United States Government Accountability Office

Report to the Committee on Armed Services, House of Representatives

October 2024

ARMY WATERCRAFT

Actions Needed to Optimize Small but Critical Fleet

GAO-25-106387

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GAO Highlights

Highlights of GAO-25-106387, a report to the Committee on Armed Services, House of Representatives

Why GAO Did This Study

The Army's watercraft fleet provides critical logistical capabilities such as intratheater transportation of personnel and equipment in support of amphibious operations. Army watercraft also provide access to waterways in austere environments where ports and roads are unavailable. As such, this fleet is a key enabler of the joint force, particularly in the Indo-Pacific area of operations.

House Report 117-397, accompanying a bill for the National Defense Authorization Act for Fiscal Year 2023, included a provision for GAO to review Army watercraft. This report assesses the extent to which (1) the Army's watercraft fleet is able to meet current and future mission requirements, and (2) the Army has taken steps to address or mitigate maintenance challenges to its watercraft fleet.

GAO analyzed relevant Army policies, requirements, handbooks, and watercraft information; toured vessels; and interviewed Army and other cognizant officials.

What GAO Recommends

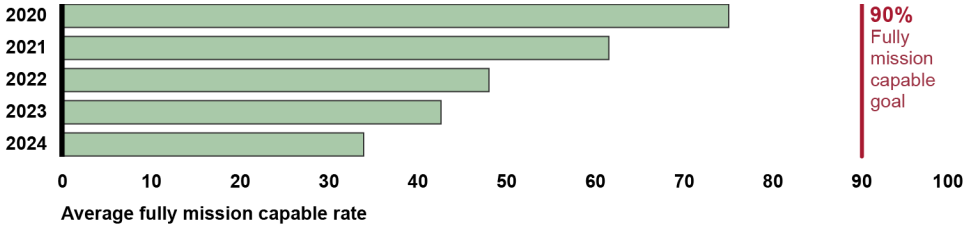
GAO is making four recommendations to the Army, including that it develops a mitigation plan to meet current and near-term requirements, and ensures the Watercraft Board develops a framework that reflects leading practices for effective governance. The Army concurred with all four of GAO's recommendations.

View GAO-25-106387. For more information, contact Diana Maurer, (202) 512-9627, MaurerD@GAO.GOV

What GAO Found

The U.S. Army's watercraft fleet is responsible for moving supplies, equipment, and personnel in deep ocean water, shallow coastal waters, inland waterways, and rivers. However, the Army's ability to meet its mission requirements with its fleet of 70 watercraft is limited. Army policy establishes a fully mission capable goal of 90 percent for ground equipment, including watercraft. Fully mission capable means that watercraft are ready and available to perform their missions. However, the fully mission capable rate for watercraft has steadily declined, from 75 percent in 2020 to less than 40 percent thus far in 2024.

Army Watercraft Fleet Average Fully Mission Capable Rate, Fiscal Years 2020-2024



Source: GAO analysis of Army data. | GAO-25-106387

Low mission capable rates hinder the

- ability to meet mission requirements and operational readiness;
- availability of vessels in the fleet, as shown in the figure; and
- ability to conduct training for watercraft personnel.

The Army is drafting a revised watercraft modernization strategy to outline future end states for Army watercraft by 2030 and 2040. However, until the strategy is finalized, it remains unclear whether it will include any mitigation plans to address the current challenges, risks, and gaps affecting the watercraft fleet. Developing a mitigation plan to address challenges will enhance the Army's ability to meet current and near-term mission requirements. In addition, by assessing the costs and benefits of potential options to improve the Army's ability to meet mission requirements, the Army will be able to make better decisions on what actions to implement.

Moreover, the Army has struggled to address a series of longstanding maintenance challenges with its watercraft fleet. Using handwritten systems to manage maintenance has adversely affected the fleet's readiness. For example, as of May 2024, one vessel had been out of service for over 5 years. Army officials reported several factors contributing to significant delays, including maintenance work.

