

Navy Surface Ships: Maintenance Funds and Actions Needed to Address Ongoing Challenges

GAO-25-106990 [Accessible Version]

Q&A Report to the Committee on Armed Services, House of Representatives

January 31, 2025

Why This Matters

The Department of Defense (DOD) spends tens of billions of dollars annually to operate and maintain its weapon systems, including combat surface ships. Combat surface ships are seagoing vessels that provide sea-to-sea, sea-to-air, sea-to-ground, and missile defense capabilities. These ships are vital to the success of combat operations and homeland defense.

The Navy uses operation and maintenance (O&M) and other appropriated amounts to support operating the ships, including buying spare parts and conducting maintenance (see fig. 1). These amounts support the Navy's readiness goals because ships require timely maintenance to allow for sufficient sailor training before deployment. In 2023, we found that from fiscal years 2011 through 2021, surface ships faced persistent and worsening sustainment challenges.

House Report 118-125, accompanying a bill for the National Defense Authorization Act for Fiscal Year 2024, includes a provision for us to review the sustainment budget for surface ships (H.R. Rep. No. 118-125, 107-108 (June 30, 2023)). This report provides information on how the Navy develops its funding requirements for sustaining combat surface ships; amounts requested and used for such ships' maintenance during fiscal years 2020 through 2023 (the most recent data available during this review); and long-standing maintenance challenges the Navy faces.

Figure 1: Littoral Combat Ship Enters Dry Dock for Maintenance



Source: U.S. Navy/Electronics Technician First Class A. Ross. | GAO-25-106990

Key Takeaways

- The Navy requested about \$24.9 billion to maintain combat surface ships during fiscal years 2020 through 2023. The Navy reported that almost \$25.9

billion was appropriated for maintenance activities during those same years—\$1 billion more than requested.

- As of the end of fiscal year 2023, the Navy reported obligating 99.7 percent of the \$25.9 billion, or about \$25.8 billion, for expenditure to sustain combat surface ships during fiscal years 2020 through 2023.
- The Navy has a detailed process to manage surface ship sustainment that involves developing a budget, submitting the budget request, executing (obligating and expending) the funds, and reporting on results.
- The Navy still faces persistent challenges sustaining combat surface ships, including limited spare parts, a lack of sufficient and qualified maintenance personnel, and a continual need to defer maintenance. We have previously made recommendations to help address these challenges.

What are combat surface ships?

The U.S. Navy operates over 230 surface and subsurface vessels, including submarines, aircraft carriers, destroyers, cruisers, and support ships. In this review, we focused on the ships in the Navy's non-nuclear surface battle force (see fig. 2).¹ We refer to these ships as combat surface ships in this report. As of November 2024, the Navy has 149 combat surface ships. The 149 ships account for roughly two-thirds of the Navy's battle force, with the remainder consisting of submarines, aircraft carriers, and support ships.

Figure 2: Navy Combat Surface Ships as of November 2024

Surface combatant



Cruiser (CG)
9 ships



Destroyer (DDG)
76 ships



Littoral Combat Ship (LCS)
24 ships



Mine warfare



Mine Countermeasures Ship (MCM)
8 ships

Amphibious warfare



Amphibious Assault Ship (general purpose) (LHA)
2 ships



Amphibious Assault Ship (multi-purpose) (LHD)
7 ships



Amphibious Transport Dock Ship (LPD)
13 ships



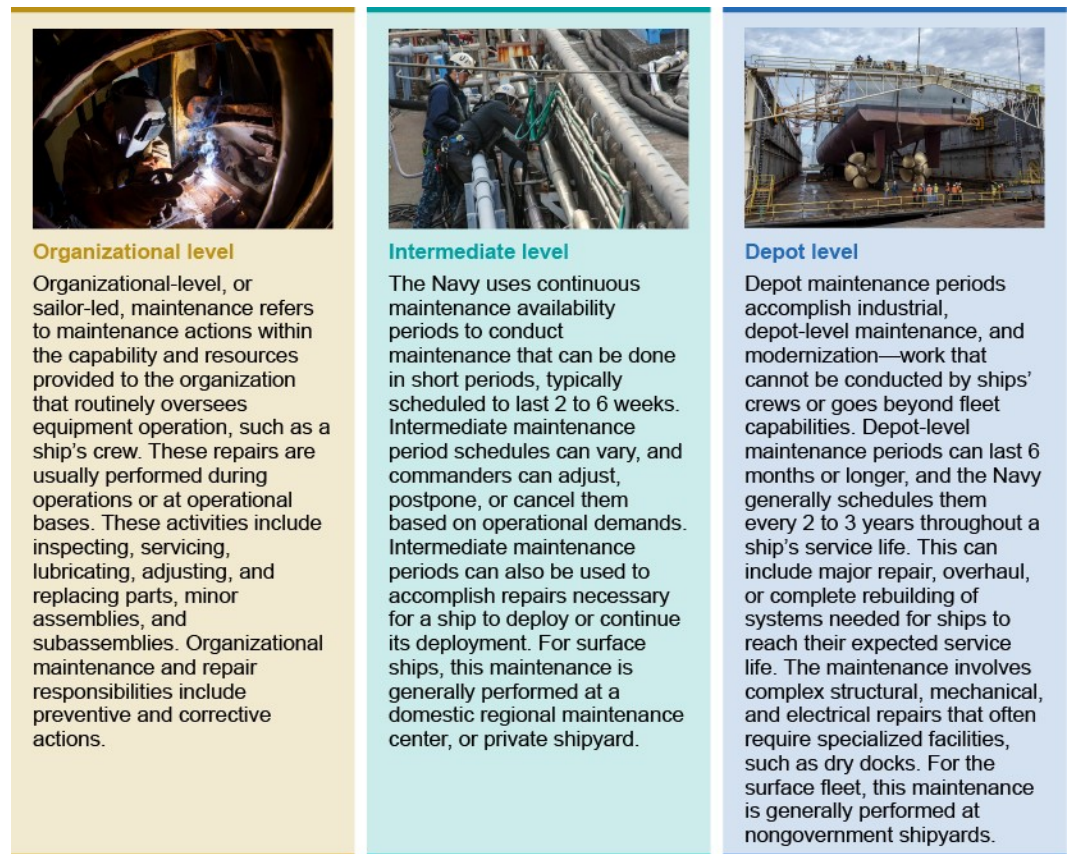
Dock Landing Ship (LSD)
10 ships

Source: Department of Defense documentation; prior GAO reports; (CG) Defense Imagery Management Operations Center/Seaman J. Grandin; (DDG) U.S. Navy; (LCS, top) U.S. Navy/D. Baso Silvers; (LCS, bottom) U.S. Navy/Petty Officer 2nd Class M. Garrison; (MCM) U.S. Navy/Lt. j.g. I. Garcia; (LHA) U.S. Navy/Petty Officer 3rd Class D. Langer; (LHD) U.S. Navy/Seaman D. Newell; (LPD) U.S. Navy/Seaman T. Welsh; (LSD) U.S. Navy/ Mass Communication Specialist 1st Class R. Chang. | GAO-25-106990

What does it mean to sustain combat surface ships?

Sustaining combat surface ships involves several activities that allow the ships to reach their expected service life. These activities—which include maintenance and modernization—help the ships meet, and in some cases extend, their service life. In this review, we use the term “sustainment” to refer to the three types of maintenance performed on combat surface ships (see fig. 3).

Figure 3: Types of Navy Ship Maintenance



Source: GAO analysis of Navy documentation; U.S. Navy/Mass Communications Specialist Seaman Apprentice J. Martinez, U.S. Navy/R. Baucom, and U.S. Navy/Mass Communication Specialist 3rd Class B. Roberson (photos). | GAO-25-106990

Who is responsible for managing the maintenance of the Navy's combat surface fleet?

