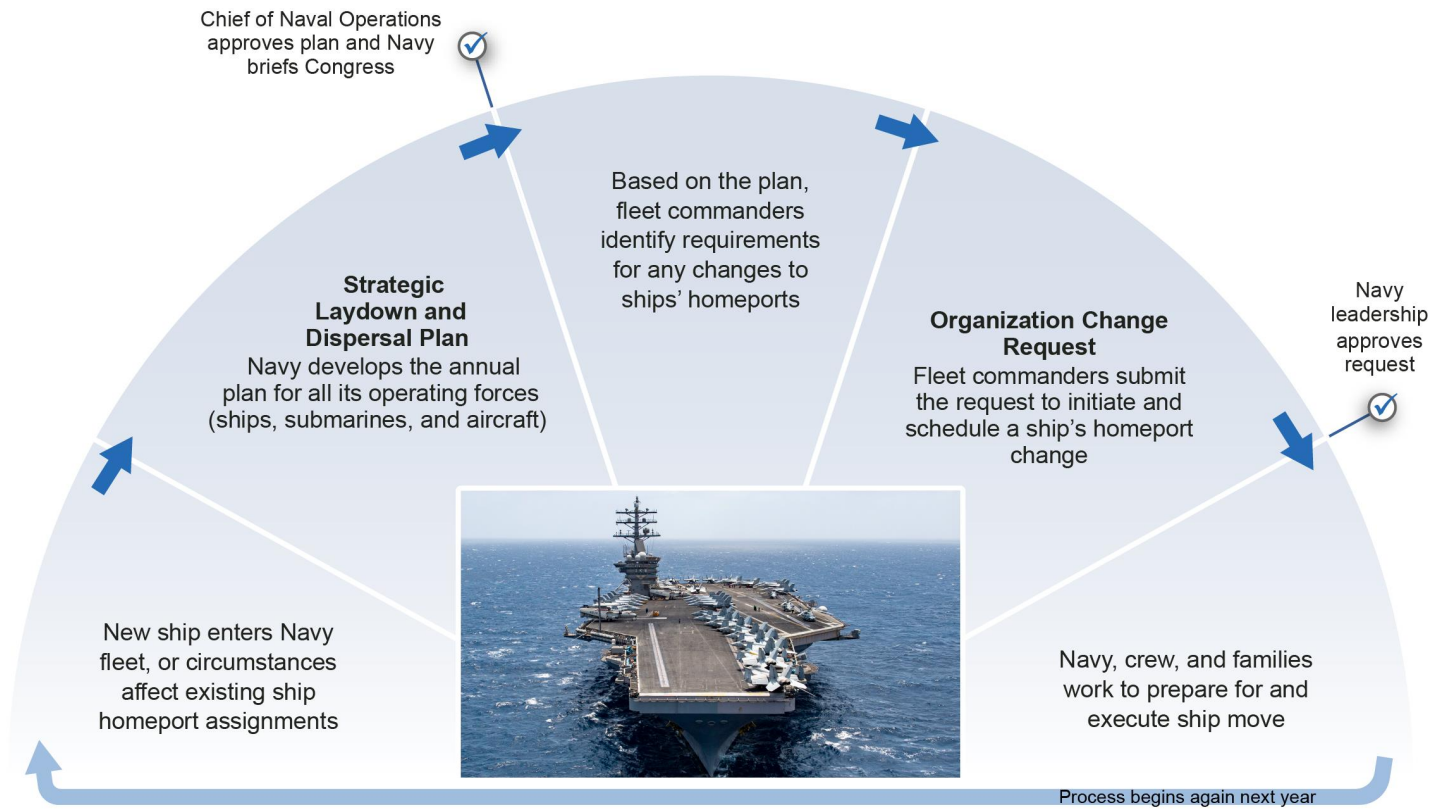
The Navy Process for Determining and Making Homeport Changes Includes Leadership and Other Stakeholder Organizations

The Navy's process for making homeport changes comprises two main elements—the annual strategic laydown plan for the Navy's operating forces, and fleet command-submitted change requests—that include input and analysis from Navy leadership and stakeholder organizations from across the department. The Navy begins the homeporting process each

year by updating its strategic laydown plan to designate the locations (including homeport changes) of all its operating forces, which comprise surface ships, submarines, aircraft carriers, other logistics and support ships, and aircraft.¹¹ This plan provides the strategic rationale and guidance for any homeport changes, such as to prepare for new ships entering the fleet, meet Navy maintenance schedule requirements, or respond to other circumstances affecting Navy strategy or force structure. The resulting strategic laydown plan sets the types and number of aircraft carriers, surface ships, and submarines at every homeport for that year, and provides future homeport projections for the following 5- and 10-year periods, which fleet commands then use to develop and submit organization change requests to initiate specific homeport changes. In figure 3, we show the relationship between the annual strategic laydown planning and the subsequent organization change request process the Navy uses to initiate specific homeport changes, including for aircraft carriers.

¹¹OPNAV Instruction 3111.17B, *Strategic Laydown and Dispersal Plan for the Operating Forces of the United States Navy* (Nov. 13, 2020).

Figure 3: The Navy’s Process for Making Ship Homeport Changes



Source: GAO analysis of Navy data; U.S. Navy/Mass Communication Specialist 1st Class A. Bewkes (photo). | GAO-21-345

Text of Figure 3: The Navy’s Process for Making Ship Homeport Changes

1. New ship enters Navy fleet, or circumstances affect existing ship homeport assignments
2. Strategic Laydown and Dispersal Plan, Navy develops the annual plan for all its operating forces (ships, submarines, and aircraft)
3. Based on the plan, fleet commanders identify requirements for any changes to ships’ homeports
4. Organization Change Request, Fleet commanders submit the request to initiate and schedule a ship’s homeport change
5. Navy, crew, and families work to prepare for and execute ship move
6. Process begins again next year.