In February 2024, the Army established the Army Watercraft Enterprise Executive Board. The Board has taken steps to provide oversight and coordination of Army-wide watercraft activities. By developing and issuing a governance framework that reflects all leading practices of effective governance, the Army will be better positioned to develop integrated strategies to respond to persistent maintenance challenges.

Contents

Abbreviations

CWC	Composite Watercraft Company
C5ISR	Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance
DOD	Department of Defense
EXORD	Execute Order
FORSCOM	U.S. Army Forces Command
INDOPACOM	U.S. Indo-Pacific Command
LCM	Landing Craft Mechanized
LCU	Landing Craft Utility
LSV	Logistics Support Vessel
MCS	Modular Causeway System
MSV	Maneuver Support Vessel
OCCM	On-Condition Cyclic Maintenance
SLEP	Service Life Extension Program
ST	Small Tug
TACOM	U.S. Army Tank-automotive and Armaments Command
TBX	Transportation Brigade (Expeditionary)
USARPAC	U.S. Army Pacific Command

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
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October 16, 2024

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

The U.S. Army's watercraft fleet is a key enabler of the joint force, particularly in the Indo-Pacific area of operations, according to Department of Defense (DOD) officials. Specifically, this fleet provides critical logistical capabilities, such as intratheater transportation of personnel and equipment in support of amphibious and riverine operations, that DOD anticipates it will need in the Indo-Pacific area of operations.[1] The Indo-Pacific region is DOD's priority theater.[2] Within this region, China is recognized as the only country that poses a military, technological, and economic challenge to the United States and its regional partners and allies. China has set a timeline for its military to be capable of taking Taiwan by 2027 and, according to DOD, recent events in the Taiwan Strait have some questioning the prospects of a near-term invasion.[3] To prepare for this possibility, among others, DOD plans to build and sustain a joint force that can deter and, if deterrence fails, defeat Chinese aggression.

House Report 117-397, accompanying a bill for the National Defense Authorization Act for Fiscal Year 2023, included a provision for us to review and assess the Army's watercraft readiness, sustainment, and long-term force structure plans.[4] In this report, we assess the extent to

[1]Section 7062(b) of title 10 of the United States Code states that the Army mission includes land combat and service forces and aviation and water transport. Department of Defense Directive 5100.01, *Functions of the Department of Defense and Its Major Components* (Dec.21, 2010) (incorporating change 1, effective Sept. 17, 2020) states that the Army will conduct amphibious and riverine operations. The Army will also provide logistics to joint operations and campaigns, including joint over-the-shore and intratheater transport.

[2]The Indo-Pacific region encompasses about half the earth's surface, stretching from the West Coast of the United States to the western border of India, and from Antarctica to the North Pole.

[3]Department of Defense, Defense.gov, "China May Draw Lessons from Russian Failures in Ukraine" (Sept. 8, 2022).

[4]H.R. Rep. No. 117-397, at 91-92 (2022).

which 1) the Army's watercraft fleet is able to meet current and future mission requirements, and 2) the Army has taken steps to address or mitigate maintenance challenges to its watercraft fleet.

To address our two objectives, we analyzed relevant Army guidance, requirements, handbooks, and Army watercraft information; toured watercraft vessels; and interviewed Army and other cognizant officials from DOD organizations listed in appendix I.

To address our first objective, we analyzed October 2019 through April 2024 yearly average fully mission capable rates for Army watercraft. We conducted data reliability assessments for the data provided by the Army and found the data analysis of Army watercraft fully mission capable averages for October 2019 through April 2024 to be sufficiently reliable. Further, we analyzed fiscal year 2023 through fiscal year 2025 Army watercraft missions for its Landing Craft Utility (LCU) vessels and Logistics Support Vessels (LSV) required by U.S. Army Pacific Command (USARPAC) and U.S. Army Forces Command (FORSCOM). To assess the reliably of these data, we reviewed them for completeness and interviewed knowledgeable officials. We found the data to be sufficiently reliable for the purpose of reporting on current and future Army watercraft mission requirements.