Several Navy offices are responsible for managing the maintenance of the combat surface fleet. Key organizations involved in maintaining the fleet include the following:

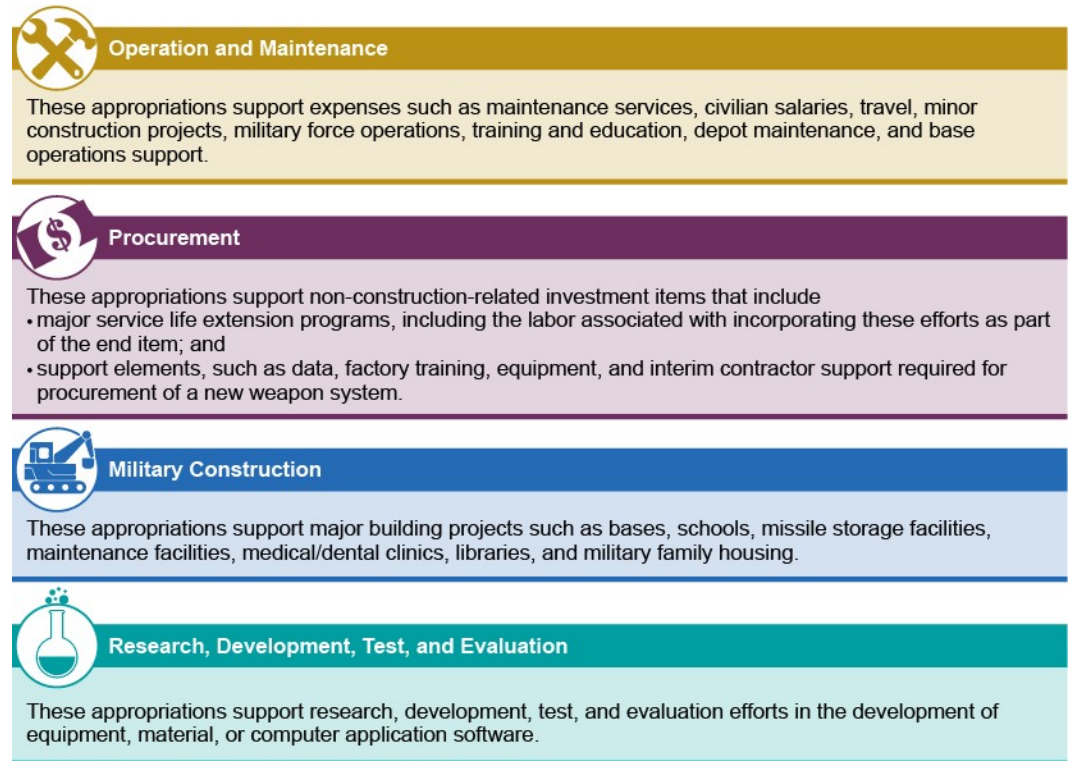
- **Type Commanders.** The Navy's Type Commanders are responsible to their fleet commanders for the material condition of their assigned ships, which includes managing the emergent and scheduled maintenance, and ensuring the readiness of the ships. The Navy's Type Commanders for surface ships—Commander, Naval Surface Force, U.S. Pacific Fleet; and Commander, Naval Surface Force, U.S. Atlantic Fleet—are responsible for maintaining the surface ships assigned to the Commander, U.S. Pacific Fleet and the Commander, U.S. Fleet Forces, respectively.
- **Surface Ship Maintenance Engineering Planning Program (SURFMEPP).** SURFMEPP provides centralized life cycle maintenance engineering, as well as class maintenance and modernization planning; and manages maintenance strategies to ensure all surface ships achieve Expected Service Life.
- **Office of the Chief of Naval Operations, Expeditionary Warfare Division (N95) and Surface Warfare Division (N96).** The Chief of Naval Operations is a senior military officer of the Department of the Navy and is responsible for the command, utilization of resources, and operating efficiency of the operating forces of the Navy and of the Navy shore activities assigned by the Secretary of the Navy. Navy officials said N95 (Expeditionary Warfare Division) and N96 (Surface Warfare Division) are the resource sponsors and

principal advisors to the Office of the Chief of Naval Operations for the readiness and logistics resource requirements of their assigned ships.

What funding sources in DOD's annual appropriations support combat surface ships?

Congress provides various appropriations to DOD for activities that broadly support operations of combat surface ships, as described in figure 4.

Figure 4: Surface Ship Appropriations



Source: GAO analysis of Department of Defense information; GAO (icons). | GAO-25-106990

In this review, we focused on O&M and procurement amounts directly supporting surface ship maintenance. These fall under three categories:

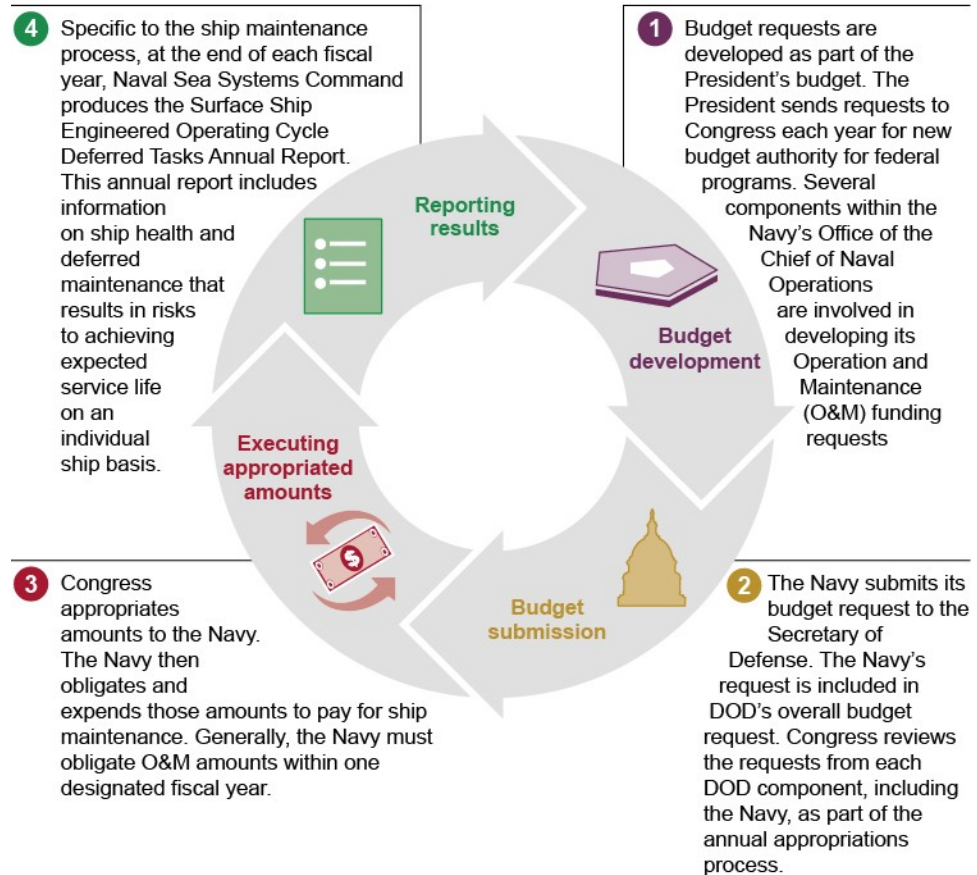
- **Mission and Other Ship Operations.** O&M amounts support most ship operations, including steaming hours and training. Standard maintenance equipment and spare parts used in organizational-level maintenance (i.e., maintenance done by sailors aboard the ship) are purchased using O&M amounts.
- **Ship Maintenance at Government-Owned Facilities.** These O&M amounts support costs associated with intermediate- and depot-level maintenance performed at Navy-owned regional maintenance and shipyard facilities.
- **Ship Maintenance at Privately Owned Facilities.** These procurement amounts support a pilot program for privately contracted ship maintenance. Procurement amounts and the use of privately owned shipyards for maintenance address emergent repair requirements and strengthen industry partnerships.

What is the Navy's budget process for combat surface ship maintenance?

The Navy's budget process for combat surface ship maintenance has four components: budget development, budget submission, execution (obligation and expenditure of appropriated amounts), and reporting on results.² Figure 5

describes in more detail the four steps in the Navy's overall budget and funding process related to ship maintenance.