Each year, divisions within the Office of the Chief of Naval Operations lead a working group of stakeholders from across the Navy to update the

strategic laydown plan, according to Navy policy, officials, and planning documents. The working group includes stakeholders from Navy headquarters staff and from fleet and component commands, such as U.S. Pacific Fleet and U.S. Fleet Forces Command, and organizations with responsibilities for maintenance, construction, and installations, such as the Office of the Chief of Naval Operations, the Naval Sea Systems Command, Navy Installations Command, and regional commands.

In sequential design and assessment phases, the working group evaluates any potential homeport changes across a range of criteria, including enhancing forces' operational efficiency and maximizing the use of existing infrastructure. The Navy conducts the strategic laydown plan design and assessment phases as follows, based on Navy guidance and our analysis of Navy documentation and information from officials, including our analysis of past aircraft carrier homeport changes.

- **Design.** The working group reviews strategic-level guidance that would affect the plan, and incorporates input from a number of policy, planning, budget, and strategic documents, such as Navy and Department of Defense (DOD) strategic guidance, the *National Defense Strategy*, Navy shipbuilding plans and acquisition timelines, maintenance and modernization requirements and schedules, and fleet operational schedules. The Navy also incorporates any real-world events or changes that occurred since the prior year's plan to design that year's proposed plan, according to officials from the Office of the Chief of Naval Operations.
- **Assessment.** The working group identifies and analyzes any execution and readiness impacts of proposed homeport changes from the design phase, prepares recommendations to mitigate impacts, and makes planning and programming recommendations to inform budget requests. About 20 designated working group participants lead assessments of the plan based on their area of expertise or issues related to the proposed plan—such as compatibility with operational plans, personnel costs, installations support, and host-nation engagement for ships homeported overseas.

After approval of each year's plan by the Chief of Naval Operations, and coordination with the Secretary of the Navy, the Navy briefs the plan to Congress.

From the strategic laydown plan, fleet commanders identify requirements to initiate early planning for homeport changes in preparation for submitting an organization change request—the action that begins the

process to schedule and initiate an individual aircraft carrier or other ship homeport change.¹² This initial planning includes detailed vetting of personnel, training, maintenance, logistics, command, control, and budget, among other requirements and issues associated with a homeport change. Following the early planning process, the affected fleet command reviews the requested change. Upon the command's endorsement of the change, the resulting organization change request includes information regarding the reasons for the change, the total number of personnel involved, and any relevant environmental regulatory requirements. The fleet command then submits the organization change request to the Chief of Naval Operations for review and approval. Requests for permanent homeport changes or changes 18 months or longer are then forwarded to the Secretary of the Navy for final approval.

Organization change request guidance also requires that ships, including aircraft carriers, change homeports for maintenance periods planned for longer than 9 months if the maintenance is not being conducted at the existing homeport location. If these requirements are not already identified in the strategic laydown plan, the fleet must coordinate with the Office of the Chief of Naval Operations prior to submitting a change request to ensure inclusion in the plan, according to the Navy's strategic laydown plan guidance.

The Navy Has Strengthened Its Homeporting Process in Response to Our Prior Recommendations

The Navy has taken actions to strengthen the homeporting process in response to our prior work, and has continued to revise homeporting policies. In 2010, we analyzed the military services' approaches for making basing decisions, including the Navy's process for making homeport changes.¹³ At the time, Navy officials stated they had used the strategic laydown plan for the past 20 years, and that they had recently refined the process to align with defense strategy. However, we found

¹²OPNAV Instruction 5400.44A, *Navy Organization Change Manual* (Oct. 13, 2011). The submission of an organization change request also begins the process for the crew, such as providing the timeline and documentation for crews and their families to relocate from one location to another, change housing, and find schools.

¹³[GAO-10-482](#). The other services had comprehensive policies, so we did not make recommendations to the Army, Air Force, or the Marine Corps. We also recommended two actions for DOD to improve domestic and global basing decisions and processes. Although the department agreed with only one of our recommendations, DOD implemented both—in 2011 and 2013, respectively.

that the Navy did not have clear, comprehensive guidance that, among other things, described how risk assessment should be evaluated; how analysis is to be conducted and who is to conduct it; and the linkage among related homeporting process guidance documents and associated activities—including how the strategic laydown plan is coordinated with the organization change process. The Navy agreed that without clear linkage of the various guidance documents, the process may not be transparent to outside stakeholders, and we found that management and staff may not understand the roles, responsibilities, and relationships between various organizations and all the elements needed to implement the process, among other things.

We made three recommendations to the Navy to improve its guidance, including that it more clearly describe how risk is evaluated; how to communicate with stakeholders; and what the authorities, roles, and responsibilities were for conducting the process, among other things. In 2013, the Navy fully implemented our recommendations with the issuance of an instruction to guide the annual strategic laydown plan process. This instruction included identifying how certain risks are assessed; how information flows within the organization, including for communication with stakeholders; what appropriate lines of reporting and authority are; and how related guidance and processes are linked, such as how organization change requests are coordinated with the strategic laydown plan.¹⁴

In 2015, we reviewed the Navy's process and its cost-benefit considerations for homeporting ships overseas.¹⁵ We found that, although the Navy's decision-making process to homeport ships overseas identified needed resources and actions, it did not identify the long-term risks that these homeport changes pose to costs, readiness, or the service lives of the ships. This in turn limited the Navy's ability to make adjustments or inform homeporting decisions in future. One of our two recommendations included that the Navy (1) develop a comprehensive assessment of the Navy's long-term costs and risks associated with increasing reliance on overseas homeporting and (2) reassess these risks when developing future strategic laydown plans and homeporting

¹⁴OPNAV Instruction 3111.17, *Strategic Laydown and Dispersal Plan for the Operating Forces of the United States Navy* (Nov. 22, 2013). The instruction was subsequently updated in both 2017 and 2020.