We also analyzed a series of Army documents that Army officials stated the Army is following to guide watercraft modernization efforts. We analyzed these documents to determine the extent to which the Army had identified challenges, risks, and gaps affecting its current watercraft fleet and implemented any mitigation plans to address identified issues. We also analyzed risk management guidance from the Army, the Office of Management and Budget, and *Standards for Internal Control in the Federal Government*.[5] Significant to this audit was the internal control principle that agency management should identify, analyze, and respond to risks related to achieving defined objectives.

To address our second objective, we analyzed and reviewed Army watercraft maintenance policies to identify maintenance goals and standards. We collected and analyzed relevant maintenance information from program officials to determine the current state of Army watercraft readiness and identified key maintenance challenges. We reviewed Army watercraft governance structure, policies, and procedures regarding the

[5]GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: Sept. 10, 2014).

Army's Board of Directors and the newly established Army Watercraft Enterprise Executive Board (the Watercraft Governance Board).

GAO has previously identified six leading practices for effective governing bodies. We conducted a content analysis comparing the Army's Watercraft Enterprise Governance Board Framework and associated order to GAO's identified leading practices. We evaluated whether the actions the Army took in relation to the governance of its watercraft exhibited an underlying characteristic of a leading practice. Analysts then independently determined if the Army fully, partially, or did not adopt a leading practice.[6] We also assessed the Army's progress against *Standards for Internal Control in the Federal Government* principles, which provide that management should identify, analyze, and respond to risks related to achieving defined objectives, such as designing specific actions to respond to the analyzed risks to achieve its objectives.[7] Our scope and methodology are discussed in detail in appendix I.

We conducted this performance audit from November 2022 to October 2024 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

Army Watercraft Purpose and History

DOD identifies Army watercraft as a key enabler of the Joint Force that supports combatant commander requirements for joint logistics-over-the-shore missions.[8] By law, the Army can have its own watercraft to

[6]Department of the Army, Execute Order 043-24, *Establishment and Execution of Army Watercraft Enterprise Governance* (Feb. 22, 2024). For GAO's six leading practice for effective governing bodies see, GAO, *Capital Police Board: Fully Incorporating Leading Governance Practices Would Help Enhance Accountability, Transparency, and External Communication*, GAO-17-112 (Washington, D.C.: Feb. 7, 2017). The six leading practices are (1) defining roles, responsibilities, and areas of authority, (2) overseeing functions of the enterprise, (3) developing processes for internal functions of the board, (4) assessing performance of the governance framework, (5) disclosing information to stakeholders, and (6) developing processes for communication with stakeholders.

[7]GAO-14-704G.

[8]Joint logistics-over-the-shore missions are missions in which service forces operate together to provide the capability to move forces, cargo, and sustainment through austere/degraded ports or over bare beaches.