Figure 5: Budget and Funding Process Related to Ship Maintenance



Source: GAO analysis of Department of Defense (DOD) information; GAO (icons). | GAO-25-106990

Budget development

Navy budget requests are part of the annual President's budget submission to Congress. Several components within the Navy's Office of the Chief of Naval Operations are involved in developing its O&M funding requests. The components are as follows:

- **Fleet Readiness (N83)**. Officials from this office stated they draft maintenance requirements for the combat surface fleet. N83 officials said that during this process they receive input on the type, frequency, and duration of maintenance from the Type Commands and Fleet Commands, along with other needs associated with maintaining their surface ships in a given fiscal year. N83 officials said their office also reviews requests for maintenance funds and maintains the primary mathematical model used to track surface ship maintenance requirements.
- **Expeditionary Warfare Division (N95) and Surface Warfare Division (N96)**. Navy officials said these offices validate maintenance requirements and ensure maintenance is performed using funding from the appropriate funding stream.
- **Program, Planning, and Development (N80)**. Officials from this office said they review the maintenance requirements and assign budget submission limits for each Navy organization involved in maintenance. Their office, according to these officials, also leads the development of the Navy's budget,

and ultimately submits the budget to the Office of the Secretary of Defense, who transmits the request to Congress.

Budget submission

Once its budget request is internally developed and reviewed, the Navy submits it to the Secretary of Defense. It is then included in the request for DOD, which in turn is included in the President's annual budget request and presented to Congress. The Navy also submits to Congress supplemental materials known as Congressional Budget Justifications. These materials provide detailed information on the intended use of requested amounts, such as the cost of maintenance scheduled for the current and upcoming fiscal year by ship, as well as budget execution data for the current and prior fiscal year.

Executing appropriated amounts

Congress appropriates amounts to the Navy. The Navy then obligates and expends those amounts to pay for ship maintenance. Generally, the Navy must obligate O&M amounts within one designated fiscal year, known as the period of availability. At the conclusion of the period of availability, remaining obligated amounts must be expended within 5 fiscal years, after which all remaining amounts are returned to the Department of the Treasury.

The Navy components involved in executing the funds are as follows:

- **Office of the Assistant Secretary of the Navy, Financial Management and Comptroller.** This office is responsible for the preparation and administration of the Navy budget as assigned by law, instruction, and regulation. An official from this office said it also oversees the distribution of maintenance funds throughout the year when they become available. This official also said their office generally allocates funds according to the maintenance requirements set by N83 but may perform infrequent end-of-year adjustments if other priorities or unexpected contingencies arise.
- **SURFMEPP.** SURFMEPP officials stated that their primary goal is to ensure as many surface ships as possible reach their expected service life. To accomplish this, these officials said SURFMEPP develops and issues maintenance requirements, technical papers, and other plans that provide a standard of maintenance for each surface ship class. The standards of maintenance that SURFMEPP develops are, according to officials, then used by N83 when drafting maintenance requirements for the combat surface fleet.
- **Type Commands and Fleet Commands.** A Navy official said the Type Commands and Fleet Commands are responsible for scheduling the maintenance availabilities for their surface ships. According to this official, these offices are responsible for managing the contract bidding process, awarding contracts, and working with the Regional Maintenance Centers to plan and prioritize maintenance needs.

Reporting results

As required by Navy policy, the Navy annually produces the Surface Ship Engineered Operating Cycle Deferred Tasks Annual Report, which summarizes the previous year's maintenance performance.³ This report includes information on ship health and deferred maintenance that results in risks to achieving expected service life on an individual ship basis.

How can changing priorities affect combat surface ship maintenance funds?

The Navy may face changing needs and priorities in the period between requesting funds and executing subsequent appropriations. The Navy uses specific processes to establish its maintenance funding requests. Navy officials noted that funding requests begin development almost 2 years prior to the fiscal year of availability. Unexpected changes in maintenance needs and priorities during the period of availability can affect anticipated spending plans.

The Navy may also reprogram unobligated fiscal year amounts to address emergent priorities.⁴ The Navy’s O&M appropriation account is provided with a lump sum amount each fiscal year. The Navy then allocates amounts among its internal budget activity and subactivity groups, such as ship operations or ship maintenance. If an unexpected priority emerges, the Navy may move amounts from one activity group to another. Navy officials told us that they have moved amounts within one O&M account activity group to another for emerging priorities such as (1) maintenance on next-to-deploy submarines and carriers, (2) increased fuel costs, and (3) additional fuel to cover increased operating tempo.

How much funding has the Navy requested, enacted, obligated, and expended for combat surface ship maintenance?

The Navy requested about \$24.9 billion to maintain combat surface fleet ships from fiscal years 2020 through 2023, as shown in table 1. Approximately \$25.9 billion was enacted—about \$1 billion more than requested. The Navy obligated \$25.8 billion—or 99.7 percent of the about \$25.9 billion—and as of the end of fiscal year 2023, had expended about \$20 billion in obligations. For requested, enacted, obligated, and expended amounts by ship class, see appendix I.

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Requested	\$6,153.4	\$6,891.8	\$5,857.1	\$5,960.1	\$24,862.4
Enacted	\$6,093.1	\$6,368.3	\$6,039.3	\$7,379.4	\$25,880.1
Obligated	\$5,933.4	\$6,153.9	\$6,654.9 ^a	\$7,069.0	\$25,811.2
Expended ^b	\$4,686.0	\$5,161.8	\$4,978.6	\$5,175.7	\$20,002.0

Source: GAO analysis of Navy budget documentation. | GAO-25-106990

Note: Other Procurement amounts are appropriated separately from Operation and Maintenance amounts. Other Procurement is for the procurement, production, and modernization of Navy support equipment and materials not otherwise provided for. Other Procurement amounts are available for obligation for 3 FYs.

^aAccording to a Navy official, in FY 2022 the Navy obligated more for maintenance than was enacted to support operational requirements. Specifically, the Navy reprogrammed amounts to fully fund ship operations to 100 percent of their modeled requirements, ship retention, and inflation adjustments. This was possible because the funding for surface ships is part of a larger budget subactivity group for all ship maintenance.

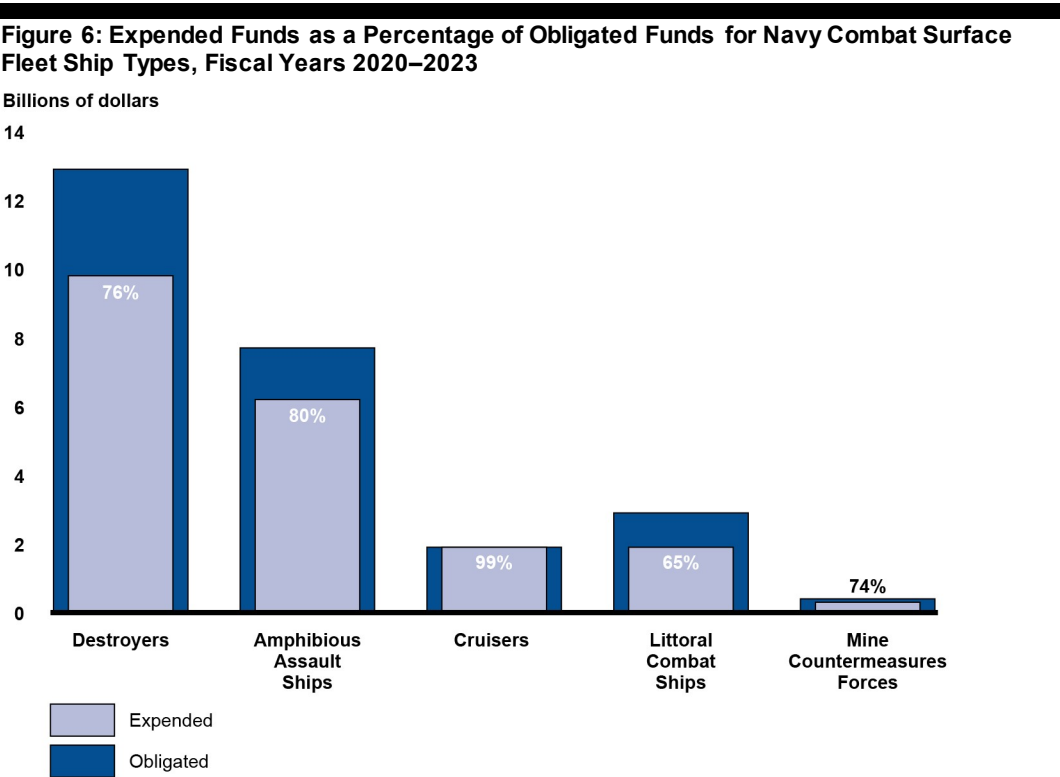
^bFor FYs 2021, 2022, and 2023, expended amounts include expenditures on obligations made in prior years. In FY 2020, the expended amount reflects only funding expended on obligations made in that FY. We were unable to review data prior to FY 2020 because the Navy told us that due to a changeover in information technology systems prior to that year, the data are no longer available. Furthermore, amounts presented include fuel used to both operate and maintain combat surface ships. We intended to only present amounts related to ship maintenance, but the Navy source system does not distinguish amounts for fuel used to operate a ship from fuel used to support ship maintenance.