¹⁵[GAO-15-329](#).

decisions.¹⁶ DOD agreed with both recommendations. In 2017, the Navy updated its strategic laydown plan guidance to include further consideration of certain long-term risks for all homeport decisions. Additionally, in 2019, the Navy conducted an internal analysis of the strategic laydown process and identified updates for incorporation into a subsequent revision of the strategic laydown guidance. Issued in November 2020, the guidance includes additional requirements for evaluating the material condition and training readiness for overseas ships in the strategic laydown process.¹⁷

During the course of this review, we found outdated and inconsistent information in the Navy's guidance for the organization change request process—the *Navy Organization Change Manual*.¹⁸ Because the Navy has not updated this guidance since 2011, it does not reflect the formalized strategic laydown process or refer to the strategic laydown guidance. We also found inconsistencies between the strategic laydown and organization change request guidance, such as the types of homeport changes that are included in the strategic laydown plan. In February 2021, Office of the Chief of Naval Operations officials told us the Navy was in the midst of revising the *Navy Organization Change Manual*, including addressing our observations by updating outdated information and clarifying terminology. The Navy expects to finalize the revised guidance in summer 2021, according to officials.

The Navy Considers Infrastructure, Crew Quality of Life, Environment, and Other Factors When Making Aircraft Carrier Homeport Changes

The Navy's strategic laydown plan and organization change request guidance direct that Navy leadership consider a variety of criteria, including local installation and other factors, and collect input on these factors from stakeholder organizations when making homeporting

¹⁶The other recommendation pertained to the Navy's operational schedules for overseas ships. DOD agreed with this recommendation but has not fully implemented it.

¹⁷OPNAV Instruction 3111.17B, *Strategic Laydown and Dispersal Plan for the Operating Forces of the United States Navy* (Nov. 13, 2020).

¹⁸OPNAV Instruction 5400.44A, *Navy Organization Change Manual* (Oct. 13, 2011).

decisions. These local factors include installation facilities and infrastructure, such as piers and maintenance infrastructure like dry docks, and the number of aircraft carriers they can accommodate; support that installations provide for ship crew and families' quality of life, such as childcare; and effects that homeport changes might have on the natural and socioeconomic environment of local areas involved. The Navy uses information it gathers on these factors to evaluate the feasibility of each year's proposed future homeport changes and address critical requirements.

Specifically, the strategic laydown plan guidance assigns the Commander, Navy Installations Command and the Commander, Naval Facilities Engineering Systems Command responsibility to assess aspects of installation support including facilities and infrastructure, and base operations that provide support and other services to sailors and their families. Furthermore, the Office of the Chief of Naval Operations' environmental division is responsible for identifying potential environmental impacts to the natural and physical environment of a proposed homeport change. The Office of the Chief of Naval Operations then leads the strategic laydown plan working group member organizations to analyze input on key factors and considerations for future homeport plans from Navy regional commands and installations, as well as Navy organizations responsible for personnel and environmental issues, among others. For example:

- **Installation facilities, infrastructure, and ship support.** The strategic laydown plan guidance directs the Navy Installations Command and Naval Facilities Engineering Systems Command to evaluate installations' pier power, water, and steam needed to support aircraft carriers or other ships to be homeported there. The guidance further directs the Office of the Chief of Naval Operations–led working group to consider facility investments, such as military construction projects at aircraft carrier homeports, during the design and assessment of the annual strategic laydown plan.

The Navy Installations Command solicits input from the regional commands and individual installations to assess the feasibility of that year's strategic laydown plan and any proposed future homeport changes at each installation, according to command, regional, and installation officials and documentation of the process we reviewed. As part of the fiscal year 2021 assessment of future aircraft carrier homeporting and related support in San Diego, the Navy identified upgrades and construction projects for future homeporting and support for the new *Ford*-class carriers, and other projects. For

example, officials said that the voltage between the *Nimitz*- and the *Ford*-class ships are different and that pier upgrades are needed to support the power of the *Ford*-class carriers. According to Navy documentation, the base in San Diego plans to conduct an electrical study for the *Ford*-class carriers to inform the project design and prepare for any future homeporting plans.

According to Navy regional command and installation officials, as well as policy documents we analyzed, identifying required infrastructure and construction projects early in the homeporting process is critical to ensuring that projects have sufficient time to be designed, planned, and constructed prior to a ship arriving at its new homeport. For example, in addition to the Navy Installations Command, other organizations such as the Naval Sea Systems Command and the shipyards coordinate long-term maintenance and infrastructure planning to inform homeporting decisions years in the future. According to Puget Sound Naval Shipyard officials, they contribute to periodic meetings to coordinate on aircraft carrier homeporting, maintenance, and associated infrastructure issues. This includes looking 10 years ahead to ensure needed capabilities and issues are identified, such as ensuring the shipyard dry dock can support expected future West Coast homeporting of *Ford*-class carriers.

- **Ship crew and family quality of life.** The strategic laydown plan guidance directs the Office of the Chief of Naval Operations–led working group to assess the morale, welfare, and recreation programs, schools, and other services in support of proposed homeport decisions in the annual plan. The working group must also evaluate the annual plan to minimize homeport changes to provide for stability and quality of life for sailors and families, while not compromising the Navy’s ability to support operations.

Regional and installation officials for the West Coast aircraft carrier homeports stated that crew and family quality of life and related services, such as childcare, housing, and others, are important to consider when planning support for future homeport plans. For example, region and installation officials in San Diego identified demand for childcare and housing as important considerations in its assessment of the Navy’s 2021 strategic laydown plan. According to officials in San Diego, the current waitlist for childcare for the installation is over several hundred children, and they reported a 6- to 18-month wait for childcare services in the area.