How did the Navy’s obligated amounts compare with expended amounts for surface ship maintenance?

From fiscal years 2020 through 2023, the Navy expended about \$5.8 billion less than it had obligated for combat surface fleet ships during the same period. However, this difference is to be expected given that amounts no longer available for new obligation, but that were obligated during their period of availability, may be expended to satisfy the associated obligation within 5 fiscal years. For example, some amounts received by the Navy in fiscal year 2020—the earliest

year in our scope—may be expended until the end of fiscal year 2025. For the latest fiscal year in our scope, 2023, the Navy has until the end of fiscal year 2028 to expend its obligated amounts. Navy officials told us that it is not uncommon for a portion of obligated amounts to be expended during the 5-year expiration period. We were unable to review data prior to fiscal year 2020 because the data are no longer available due to a changeover in information technology systems prior to that year, according to Navy officials.

The size of the difference between expended and obligated funds varied among the combat surface ship types across fiscal years 2020 through 2023, as shown in figure 6. The expenditures were lower than the obligated amounts, but this is to be expected for the reasons stated above.



Source: GAO analysis of Navy data. | GAO-25-106990

Accessible Data for Figure 6: Expended Funds as a Percentage of Obligated Funds for Navy Combat Surface Fleet Ship Types, Fiscal Years 2020–2023

	Expended (billions of dollars)	Obligated (billions of dollars)
Destroyers	9.8	12.9
Amphibious Assault Ships	6.2	7.7
Cruisers	1.9	1.9
Littoral Combat Ships	1.9	2.9
Mine Countermeasures Forces	0.3	0.4

Source: GAO analysis of Navy data. | GAO-25-106990

Note: Comparison of total expended funds over the 4 fiscal years as a percentage of the Navy's total obligated funds over that same time period.

What challenges does the Navy face in maintaining combat surface ships?

Navy officials we spoke to said they encounter long-running challenges such as a lack of spare parts, lack of trained personnel, and increases in deferred maintenance while trying to maintain their combat surface ships. These challenges are explained in figure 7. Our prior reports have also identified these

issues, as well as numerous others, that challenge the Navy's effort to effectively maintain its combat surface ships.⁵ As discussed in more detail below, the Navy continues to work on the recommendations we have made regarding these issues. See appendix II for our reports with recommendations on Navy ship sustainment that the Navy has not implemented fully.

Figure 7: Common Ship Maintenance Challenges



Lack of spare parts

The lack of spare parts affects the Navy's ability to properly maintain its ships. Sometimes, Navy maintainers are forced to cannibalize from other ships—take working parts off of another ship—to acquire the parts they need.



Lack of personnel

Navy officials said they do not have enough trained personnel to maintain their ships, which can lead to ships spending more time in maintenance.



Deferred maintenance

Deferred maintenance is maintenance that cannot be performed at its intended time and is put off for later. Deferred maintenance can result in more expensive repairs, reduced ship service life, and reduced operational readiness.

Source: GAO analysis of interviews with Navy officials; U.S. Navy/Mass Communication Specialist 3rd Class A. Johnson, U.S. Navy/Mass Communication Specialist 3rd Class P. Semales, and BAE Systems (photos). | GAO-25-106990

Spare parts

In September 2024, we reported that 73 percent of the executive officers who completed our survey on behalf of their ships said it was moderately to extremely difficult to complete sailor-led maintenance with the spare parts available.⁶ In discussion groups aboard each of the 25 ships we visited as part of that review, sailors consistently cited parts shortages as an impediment to their ability to perform maintenance and repairs. They also cited various steps that they have taken in efforts to complete tasks, such as taking parts from other ships, buying parts while in port, and reverse engineering parts.

In January 2023, we reported that Navy program offices for nine ship classes faced challenges obtaining spare parts and that cannibalization actions across certain ship classes increased from 2015 to 2021.⁷ In March 2020, we reported that the Navy's shipbuilding programs do not identify, evaluate, or mitigate maintenance risks during acquisition, which can later lead to spare parts shortages.⁸ As of October 2024, 10 of the 11 recommendations we made in these reports have either not been addressed or have only been partially addressed. For example, an open recommendation in the March 2020 report recommended that the Navy set material availability requirements that fully capture all factors that could preclude a ship from being ready when needed.

As part of the Navy's efforts to address this challenge, Navy officials said they launched a new initiative, known as Endurance Supply, in fiscal year 2022. These officials said the initiative's goal is to improve operational resiliency and readiness. Navy officials said Endurance Supply aims to identify critical systems necessary for the operation of the combat surface fleet, implement resourcing and mitigation strategies for those systems, and create spare parts and supplies packages that can maintain those systems for a duration of time during periods of open warfare without the need for resupply.

Personnel

In September 2024, we reported that sailor shortages hinder the Navy's ability to complete required maintenance.⁹ The Navy assigns fewer sailors fleetwide than

required aboard ships because it does not (1) fill all required ship positions, (2) ensure sailors assigned to a ship are available for duty, and (3) ensure sailors are prepared for positions they fill. According to 63 percent of Navy executive officers who completed our survey, it is moderately to extremely difficult to conduct repairs while underway with the number of sailors assigned to their ships. Navy officials from seven of 16 offices we met with this during this review also said they do not have enough trained personnel to maintain their ships. For example, Navy officials from one office said ships are spending more time in maintenance because of the lack of personnel with the appropriate skillsets and available experience.

In December 2018, we found that the Navy suffered workforce challenges at its maintenance depots, such as hiring personnel in a timely manner and providing necessary training.¹⁰ More recently, in April 2024 we reported that the Navy relies on data that do not describe the true extent of the skill and experience gaps across the fleet.¹¹ As of October 2024, 11 of the 12 recommendations we made to the Navy in these reports remain unaddressed. For example, we recommended in our April 2024 report that the Navy require documentation of the factors it considers when determining whether crewing target levels should be adjusted.

As part of the Navy's efforts to address its personnel shortages, Navy officials said they requested that the Office of Personnel Management increase the compensation shipyard personnel received. Navy officials said this increase was meant to ensure pay equity between public and private shipyards as part of a broader initiative to retain critical shipyard personnel. As of September 2024, Navy officials said the initiative was still in the process of being fully implemented across all shipyards, but that preliminary observations at the shipyards where the initiative has been implemented indicate the outward flow of personnel from the public shipyards has either slowed or stopped.

Deferred maintenance

Navy officials from six of 16 offices we spoke to said one or more of the previously identified challenges contributes to deferred maintenance, which is maintenance that cannot be performed at its intended time and is put off for later. Officials from one office said deferred maintenance can result in more expensive repairs, reduced ship service life, and reduced operational readiness.

In May 2022, we found that the Navy's deferred maintenance backlog for surface ships alone totaled \$1.7 billion in 2021.¹² We also recommended that the Navy publish an annual report that aggregates the estimated amount of deferred maintenance for each ship. The Navy partially concurred with this recommendation and continues to track its estimated deferred maintenance backlog for surface ships every year, which totaled \$2.3 billion in 2022 and \$2.0 billion in 2023. While this recommendation was addressed in March 2023, five other recommendations from our 2022 report have either not been addressed or have only been partially addressed as of October 2024. These recommendations include the annual reporting of assessments on the operational, technical, and economic risks associated with deferred maintenance on surface ships and the issuance of guidance on the disclosure of ship deferred maintenance in annual financial statements.

As part of their effort to address deferred maintenance, Navy officials we spoke to said they were in the process of updating existing guidance to better prioritize ship maintenance. This update, according to Navy officials, would codify the maintenance prioritizations for certain classes of ships.

Agency Comments

The Navy provided technical comments on this draft, which we incorporated where appropriate.

How GAO Did This Study

To conduct this work, we reviewed documents regarding the Navy's management of its budget process, funding sources, and key offices responsible for maintaining and supporting its combat surface ships. In addition, we interviewed cognizant officials from the Navy offices responsible for developing the budget requests that support surface ship maintenance and from the Navy offices involved in managing the maintenance performed on the combat surface fleet. These interviews allowed us to gain a broader understanding of how the Navy formulates maintenance requirements for each ship, prioritizes the order in which ships receive maintenance, and addresses any challenges it may encounter when performing maintenance on combat surface ships. We also reviewed our prior reports to further ascertain the extent of the challenges the Navy faces while maintaining its surface ships.

We assessed O&M and Other Procurement appropriated amounts requested, enacted, obligated, and expended by the Navy for surface ship maintenance from fiscal years 2020 through 2023, and the extent to which those amounts were ultimately expended to maintain the combat surface fleet. We were not able to analyze data prior to fiscal year 2020 because the Navy told us that due to a change in information technology systems, such data were no longer available. Amounts include fuel used to both operate and maintain combat surface ships. We intended to only present amounts related to ship maintenance, but the Navy source system does not distinguish amounts for fuel used to operate a ship from fuel used to support ship maintenance.

We collected data from two systems—the Program Budget Information System (PBIS) and the Standard Accounting, Budgeting, and Reporting System (SABRS). PBIS provided information on requested and enacted funds. SABRS provided data on obligated and expended funds. We assessed the reliability of the data from each system by reviewing related documentation, conducting manual testing to look for missing data or outliers, and interviewing knowledgeable officials. With the data limitation noted above, we determined that the systems were sufficiently reliable for our purposes of reporting on the Navy's requested, enacted, obligated, and expended amounts for surface ship maintenance.

We conducted this performance audit from July 2023 to January 2025 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.

List of Addressees

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

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

GAO Contact Information

For more information, contact: Diana Maurer, Director, Defense Capabilities and Management, MaurerD@gao.gov, (202) 512-9627.

Sarah Kaczmarek, Managing Director, Public Affairs, KaczmarekS@gao.gov, (202) 512-4800.

A. Nicole Clowers, Managing Director, Congressional Relations, ClowersA@gao.gov, (202) 512-4400.

Staff Acknowledgments: John Bumgarner (Assistant Director), James Lackey (Analyst in Charge), Aaron Chua, John Craig, Jason Lee, Amie Lesser, Felicia Lopez, Leah Nash, Michael Silver, Anne Thomas, Brandon Voss, and Suzanne Wren.

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>.

This is a work of the U.S. government but may include copyrighted material. For details, see <https://www.gao.gov/copyright>.

Appendix I: Funds Requested, Enacted, Obligated, and Expended by Ship Class

Funding for ship maintenance is provided by Congress in a lump sum amount for each of the Navy's Operation and Maintenance (O&M) and Procurement appropriation accounts each year. The Navy then allocates amounts among its internal budget activity and subactivity groups, such as ship operations or ship maintenance. The Navy refers to these allocated amounts as "enacted." If an unexpected priority emerges, the Navy may move amounts from one activity group to another to address that priority. This appendix highlights the amounts requested, enacted, obligated, and expended for destroyers (see table 2), amphibious assault ships (see table 3), littoral combat ships (see table 4), cruisers (see table 5), and mine countermeasures forces (see table 6).

Table 2: Operation and Maintenance and Other Procurement Funding for Maintenance of Destroyers, Fiscal Years (FY) 2020–2023 (in millions)

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Requested	\$2,578.1	\$3,204.1	\$2,764.9	\$3,354.7	\$11,901.8
Enacted	\$2,519.0	\$2,874.4	\$2,803.6	\$3,344.8	\$11,541.9
Obligated	\$2,718.7 ^a	\$3,190.3 ^a	\$3,500.0 ^a	\$3,526.9 ^a	\$12,935.8
Expended ^b	\$2,267.3	\$2,310.4	\$2,515.4	\$2,689.3	\$9,782.4

Source: GAO analysis of Navy budget documentation. | GAO-25-106990

Note: Procurement amounts are appropriated separately from Operation and Maintenance amounts. Other Procurement is for the procurement, production, and modernization of Navy support equipment and materials not otherwise provided for. Other Procurement amounts are available for obligation for 3 FYs.

^aAccording to a Navy official, in FY 2020 the Navy obligated more for maintenance than was enacted to support operational requirements. Specifically, the Navy added funds to fully fund ship operations to 100 percent of their modeled requirements, ship retention, and inflation adjustments. This was possible because the funding for surface ships is part of a larger budget subactivity group for all ship maintenance.

^bAccording to Navy officials, for FYs 2021, 2022, and 2023, expended amounts include expenditures on obligations made in the prior years. In FY 2020, the expended amount reflects only funding expended on obligations made in that FY. We were unable to review data prior to FY 2020 because the Navy told us that due to a changeover in information technology systems prior to that year the data are no longer available. Furthermore, amounts presented include fuel used to both operate and maintain combat surface ships. We intended to only present amounts related to ship maintenance, but the Navy source system does not distinguish amounts for fuel used to operate a ship from fuel used to support ship maintenance.

Table 3: Operation and Maintenance and Other Procurement Funding for Maintenance of Amphibious Assault Ships, Fiscal Years (FY) 2020–2023 (in millions)

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Requested	\$1,836.6	\$2,043.8	\$1,712.6	\$1,622.1	\$7,215.0
Enacted	\$1,848.4	\$1,951.9	\$1,773.7	\$2,099.6	\$7,673.6
Obligated	\$1,719.1	\$1,757.1	\$2,356.2 ^a	\$1,899.2	\$7,731.6
Expended ^b	\$1,333.6	\$1,776.8	\$1,575.8	\$1,513.5	\$6,199.7

Source: GAO analysis of Navy budget documentation. | GAO-25-106990

Note: Other Procurement amounts are appropriated separately from Operation and Maintenance amounts. Other Procurement is for the procurement, production and modernization of Navy support equipment and materials not otherwise provided for. Other Procurement amounts are available for obligation for 3 FYs.

^aAccording to a Navy official, in FY 2022 the Navy obligated more for maintenance than was enacted to support operational requirements. Specifically, the Navy reprogrammed amounts to fully fund ship operations to 100 percent of their modeled requirements, ship retention, and inflation adjustments. This was possible because the funding for surface ships is part of a larger budget subactivity group for all ship maintenance.

^bAccording to Navy officials, for FYs 2021, 2022, and 2023, expended amounts include expenditures on obligations made in the prior years. In FY 2020, the expended amount reflects only funding expended on obligations made in that FY. We were unable to review data prior to FY 2020 because the Navy told us that due to a changeover in information technology systems prior to that year the data is no longer available. Furthermore, amounts presented include fuel used to both operate and maintain combat surface ships. We intended to only present amounts related to ship maintenance, but the Navy source system does not distinguish amounts for fuel used to operate a ship from fuel used to support ship maintenance.

Table 4: Operation and Maintenance and Other Procurement Funding for Maintenance of Littoral Combat Ships, Fiscal Years (FY) 2020–2023 (in millions)

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Requested	\$753.5	\$748.5	\$604.5	\$776.4	\$2,882.9
Enacted	\$749.3	\$693.1	\$653.6	\$1,023.6	\$3,119.7
Obligated	\$541.1	\$791.1 ^a	\$630.2	\$891.5	\$2,853.9
Expended ^b	\$504.9	\$520.9	\$361.7	\$464.6	\$1,852.1

Source: GAO analysis of Navy budget documentation. | GAO-25-106990

Note: Other Procurement amounts are appropriated separately from Operation and Maintenance amounts. Other Procurement is for the procurement, production and modernization of Navy support equipment and materials not otherwise provided for. Other Procurement amounts are available for obligation for 3 FYs.

^aAccording to a Navy official, in FY 2021 the Navy obligated more for maintenance than was enacted to support operational requirements. Specifically, the Navy reprogrammed amounts to fully fund ship operations to 100 percent of their modeled requirements, ship retention, and inflation adjustments. This was possible because the funding for surface ships is part of a larger budget subactivity group for all ship maintenance.

^bAccording to Navy officials, for FYs 2021, 2022, and 2023, expended amounts include expenditures on obligations made in the prior years. In FY 2020, the expended amount reflects only funding expended on obligations made in that FY. We were unable to review data prior to FY 2020 because the Navy told us that due to a changeover in information technology systems prior to that year the data are no longer available. Furthermore, amounts presented include fuel used to both operate and maintain combat surface ships. We intended to only present amounts related to ship maintenance, but the Navy source system does not distinguish amounts for fuel used to operate a ship from fuel used to support ship maintenance.