Providing sufficient housing is also an ongoing challenge in supporting additional ship homeporting based on information provided by officials and strategic laydown plan documentation we analyzed. For example,

Navy officials in San Diego stated that unaccompanied housing (i.e., housing for single sailors) is particularly strained now that three aircraft carriers can be in port together, because current base housing only accommodates two aircraft carrier crews.¹⁹ During the strategic laydown plan process the installation proposed a military construction project for additional barracks, according to Navy documentation. The Navy also considers available and needed family housing during the homeporting process, according to officials and strategic laydown plan documentation we analyzed. For example, the area surrounding the homeport in San Diego is densely populated Coronado Island, where there is little room for expansion. The Navy identified a family housing deficit in the San Diego metro area in strategic laydown plan documentation, and because of the area's housing market many sailors live 60 to 80 miles from the base, according to officials.

- **Effect on the natural and socioeconomic environment.** The strategic laydown plan guidance directs the Office of the Chief of Naval Operations–led working group to identify and describe potential impacts to the natural and physical environment posed by any proposed homeporting changes, including for aircraft carriers, during the assessment phase of that year's strategic laydown plan. Navy Installations Command and Naval Facilities Engineering Systems Command are also responsible for assessing on- and off-base land use and transportation impacts, among other issues. Additionally, the Office of the Chief of Naval Operations Energy and Environmental Readiness Division, the Navy Installations Command, or the fleet submitting the organization change request (e.g., Pacific Fleet or Fleet Forces Command) determines and documents the appropriate level of compliance with environmental regulations, including with the National Environmental Policy Act.²⁰

Officials from the Office of the Chief of Naval Operations and Fleet Forces Command stated that they analyze environmental factors required by the National Environmental Policy Act and Navy policy when assessing the proposed future homeport changes in the annual strategic laydown plan. The Navy also included the required

¹⁹In 2000, the Navy announced its decision to develop homeport facilities in support of three *Nimitz*-class aircraft carriers at Naval Air Station North Island near San Diego, California. It was not until 2019, however, that the Navy moved the USS *Abraham Lincoln* to San Diego to join the two carriers already homeported there. Department of Navy, *Record of Decision for Developing Home Port Facilities for Three Nimitz-Class Aircraft Carriers in Support of the U.S. Pacific Fleet*, 65 Fed. Reg. 6181 (Feb. 8, 2000).

²⁰National Environmental Policy Act of 1969, Pub. L. No. 91-190 (1970), codified at 42 U.S.C. §§ 4321-4347.

environmental analysis in its organization change requests for all homeport changes in 2011 through 2020 based on our analysis of associated documentation. Furthermore, officials from Fleet Forces Command, the Office of the Chief of Naval Operations, and Navy regional commands stated they work together to understand any environmental impacts of homeport changes and ensure that all required analysis is completed.

Officials from all three recent West Coast aircraft carrier homeports stated they are involved with regional and Navy-wide efforts to ensure all homeport changes and aircraft carrier requirements comply with national and local regulations. For example, Navy officials in Bremerton stated that they analyze prior environmental analyses to ensure that proposed actions, such as construction projects to support future homeporting of *Ford*-class carriers, are consistent with past analysis or to determine if a new analysis is required. Similarly, officials in San Diego stated that they worked with Navy Region Southwest and the Office of the Chief of Naval Operations' environmental division to evaluate the 2019 addition of a third aircraft carrier. The analysis focused on whether the resulting increase in the amount of time the ships would be in port together was consistent with the original environmental impact analyses of homeporting the ships in San Diego.²¹ Based on related documentation we analyzed, the Navy assessed the expected increase in the number of days the three aircraft carriers will be in port and identified steps to mitigate any potential increase in traffic or other local effects.

Navy officials in San Diego, Bremerton, and Everett said they coordinate with local governments and regional associations that include representatives of local municipalities and tribes, with whom they can collaborate on environmental and land use issues. For example, Naval Base Kitsap contributed to a joint land use study conducted for the City of Bremerton and nearby counties and funded in part by the DOD Office of Local Defense Community Cooperation.²²

²¹Department of the Navy, *Final Environmental Impact Statement for Developing Home Port Facilities for Three Nimitz-Class Aircraft Carriers in Support of the U.S. Pacific Fleet* (July 1999) and Department of the Navy, *Volume 1 Final Supplemental Environmental Impact Statement for Developing Home Port Facilities for Three Nimitz-Class Aircraft Carriers in Support of the U.S. Pacific Fleet* (December 2008).

²²The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 redesignated the Office of Economic Adjustment as the Office of Local Defense Community Cooperation. Pub. L. No. 116-283, title IX, § 905 (Jan. 2, 2021).

The study identified actions the local community and installation can take to encourage compatible land use.

The Navy Made 15 Aircraft Carrier Homeport Changes from Fiscal Years 2011 through 2020, All for Maintenance Reasons

The Navy made 15 homeport changes involving eight of its 11 aircraft carriers from fiscal years 2011 through 2020. In all 15 cases, the driving factor for the Navy's decisions was maintenance—either for planned dry-dock or midlife refueling required by the aircraft carrier maintenance plan or a result of the Navy's desire to co-locate ships near specific maintenance facilities. For example, 10 of the 15 aircraft carrier homeport changes were to move an aircraft carrier to or from a shipyard for dry-dock maintenance or midlife refueling, as shown in table 1. Two additional ship moves were to replace a ship that changed homeports for its midlife refueling and maintenance. The Navy also changed the homeports of three aircraft carriers to be co-located at or near installations with other specific maintenance facilities, such as those required for routine nuclear maintenance.