Table 5: Operation and Maintenance and Other Procurement Funding for Maintenance of Cruisers, Fiscal Years (FY) 2020–2023 (in millions)

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Requested	\$792.0	\$752.7	\$661.3	\$170.9	\$2,377.0
Enacted	\$783.6	\$707.3	\$694.9	\$769.0	\$2,954.7
Obligated	\$827.7 ^a	\$340.0	\$119.4	\$639.9	\$1,927.0
Expended ^b	\$529.0	\$486.0	\$455.5	\$430.0	\$1,900.5

Source: GAO analysis of Navy budget documentation. | GAO-25-106990

Note: Other Procurement amounts are appropriated separately from Operation and Maintenance amounts. Other Procurement is for the procurement, production and modernization of Navy support equipment and materials not otherwise provided for. Other Procurement amounts are available for obligation for 3 FYs.

^aAccording to a Navy official, in FY 2020 the Navy obligated more for maintenance than was enacted to support operational requirements. Specifically, the Navy reprogrammed amounts to fully fund ship operations to 100 percent of their modeled requirements, ship retention, and inflation adjustments. This was possible because the funding for surface ships is part of a larger budget subactivity group for all ship maintenance.

^bAccording to Navy officials, for FYs 2021, 2022, and 2023, expended amounts include expenditures on obligations made in the prior years. In FY 2020, the expended amount reflects only funding expended on obligations made in that FY. We were unable to review data prior to FY 2020 because the Navy told us that due to a changeover in information technology systems prior to that year the data are no longer available. Furthermore, amounts presented include fuel used to both operate and maintain combat surface ships. We intended to only present amounts related to ship maintenance, but the Navy source system does not distinguish amounts for fuel used to operate a ship from fuel used to support ship maintenance.

Table 6: Operation and Maintenance and Other Procurement Funding for Maintenance of Mine Countermeasures Forces, Fiscal Years (FY) 2020–2023 (in millions)

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Requested	\$193.2	\$142.8	\$113.9	\$36.0	\$485.8
Enacted	\$192.8	\$141.6	\$113.4	\$142.4	\$590.2
Obligated	\$126.9	\$75.4	\$49.3	\$111.5	\$363.0
Expended ^a	\$51.2	\$67.6	\$70.2	\$78.3	\$267.3

Source: GAO analysis of Navy budget documentation. | GAO-25-106990

Note: Other Procurement amounts are appropriated separately from Operation and Maintenance amounts. Other Procurement is for the procurement, production and modernization of Navy support equipment and materials not otherwise provided for. Other Procurement amounts are available for obligation for 3 FYs. ^aAccording to Navy officials, for FYs 2021, 2022, and 2023, expended amounts include expenditures on obligations made in the prior years. In FY 2020, the expended amount reflects only funding expended on obligations made in that FY. We were unable to review data prior to FY 2020 because the Navy told us that due to a changeover in information technology systems prior to that year the data are no longer available. Furthermore, amounts presented include fuel used to both operate and maintain combat surface ships. We intended to only present amounts related to ship maintenance, but the Navy source system does not distinguish amounts for fuel used to operate a ship from fuel used to support ship maintenance.

Appendix II: GAO Reports on Navy Sustainment with Recommendations Not Implemented

We have issued several reports related to the various challenges the Navy faces when trying to sustain its ships. Table 7 provides the titles of selected reports pertaining to ship sustainment that have recommendations that have not been implemented, including recommendations that we consider to be priority recommendations. Some of the reports included in table 8 were only recently issued and the Navy may not have had sufficient time to implement these recommendations. Priority recommendations are those that we believe warrant priority attention from the heads of departments or agencies receiving the recommendation. They are highlighted because, upon implementation, they may significantly improve government operations—for example, by realizing large dollar savings; eliminating mismanagement, fraud, and abuse; or making progress toward addressing a high-risk or duplication issue.

For each of the reports in table 7, recommendations that are not fully implemented are identified in table 8. Status updates for each recommendation can be found at the hyperlinks for each report.

Table 7: Summary of Selected GAO Reports on Navy Ship Sustainment with Recommendations Not Implemented, as of September 2024

Report title	Number of recommendations not implemented	Number of recommendations not implemented that are priority recommendations ^a
Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance (GAO-24-106525)	7	0
Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data (GAO-24-105811)	11	0
Navy Ship Fires: Ongoing Efforts to Improve Safety Should Be Enhanced (GAO-23-105481)	3	0
Navy Ships: Applying Leading Practices and Transparent Reporting Could Help Reduce Risks Posed by Nearly \$1.8 Billion Maintenance Backlog (GAO-22-105032)	5	0
Military Depots: DOD Strategy for Addressing Deteriorating Facilities and Equipment Is Incomplete (GAO-22-105009)	2	0
Navy Ship Maintenance: Actions Needed to Monitor and Address the Performance of Intermediate Maintenance Periods (GAO-22-104510)	4	1
Navy Readiness: Additional Efforts Are Needed to Manage Fatigue, Reduce Crewing Shortfalls, and Implement Training (GAO-21-366)	4	3
Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions (GAO-20-2)	10	2
Total	46	6

Source: GAO. | GAO-25-106990

^aPriority recommendations are those that we believe warrant priority attention from the heads of departments or agencies. They are highlighted because, upon implementation, they may significantly improve government operations—for example, by realizing large dollar savings; eliminating mismanagement, fraud, and abuse; or making progress toward addressing a high-risk or duplication issue.

Table 8: Recommendations Not Implemented or Partially Implemented from Selected GAO Reports on Navy Ships' Sustainment, as of September 2024

GAO report	Recommendation and status
<i>Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance</i> (GAO-24-106525)	The Secretary of the Navy should ensure that the Deputy Chief of Naval Operations for Personnel, Manpower, and Training updates Navy policy to require the Navy to periodically gather and report personnel data specific to sailor-led maintenance, such as comparing assigned personnel to the number of mustering personnel available for duty and tracking the quality of sailors' alignment across departments. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance</i> (GAO-24-106525)	The Secretary of the Navy should ensure that the Commander, Naval Education and Training Command, evaluates and optimizes the balance between classroom training and on-the-job training on maintenance skills for junior sailors as it implements Ready Relevant Learning. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance</i> (GAO-24-106525)	The Secretary of the Navy should ensure that policy is updated to include commanding officers as key stakeholders in updating maintenance cards to better reflect actual time expended in accomplishing sailor-led maintenance tasks in light of ship-specific conditions. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance</i> (GAO-24-106525)	The Secretary of the Navy, in collaboration with Naval Sea Systems Command, should ensure that maintenance cards are written at an appropriate level of detail to reflect specific conditions affecting the amount of time, number of personnel needed, and training necessary to conduct sailor-led maintenance. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance</i> (GAO-24-106525)	The Secretary of the Navy should direct the Deputy Chief of Naval Operations for Fleet Readiness and Logistics, in collaboration with Naval Supply Systems Command and Naval Sea Systems Command, to ensure that shipboard allowance lists are updated and accurate. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance</i> (GAO-24-106525)	The Secretary of the Navy should ensure that the Deputy Chief of Naval Operations for Fleet Readiness and Logistics, in collaboration with Naval Sea Systems Command and Naval Supply Systems Command, clarifies guidance to specify how and when program offices must use readiness-based sparing. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance</i> (GAO-24-106525)	The Secretary of the Navy should ensure that the Assistant Secretary of the Navy for Research, Development, and Acquisition, in conjunction with the Program Executive Office for Manpower, Logistics, and Business Solutions, establishes a mechanism for management to periodically communicate quality information throughout the Navy to ensure stakeholders fully understand the purpose of the Naval Maintenance, Repair, and Overhaul (N-MRO) program and its applicability to their organizations and successfully enlists users in solving remaining challenges. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Commander, U.S. Fleet Forces Command and Commander, U.S. Pacific Fleet amend guidance to require documentation of the review process—to include the factors they consider—when determining whether enlisted crewing target levels should be adjusted. Status: Not Implemented