Table 1: Aircraft Carrier Homeport Changes and Maintenance Reasons

Aircraft carrier	Homeport change		Date ^a	Maintenance reason		
	Prior homeport	New homeport		To/from dry dock ^b	Midlife refueling ^b	Other
USS <i>Nimitz</i>	San Diego	→ Bremerton	Dec. 2010	Yes	—	—
USS <i>Nimitz</i>	Bremerton	→ Everett	Dec. 2011	Yes	—	—
USS <i>Ronald Reagan</i>	San Diego	→ Bremerton	Jan. 2012	Yes	—	—
USS <i>Abraham Lincoln</i>	Everett	→ Newport News	Aug. 2012	—	Yes	—
USS <i>Ronald Reagan</i>	Bremerton	→ San Diego	Feb. 2013	Yes	—	—
USS <i>Nimitz</i>	Everett	→ Bremerton	Jan. 2015	—	—	Co-locate near nuclear maintenance facilities ^c
USS <i>Ronald Reagan</i>	San Diego	→ Yokosuka	Aug. 2015	—	—	Replacement for USS <i>George Washington</i> ^d
USS <i>George Washington</i>	Yokosuka	→ Newport News	Nov. 2015	—	Yes	—
USS <i>Theodore Roosevelt</i>	Norfolk	→ San Diego	Nov. 2015	—	—	Replacement for USS <i>Ronald Reagan</i> ^d
USS <i>Gerald R. Ford</i>	Newport News	→ Norfolk	Apr. 2017	—	—	Co-locate new ship near shipbuilder/shipyard
USS <i>Abraham Lincoln</i>	Newport News	→ Norfolk	Apr. 2017	—	Yes	—
USS <i>Carl Vinson</i>	San Diego	→ Bremerton	Jan. 2019	Yes	—	—
USS <i>John C. Stennis</i>	Bremerton	→ Norfolk ^e	May 2019	—	Yes	—
USS <i>Abraham Lincoln</i>	Norfolk	→ San Diego	Oct. 2019	—	—	Co-locate near nuclear maintenance facilities ^c
USS <i>Carl Vinson</i>	Bremerton	→ San Diego	Aug. 2020	Yes	—	—

Source: GAO analysis of Navy information. | GAO-21-345

^aDate is the effective date of the homeport change as listed on the Navy organization change requests and may not reflect the actual date the ship departed or arrived at a homeport.

^bAircraft carriers homeported at locations not near a capable shipyard may change homeports twice—first to move to the shipyard for dry-dock maintenance or midlife refueling, and again to return to its prior homeport or move to another one once maintenance is complete.

^cThese are homeport changes to move ships to a location with the nuclear maintenance facilities needed for regularly scheduled maintenance.

^dThe USS *Ronald Reagan* and the USS *Theodore Roosevelt* were part of a three-ship homeport swap to allow the USS *George Washington* to conduct a homeport change from Yokosuka, Japan to Newport News for its scheduled midlife refueling and complex overhaul.

^eThe USS *John C. Stennis* changed homeports to Norfolk in preparation for its midlife refueling in Newport News.

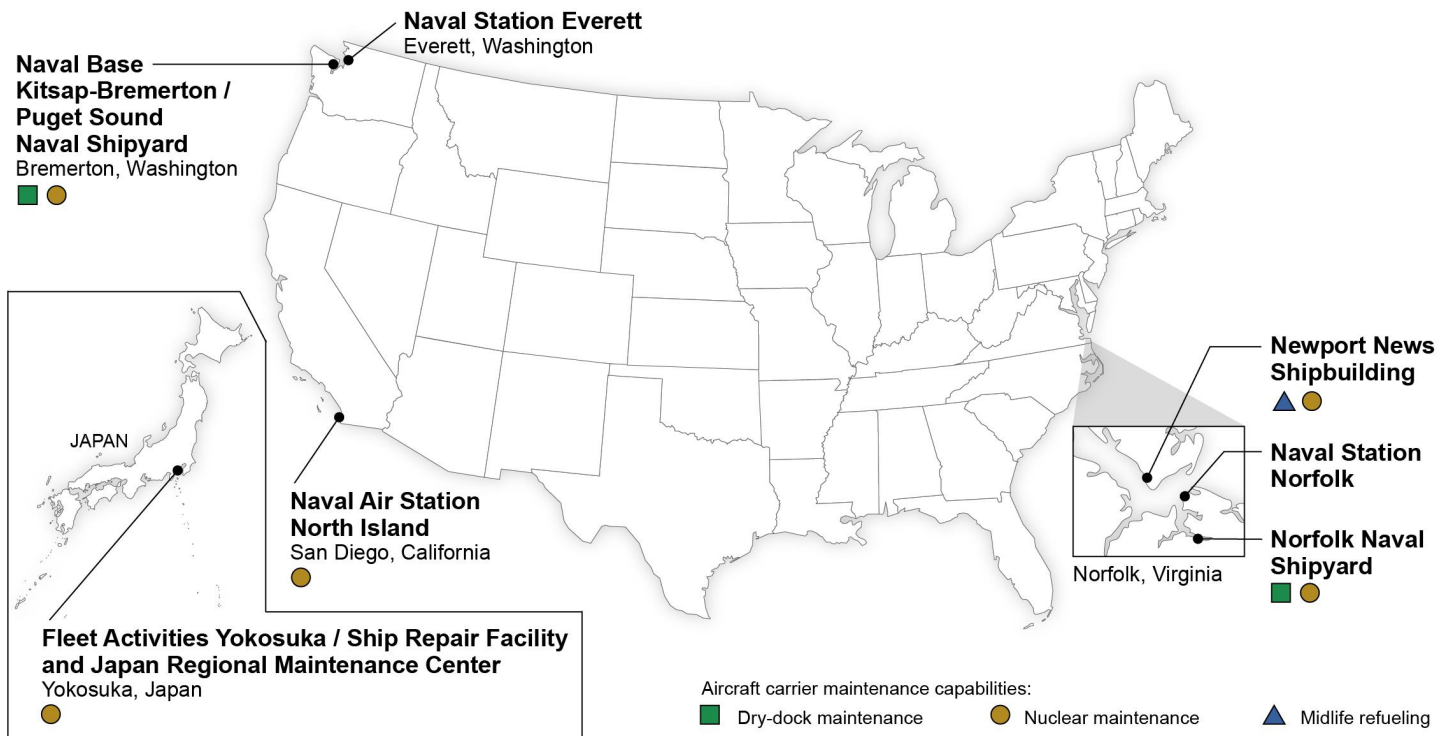
The majority of aircraft carrier homeport changes were to move to and from a shipyard for dry-dock maintenance and midlife refueling. Homeport changes for dry-dock maintenance were the most common reason for homeport changes. Dry-dock maintenance is scheduled for about every 9 years. If an aircraft carrier is not homeported at or adjacent

to a shipyard with a dry dock large enough for an aircraft carrier, it must move to a shipyard that has a suitable dry dock. Since dry-dock maintenance is scheduled to take 16 months, moving to a shipyard requires officially changing homeports, both for the specific infrastructure needed and because Navy guidance requires homeport changes for maintenance longer than 9 months.²³ Most recently the Navy conducted a homeport change for the USS *Carl Vinson* from San Diego to Bremerton for dry-dock maintenance scheduled for 2019, as well as for its subsequent return to San Diego when maintenance concluded in 2020. Aircraft carriers homeported in the Norfolk area or Bremerton can receive their regularly scheduled dry-dock maintenance at the shipyard in their assigned homeport area, as shown in figure 4. However, ships homeported elsewhere must conduct a homeport change to a shipyard.

Four of the Navy's aircraft carrier homeport changes were for midlife refueling, as well as two additional changes to backfill resulting vacancies. In 2015, the Navy changed the homeport of the USS *George Washington* from Japan to Newport News, in the Norfolk area, for its scheduled midlife refueling expected to take almost 4 years. This resulted in two additional homeport shifts to coordinate the replacement of the ship in Japan—the USS *Ronald Reagan* from San Diego to Japan, and the USS *Theodore Roosevelt* from Norfolk to San Diego. Because midlife refueling is only conducted at Newport News Shipbuilding, ships and crews homeported in Norfolk can stay in the area they live, and ships do not have to make an official homeport change, according to officials. However, aircraft carriers homeported outside of the Norfolk area require an official homeport change to move the ship and crew for the duration of the midlife refueling.

²³OPNAV instruction 5400.44A.

Figure 4: Recent Navy Aircraft Carrier Homeport Locations and Maintenance Capabilities



Source: GAO analysis of Navy information; Map Resources (map). | GAO-21-345

Text of Figure 4: Recent Navy Aircraft Carrier Homeport Locations and Maintenance Capabilities

- Naval Base Kitsap-Bremerton /Puget Sound, Naval Shipyard Bremerton, Washington. Dry dock maintenance and nuclear maintenance
- Naval Station Everett, Everett, Washington
- Naval Air Station North Island San Diego, California. Nuclear maintenance
- Newport News Shipbuilding, Norffolk, Virginia. Midlife refueling and nuclear maintenance
- Naval Station, Norfolk, VA
- Norfolk Naval Shipyard, Norfolk, VA. Dry dock maintenance and Nuclear maintenance.
- Fleet Activities Yokosuka / Ship Repair Facility and Japan Regional Maintenance Center, Yokosuka, Japan. Nuclear maintenance.

In 2015 and 2019, the Navy decided to homeport aircraft carriers at Bremerton and San Diego because Everett lacked nuclear maintenance facilities. The Navy first homeported an aircraft carrier at Everett in 1997. However, in 2000 the Navy decided not to build nuclear maintenance facilities at Everett due to its proximity to the shipyard and nuclear maintenance facilities in Bremerton, about 100 miles away by car.²⁴ As a result, unlike the other homeports, Everett has neither a shipyard, like Bremerton and Norfolk, nor facilities like San Diego and Yokosuka, as shown in figure 4. Approximately every 2 to 3 years, aircraft carriers homeported in Everett would move to Bremerton for 6 months to undergo regularly scheduled maintenance. The ship's crew is responsible for a portion of the work during these maintenance periods. At the time, the Navy did not require a homeport change, as it would for lengthier, dry-dock maintenance at the shipyard. As a result, the sailors homeported and living in Everett would make a daily 3- to 4-hour commute for the 6 months or more that ship was in Bremerton, according to Navy maintenance officials and documentation we reviewed.

According to Navy maintenance officials, the commute resulted in reduced work hours and maintenance taking longer or requiring substantial overtime to be completed on time.²⁵ For example, in 2007, the USS *Abraham Lincoln* completed its maintenance period more than 3 months late, taking a total of more than 9 months, according to Navy maintenance documentation. Navy officials also stated that the high stress environment of nuclear maintenance and long days resulting from the commute led to reduced sailor morale, mental acuity, and quality of life. Additionally, the region has grown and changed in the past 20 years since the decision to locate an aircraft carrier at Everett was made,

²⁴At the time, the Navy determined facilities were too costly to build to support a single aircraft carrier given the proximity to Bremerton. While we did not conduct a cost analysis to build the required nuclear maintenance facilities at Everett, in 2011, GAO conducted a cost estimate to build the required nuclear maintenance facilities for Naval Station Mayport when the Navy was considering it as a possible future nuclear aircraft carrier homeport. At the time, GAO estimated, in 2010 dollars, it would cost up to \$154.2 million dollars to make the required maintenance infrastructure improvements. [GAO-11-388R](#).