GAO report	Recommendation and status
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations—in coordination with the Commander, U.S. Fleet Forces Command, U.S. Pacific Fleet, and Navy Personnel Command Career Management Department—removes the rules that allow junior sailors to count as filling positions of senior sailors in the Navy's fill and fit metrics, including when having to provide such data in certain reports to Congress pursuant to section 597 of the National Defense Authorization Act (NDAA) for Fiscal Year 2020. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations—in coordination with the Commander, U.S. Fleet Forces Command, U.S. Pacific Fleet, and Navy Personnel Command Career Management Department—reviews all business rules and source system data that inform the calculations for fill and fit metrics and aligns them across relevant documents for consistency to ensure the quality of data it uses to monitor ship readiness. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations—in coordination with the Commander, U.S. Fleet Forces Command, U.S. Pacific Fleet, and Navy Personnel Command Career Management Department—establishes thresholds for measuring Navy enlisted classification fill and fit metrics against funded positions and personnel requirements, and reports this information to Congress, when required to report pursuant to section 597 of the NDAA for Fiscal Year 2020. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations—in coordination with the Commander, U.S. Fleet Forces Command and the Commander, U.S. Pacific Fleet—updates guidance related to (1) personnel policies and procedures and (2) enlisted crewing target levels to clearly and consistently describe those personnel requirements and what they represent in the Total Force Manpower Management System (TFMMS). Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations—in coordination with the Navy Manpower Analysis Center (NAVMAC)—updates guidance related to (1) personnel policies and procedures and (2) personnel management data elements and values to clearly and consistently reflect that only NAVMAC can validate personnel requirements for ships. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations—in coordination with Navy Manpower Analysis Center—updates guidance concerning change requests—such as those made by budget submitting offices—to require that the Navy Manpower Analysis Center review and validate such changes when they concern personnel requirements data. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations—in coordination with the Navy Manpower Analysis Center—reviews the quality of personnel requirements data in TFMMS to ensure that such data reliably and accurately represent validated requirements for use within the Navy, to include within Navy personnel systems. Status: Not Implemented

GAO report	Recommendation and status
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Deputy Chief of Naval Operations for Integration of Capabilities and Resources updates relevant guidance to specify what documents represent validated personnel requirements that should be used when making decisions about what positions to fund for the upcoming budget cycle during the Program Objective Memorandum process. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Department of the Navy Chief Information Officer develops and implements a timeframe to finalize the governance structure for the Business Mission Area for Navy's information technology. Status: Not Implemented
<i>Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data</i> (GAO-24-105811)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations—in coordination with Deputy Chief of Naval Operations for Personnel, Manpower, and Training/Chief of Naval Personnel—develops and implements a timeframe to finalize governance structures for data and information technology management as the Navy continues to transform personnel systems—including ensuring all boards and forums are active; and documenting data processes to help ensure the quality and reliability of system data used to inform and monitor crewing levels, such as fill and fit metrics data. Status: Not Implemented
<i>Navy Ship Fires: Ongoing Efforts to Improve Safety Should Be Enhanced</i> (GAO-23-105481)	The Secretary of the Navy, in collaboration with the Office of the Chief of Naval Operations, should ensure that the Navy issues guidance to require a process that will allow consistent collection, analysis, and sharing of fire safety-related lessons learned. Status: Not Implemented
<i>Navy Ship Fires: Ongoing Efforts to Improve Safety Should Be Enhanced</i> (GAO-23-105481)	The Secretary of the Navy, in collaboration with the Office of the Chief of Naval Operations, should ensure that a single organization is responsible for using existing fire-incident data to analyze the broad effects that fire incidents for ships undergoing maintenance have on Navy operations and inform the Navy's response to risks. Status: Not Implemented
<i>Navy Ship Fires: Ongoing Efforts to Improve Safety Should Be Enhanced</i> (GAO-23-105481)	The Secretary of the Navy, in collaboration with the Office of the Chief of Naval Operations, should ensure establishment of (1) service-wide goals and performance measures for the Navy's fire-safety training activities and, (2) a process to monitor and report progress toward these goals. Status: Not Implemented
<i>Navy Ships: Applying Leading Practices and Transparent Reporting Could Help Reduce Risks Posed by Nearly \$1.8 Billion Maintenance Backlog</i> (GAO-22-105032)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations identifies and assesses the full range of fleet-wide risks, including operational, technical, and economic risks, associated with deferred surface ship depot maintenance, and includes the assessment in an annual report to the Chief of Naval Operations published by Naval Sea Systems Command. Status: Not Implemented
<i>Navy Ships: Applying Leading Practices and Transparent Reporting Could Help Reduce Risks Posed by Nearly \$1.8 Billion Maintenance Backlog</i> (GAO-22-105032)	The Secretary of the Navy should ensure that information on the deferred maintenance backlog estimate for any ships proposed for decommissioning is included in congressional budget requests and related reports. Status: Partially Implemented

GAO report	Recommendation and status
<i>Navy Ships: Applying Leading Practices and Transparent Reporting Could Help Reduce Risks Posed by Nearly \$1.8 Billion Maintenance Backlog</i> (GAO-22-105032)	The Secretary of the Navy should ensure that the Office of the Assistant Secretary of the Navy (Financial Management and Comptroller) issues guidance on the disclosure of ship deferred maintenance in annual financial statements. Status: Not Implemented
<i>Navy Ships: Applying Leading Practices and Transparent Reporting Could Help Reduce Risks Posed by Nearly \$1.8 Billion Maintenance Backlog</i> (GAO-22-105032)	The Secretary of the Navy should ensure that the Office of the Assistant Secretary of the Navy (Financial Management and Comptroller) coordinates with Office of the Chief of Naval Operations, Fleet Readiness and discloses the aggregate ship deferred maintenance backlog estimate in annual financial statements. Status: Not Implemented
<i>Navy Ships: Applying Leading Practices and Transparent Reporting Could Help Reduce Risks Posed by Nearly \$1.8 Billion Maintenance Backlog</i> (GAO-22-105032)	The Secretary of the Navy should ensure that the Office of the Assistant Secretary of the Navy (Financial Management and Comptroller) discloses both funded and unfunded ship deferred maintenance in annual financial statements. Status: Not Implemented
<i>Military Depots: Department of Defense Strategy for Addressing Deteriorating Facilities and Equipment Is Incomplete</i> (GAO-22-105009)	We recommend that the Secretary of Defense ensure that the military services identify in annual budget submissions the minimum level of annual investment needed to prevent further infrastructure deterioration. The minimum investment level should reflect a percentage of the 3-year rolling average of maintenance, repair, and overhaul workload funded at all of the covered depots of the respective military service. Status: Not Implemented
<i>Military Depots: Department of Defense Strategy for Addressing Deteriorating Facilities and Equipment Is Incomplete</i> (GAO-22-105009)	We recommend that the Secretary of Defense ensure that the department completes the depot infrastructure strategy in a timely manner to fully address all required elements. Status: Not Implemented
<i>Navy Ship Maintenance: Actions Needed to Monitor and Address the Performance of Intermediate Maintenance Periods</i> (GAO-22-104510)	The Secretary of the Navy should ensure that the shore-based maintenance providers and the fleet/type commanders establish and implement procedures to collect and analyze complete and reliable data on the performance of intermediate maintenance periods for submarines, surface ships, and aircraft carriers. These data should include the planned and actual start and completion dates, costs, and the causes of any delays in the completion of maintenance periods, among other things. Status: Partially Implemented
<i>Navy Ship Maintenance: Actions Needed to Monitor and Address the Performance of Intermediate Maintenance Periods</i> (GAO-22-104510)	The Secretary of the Navy should ensure that a single entity is designated to address challenges affecting intermediate maintenance periods for submarines, surface ships, and aircraft carriers. Status: Not Implemented