²⁵In 2020 we found that the Navy relied on high levels of overtime to complete aircraft carrier and submarine maintenance, including that overtime among certain maintenance shops, such as painting or welding, averaged from 25 to 32 percent for fiscal years 2015 through 2019. See GAO, *Navy Shipyards: Actions Needed to Address the Main Factors Causing Maintenance Delays for Aircraft Carriers and Submarines*, [GAO-20-588](#) (Washington, D.C.: Aug. 20, 2020). We recommended that, among other things, the Navy update workforce planning requirements to avoid the consistent use of overtime and the Navy agreed with our recommendation.

making the 100-mile commute, each way, between Everett and Bremerton lengthier.

These concerns informed three Navy homeporting decisions affecting Everett:

- First, in 2015, the Navy changed the USS *Nimitz* homeport from Everett to Bremerton for 16 months of maintenance. While this maintenance did not require the shipyard's dry dock, it included complex, intrusive nuclear maintenance the Navy could not perform in Everett, according to Navy officials and documentation. Additionally, because the Navy expected the maintenance period to last longer than 9 months, Navy policy required a homeport change.
- The Navy completed the scheduled maintenance on the USS *Nimitz* in 2016 and decided to keep it in Bremerton rather than conduct a homeport change back to Everett. According to Navy officials and documentation we reviewed, the Navy decided to keep the USS *Nimitz*, the oldest aircraft carrier in the fleet, close to the required nuclear and other maintenance facilities in Bremerton.
- Finally, in 2019, the Navy changed the homeport of the USS *Abraham Lincoln* from Norfolk to San Diego, after the aircraft carrier completed its midlife refueling. The prior year, during the strategic laydown planning process, the Navy had deliberated whether to return the USS *Abraham Lincoln* to Everett or San Diego. According to Navy officials and documentation, the Navy's decision to choose San Diego was a culmination of Navy plans since the 1990s to homeport three aircraft carriers there. Officials from the Office of the Chief of Naval Operations and others stated that a contributing factor to this decision was also the Navy's desire to ensure access to needed nuclear maintenance and support near the homeport.

As the aircraft carriers age, nuclear and other system repairs increase in complexity, and maintenance has taken longer. Accordingly, it has become increasingly important they be homeported near sufficient maintenance capabilities, according to nuclear maintenance and other officials. We have also reported that maintenance periods are getting longer for aircraft carriers. For example, while regularly scheduled maintenance periods are expected to last 6 months, in recent years Navy maintenance delays have resulted in maintenance taking longer than expected. In August 2020 we reported that only eight of 18 aircraft carrier maintenance periods—including regular, dry-dock, and midlife refueling maintenance periods—were completed on time, resulting in a total of

1,128 days beyond the expected duration.²⁶ The Navy also decided to homeport the first of the new *Ford*-class aircraft carriers in Norfolk in 2017 for similar reasons. According to officials, the Navy made this decision to keep the first-of-its-kind aircraft carrier close to needed maintenance facilities and the shipbuilder for any updates or unforeseen issues, and to learn to work on the new class for the first time in the shipyard. Similar considerations will be included in deliberations for the first West Coast homeport for future *Ford*-class ships, according to Navy officials.²⁷

The Navy's decision to homeport the USS *Nimitz* and USS *Abraham Lincoln* in Bremerton and San Diego, respectively, where they can each receive more of the scheduled nuclear maintenance at the homeport, is in accordance with its strategic laydown plan guidance to limit crew homeport shifts to ensure crew stability and quality of life. Furthermore, according to the Navy's recent strategic laydown plans, the Navy has no future plans to homeport a carrier at Everett, though it plans to continue homeporting surface ships, like destroyers and cruisers, and their crews there.²⁸

Agency Comments

We provided a draft of this report to DOD for comment. The department had no formal comments. The Navy provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, the Acting Secretary of the Navy, and other interested parties. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

²⁶[GAO-20-588](#).

²⁷According to Office of the Chief of Naval Operations officials, the first ship of a class is typically homeported near a naval shipyard and the shipbuilder for any unexpected maintenance and repair issues, particularly for aircraft carriers and submarines, which are nuclear-powered. For example, aircraft carriers are built in Newport News, Virginia, near Norfolk Naval Shipyard and the naval station in Norfolk, and the submarines built in Connecticut are closer to Naval Submarine Base New London, in Connecticut, and to Portsmouth Naval Shipyard.

²⁸The Navy has increased the number of surface ships at Everett in recent years. For example, the Navy recently added the crews of two cruisers, while they undergo maintenance in Seattle, to the five destroyers already homeported there. These ships do not require nuclear maintenance facilities.

If you or your staff have any questions about this report, please contact me at MaurerD@gao.gov or (202) 512-9627. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.

A handwritten signature in black ink that reads "Diana Maurer". The signature is written in a cursive, flowing style.

Diana Maurer
Director, Defense Capabilities and Management

Appendix I: Organizations Contacted

We interviewed or otherwise obtained information from the following organizations and offices:

- The Office of the Chief of Naval Operations, including offices with responsibility for coordinating and documenting the strategic laydown and dispersal planning and the organization change processes.
- U.S. Fleet Forces Command, U.S. Pacific Fleet, and Naval Air Forces.
- Navy maintenance organizations, including Naval Reactors, the Carrier Planning Activity, Puget Sound Naval Shipyard, and the shipyard's detachment in San Diego.
- Navy commands responsible for overall management of shore installations, such as Commander, Navy Installations Command; Naval Facilities Engineering Systems Command; and Navy Regions Northwest and Southwest.
- The three current and recent West Coast aircraft carrier homeports—Naval Base Kitsap; Naval Base Coronado, which includes Naval Air Station North Island; and Naval Station Everett—including officials with responsibility for planning, infrastructure, environment, and community liaison, among others.
- Department of Defense Office of Local Defense Community Cooperation.¹
- Regional government-community associations in the San Diego, Bremerton, and Everett areas that each coordinate with installations in their area.

We focused our installation interviews on the three West Coast homeports because, according to officials and our analysis, the West Coast ships and crew experience the most flux in aircraft carrier homeport changes given that not all aircraft carriers are co-located with a shipyard, and because all midlife refueling takes place in the Norfolk area. For example, our analysis showed that 12 of the 15 homeport changes in fiscal years 2011 through 2020 involved San Diego, Bremerton, and

¹The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 redesignated the Office of Economic Adjustment as the Office of Local Defense Community Cooperation. Pub. L. No. 116-283, title IX, § 903 (Jan. 2, 2021).

Appendix I: Organizations Contacted

Everett, and the rare cases of homeport changes involving the Norfolk area are for West Coast aircraft carriers' required midlife refueling in Newport News, or for a an aircraft carrier's first homeport assignment from the shipbuilder in Newport News to the naval station in Norfolk, according to officials.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

Diana Maurer at (202) 512-9627 or MaurerD@gao.gov

Staff Acknowledgments

In addition to the contact named above, individuals who made key contributions to this report include Marcus Oliver (Assistant Director), Sally Williamson (Analyst in Charge), David L. Jones, Mae Jones, Ronald La Due Lake, Felicia Lopez, James A. Reynolds, Benjamin Sclafani, and Guiovary (Geo) Venegas.

Related GAO Products

Navy and Marine Corps: Services Continue Efforts to Rebuild Readiness, but Recovery Will Take Years and Sustained Management Attention. [GAO-21-225T](#). Washington, D.C.: December 2, 2020.

Navy Shipyards: Actions Needed to Address the Main Factors Causing Maintenance Delays for Aircraft Carriers and Submarines. [GAO-20-588](#). Washington, D.C.: August 20, 2020.

Navy Ship Maintenance: Actions Needed to Address Maintenance Delays for Surface Ships Based Overseas. [GAO-20-86](#). Washington, D.C.: February 26, 2020.

Naval Shipyards: Key Actions Remain to Improve Infrastructure to Better Support Navy Operations. [GAO-20-64](#). Washington, D.C.: November 25, 2019.

Navy and Marine Corps: Rebuilding Ship, Submarine, and Aviation Readiness Will Require Time and Sustained Management Attention. [GAO-19-225T](#). Washington, D.C.: December 12, 2018.

Military Bases: DOD Should Address Challenges with Communication and Mission Changes to Improve Future Base Realignment and Closure Rounds. [GAO-18-231](#). Washington, D.C.: March 30, 2018.

Navy Readiness: Actions Needed to Address Persistent Maintenance, Training, and Other Challenges Facing the Fleet. [GAO-17-809T](#). Washington, D.C.: September 19, 2017.

Naval Shipyards: Actions Needed to Improve Poor Conditions That Affect Operations. [GAO-17-548](#). Washington, D.C.: September 12, 2017.

Military Readiness: Progress and Challenges in Implementing the Navy's Optimized Fleet Response Plan. [GAO-16-466R](#). Washington, D.C.: May 2, 2016.

Navy Force Structure: Sustainable Plan and Comprehensive Assessment Needed to Mitigate Long-Term Risks to Ships Assigned to Overseas Homeports. [GAO-15-329](#). Washington, D.C.: May 29, 2015.

Defense Infrastructure: Navy's Analysis of the Costs and Benefits Regarding Naval Station Mayport Demonstrated Some Best Practices and Minimally Addressed Other Requirements. [GAO-13-501](#). Washington, D.C.: May 23, 2013.

Defense Infrastructure: Communities Need Additional Guidance and Information to Improve Their Ability to Adjust to DOD Installation Closure or Growth. [GAO-13-436](#). Washington, D.C.: May 14, 2013.

Defense Infrastructure: The Navy's Use of Risk Management at Naval Stations Mayport and Norfolk. [GAO-12-710R](#). Washington, D.C.: July 13, 2012.

Defense Infrastructure: Ability of Ship Maintenance Industrial Base to Support a Nuclear Aircraft Carrier at Naval Station Mayport. [GAO-11-388R](#). Washington, D.C.: March 29, 2011.

Defense Infrastructure: Navy Can Improve the Quality of Its Cost Estimate to Homeport an Aircraft Carrier at Naval Station Mayport. [GAO-11-309](#). Washington, D.C.: March 3, 2011.

Depot Maintenance: Navy Has Revised Its Estimated Workforce Cost for Basing an Aircraft Carrier at Mayport, Florida. [GAO-11-257R](#). Washington, D.C.: March 3, 2011.

Military Base Realignment and Closures: DOD Is Taking Steps to Mitigate Challenges but Is Not Fully Reporting Some Additional Costs. [GAO-10-725R](#). Washington, D.C.: July 21, 2010.

Defense Infrastructure: Opportunities Exist to Improve the Navy's Basing Decision Process and DOD Oversight. [GAO-10-482](#). Washington, D.C.: May 11, 2010.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through our website. Each weekday afternoon, GAO posts on its [website](#) newly released reports, testimony, and correspondence. You can also [subscribe](#) to GAO's email updates to receive notification of newly posted products.

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <https://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#).
Subscribe to our [RSS Feeds](#) or [Email Updates](#). Listen to our [Podcasts](#).
Visit GAO on the web at <https://www.gao.gov>.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact FraudNet:

Website: <https://www.gao.gov/fraudnet/fraudnet.htm>

Automated answering system: (800) 424-5454 or (202) 512-7700

Congressional Relations

Orice Williams Brown, Managing Director, WilliamsO@gao.gov, (202) 512-4400,
U.S. Government Accountability Office, 441 G Street NW, Room 7125,
Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548

Strategic Planning and External Liaison

Stephen J. Sanford, Acting Managing Director, spel@gao.gov, (202) 512-4707
U.S. Government Accountability Office, 441 G Street NW, Room 7814,
Washington, DC 20548



Please Print on Recycled Paper.