GAO report	Recommendation and status
<i>Navy Ship Maintenance: Actions Needed to Monitor and Address the Performance of Intermediate Maintenance Periods</i> (GAO-22-104510)	The Secretary of the Navy should ensure that shore-based maintenance providers and fleet/type commanders implement a mechanism to share best practices and lessons learned regarding the performance of intermediate maintenance periods across submarines, surface ships, and aircraft carriers. Status: Not Implemented
<i>Navy Ship Maintenance: Actions Needed to Monitor and Address the Performance of Intermediate Maintenance Periods</i> (GAO-22-104510)	Priority Recommendation The Secretary of the Navy should ensure that the Navy's maintenance-related strategic planning and initiatives, such as the Navy's Performance to Plan efforts, include issues associated with the performance of intermediate maintenance periods. Status: Partially Implemented
<i>Navy Readiness: Additional Efforts Are Needed to Manage Fatigue, Reduce Crewing Shortfalls, and Implement Training</i> (GAO-21-366)	Priority Recommendation The Secretary of the Navy should ensure that the Office of Chief of Naval Operations and the Commander, U.S. Fleet Forces Command and Commander, U.S. Pacific Fleet use collected data on sailor fatigue to identify, monitor, and evaluate factors that contribute to fatigue and inadequate sleep such as the effects of crew shortfalls, work requirements, administrative requirements, and collateral duties. Status: Partially Implemented
<i>Navy Readiness: Additional Efforts Are Needed to Manage Fatigue, Reduce Crewing Shortfalls, and Implement Training</i> (GAO-21-366)	Priority Recommendation The Secretary of the Navy should ensure that the Office of Chief of Naval Operations and the Commander, U.S. Fleet Forces Command and Commander, U.S. Pacific Fleet take actions to address the factors causing sailor fatigue and inadequate sleep. Status: Not Implemented
<i>Navy Readiness: Additional Efforts Are Needed to Manage Fatigue, Reduce Crewing Shortfalls, and Implement Training</i> (GAO-21-366)	Priority Recommendation The Secretary of the Navy should ensure that the Office of Chief of Naval Operations and the Commander, U.S. Fleet Forces Command and Commander, U.S. Pacific Fleet establish a process for identifying and assisting units that have not implemented its fatigue management policy. Status: Partially Implemented
<i>Navy Readiness: Additional Efforts Are Needed to Manage Fatigue, Reduce Crewing Shortfalls, and Implement Training</i> (GAO-21-366)	The Secretary of the Navy should ensure that the Office of the Chief of Naval Operations accounts for additional sailor workload resulting from the continued implementation of Ready Relevant Learning when determining crew requirements. Status: Partially Implemented
<i>Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions</i> (GAO-20-2)	Priority Recommendation The Secretary of Defense should change its definition for setting operational availability for ships in its Joint Capabilities Integration and Development System policy by adding information that defines the operational availability requirement by mission area in addition to the ship level and includes all equipment failures that affect the ability of a ship to perform primary missions. Status: Partially Implemented
<i>Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions</i> (GAO-20-2)	The Secretary of Defense should change its definition for setting materiel availability for ships in its Joint Capabilities Integration and Development System requirements policy to include all factors that could result in a ship being unavailable for operations, such as unplanned maintenance, unplanned losses, and training. Status: Partially Implemented

GAO report

Recommendation and status

Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions
(GAO-20-2)

The Secretary of the Navy should direct the Assistant Secretary of the Navy for Research Development and Acquisition (ASN (RD&A)) and the Chief of Naval Operations (CNO), once Department of Defense (DOD) requirements setting policy is revised, to update existing operational availability requirements for ongoing shipbuilding programs. When revising these requirements, the Navy should set operational availability requirements that: (1) are based on failures that affect the ability of a ship to perform primary missions and (2) are set at the mission level instead of ship level.
Status: Not Implemented

Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions
(GAO-20-2)

The Secretary of the Navy should direct the ASN (RD&A) and the CNO, once DOD requirements setting policy is revised, to update the materiel availability requirements for ongoing shipbuilding programs. When developing or revising these requirements, the Navy should set materiel availability requirements that fully capture all factors that could preclude a ship from being ready when needed.
Status: Not Implemented

Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions
(GAO-20-2)

The Secretary of the Navy should direct the ASN (RD&A) and the CNO, once the Navy revises its sustainment requirements, to ensure that shipbuilding programs report operational availability and materiel availability requirements in Selected Acquisition Reports, and alternatives to the Selected Acquisition Reports, for Congress.
Status: Not Implemented

Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions
(GAO-20-2)

The Secretary of the Navy should direct the Commander of Naval Sea Systems Command to ensure that cost estimators follow current guidance and GAO-identified best practices and conduct sensitivity analyses and other analyses to improve their assessment of cost risk in the O&S costs in shipbuilding programs' life-cycle cost estimates.
Status: Partially Implemented

Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions
(GAO-20-2)

Priority Recommendation
The Secretary of the Navy should direct the ASN (RD&A) to ensure all shipbuilding programs develop and update life-cycle sustainment plans, in accordance with DOD policy, that demonstrate how a ship class can be affordably operated and maintained while meeting sustainment requirements, including associated business case analyses and identifying sustainment risk.
Status: Partially Implemented

Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions
(GAO-20-2)

The Secretary of the Navy should direct the Commander of Naval Sea Systems Command to evaluate and implement changes to the independent logistics assessment (ILA) in order to position the ILA to effectively identify key sustainment risks and make recommendations for risk mitigation, which may include existing Navy proposals to change the ILA process.
Status: Not Implemented

Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions
(GAO-20-2)

The Secretary of the Navy should direct the ASN (RD&A) and the CNO to ensure sustainment-related briefing topics prescribed by the Navy's acquisition policy are consistently discussed at Gate reviews.
Status: Partially Implemented

Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions
(GAO-20-2)

The Secretary of the Navy should direct the ASN (RD&A) and the CNO to implement the sustainment program baseline initiative for shipbuilding programs and, in so doing, develop a mechanism that ensures that sustainment outcomes are a factor in shipbuilding programs' decision-making during the acquisition process.
Status: Partially Implemented

Source: GAO. | GAO-25-106990

Note: Priority recommendations are those that we believe warrant priority attention from the heads of departments or agencies. They are highlighted because, upon implementation, they may significantly improve government operations—for example, by realizing large dollar savings; eliminating mismanagement, fraud, and abuse; or making progress toward addressing a high-risk or duplication issue.

Endnotes

¹We did not include in our review aircraft carriers, submarines, support ships, or ships operated by Military Sealift Command.

²An obligation is a definite commitment that creates a legal liability of the government for the payment of goods and services ordered and received. An expenditure is the actual spending of money through an outlay through the issuance of checks, disbursement of cash, or electronic transfer of funds made to liquidate a federal obligation. GAO, *A Glossary of Terms Used in the Federal Budget Process*, GAO-05-734SP (Washington, D.C.: Sept. 2005).

³Chief of Naval Operations Instruction (OPNAVINST) 3120.47, *Surface Ship Engineered Operating Cycle Program* (May 2, 2013).

⁴A reprogramming is the shifting of an amount within an appropriation account, such as Operation and Maintenance, Navy, to use for purposes other than those contemplated at the time of appropriation. GAO-05-734SP.

⁵See GAO, *Military Depots: DOD Strategy for Addressing Deteriorating Facilities and Equipment is Incomplete*, [GAO-22-105009](#) (Washington, D.C.: May 9, 2022) and *Navy Readiness: Additional Efforts Are Needed to Manage Fatigue, Reduce Crewing Shortfalls, and Implement Training*, [GAO-21-366](#) (Washington, D.C.: May 27, 2021) for examples of prior GAO reports that cover some of the other challenges the Navy faces.

⁶GAO, *Navy Readiness: Actions Needed to Improve Support for Sailor-Led Maintenance*, [GAO-24-106525](#) (Washington, D.C.: Sept. 9, 2024). The survey conducted for this report included 232 ships and received a response rate from executive officers from those ships representing 91 percent of the active battle fleet.

⁷GAO, *Weapon System Sustainment: Navy Ship Usage Has Decreased as Challenges and Costs Have Increased*, [GAO-23-106440](#) (Washington, D.C.: Jan. 31, 2023).

⁸GAO, *Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions*, [GAO-20-2](#) (Washington, D.C.: Mar. 24, 2020).

⁹[GAO-24-106525](#).

¹⁰GAO, *DOD Depot Workforce: Services Need to Assess the Effectiveness of Their Initiatives to Maintain Critical Skills*, [GAO-19-51](#) (Washington, D.C.: Dec. 14, 2018).

¹¹GAO, *Navy Readiness: Actions Needed to Improve the Reliability and Management of Ship Crewing Data*, [GAO-24-105811](#) (Washington, D.C.: Apr. 29, 2024).

¹²GAO, *Navy Ships: Applying Leading Practices and Transparent Reporting Could Help Reduce Risks Posed by Nearly \$1.8 Billion Maintenance Backlog*, [GAO-22-105032](#) (Washington, D.C.: May 9, 2022).