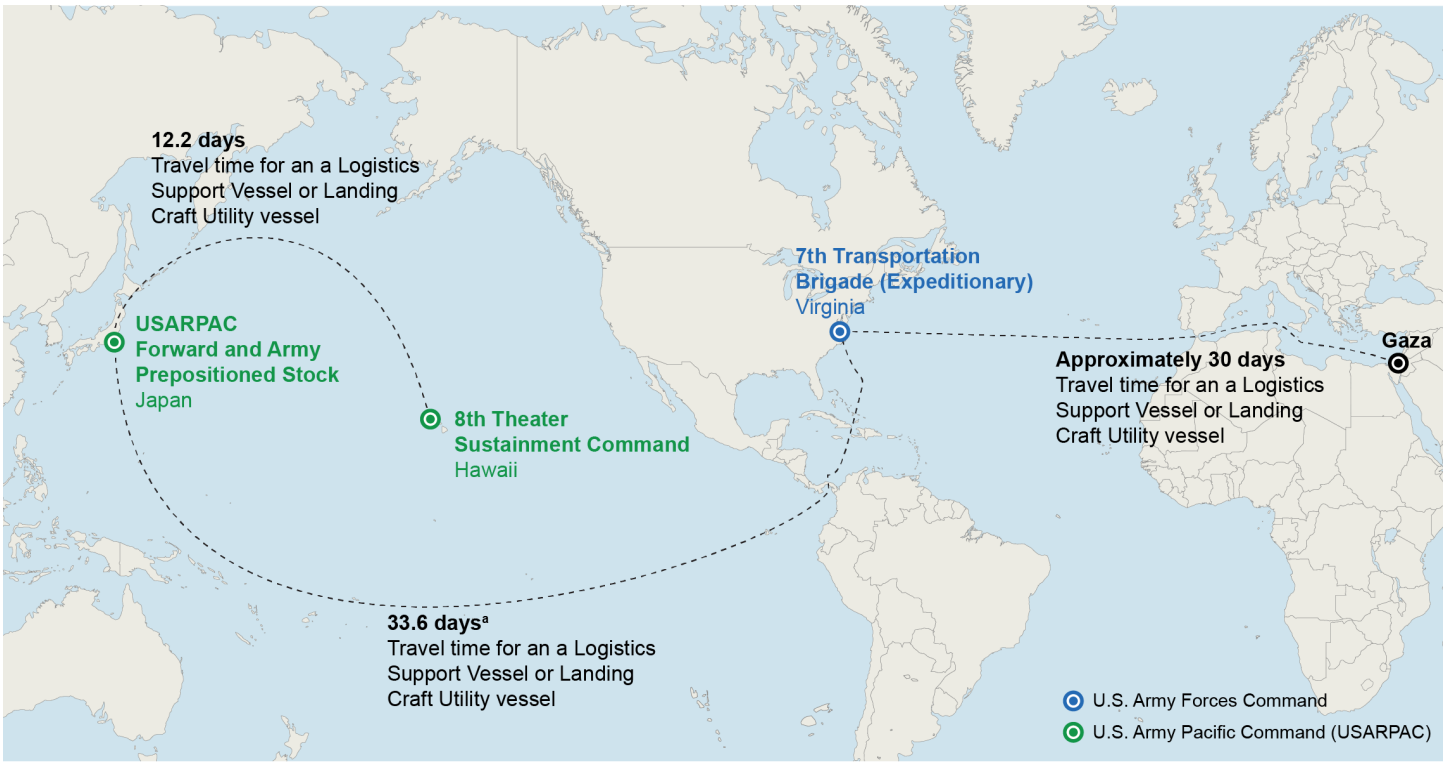
transport its forces.[9] The Army's watercraft fleet is designed to move supplies, equipment, and personnel in deep ocean water, shallow coastal waters, inland waterways, and rivers. Army watercraft also provide access to waterways in support of force elements in austere environments where mature ports and road networks are unavailable.

The Army began to employ its own watercraft in World War II when it realized that it needed to bridge the last nautical mile and address a significant capability gap. Over time, the Army grew its fleet to approximately 127,000 watercraft of various types. The fleet decreased in the decades that followed. By 1971, Army watercraft numbered just over 2,000 vessels and by 2018, the Army had 134 vessels. As of May 2024, the Army has 70 Army watercraft vessels to meet the joint service demand. Currently, 68 of the Army's 70 watercraft are assigned to FORSCOM and USARPAC. Two vessels are assigned to the Army's Training and Doctrine Command for training purposes.

Army watercraft vessels reside in four locations: Joint Base Langley-Eustis, Virginia; Joint Base Pearl Harbor-Hickam, Hawaii; North Dock, Yokohama and Naha, Okinawa, Japan. The Army's two large seagoing vessels, the LSV and the LCU, require approximately 34 days to travel from Virginia to Japan, and took approximately 30 days to travel to the eastern Mediterranean region in spring 2024 (see fig. 1).

[9]10 U.S.C. § 7062.

Figure 1: Army Watercraft Vessel Locations and Notional Sailing Times



Source: GAO analysis of Army information; Map Resources (map). | GAO-25-106387

[a]indicates a need for refueling based on vessel transportation loads.

Note: The sailing routes displayed in the figure are for illustration and do not represent the actual sailing routes. Army officials stated that the travel times represent the minimum time to each location.

Army Watercraft Divestment

Since 2018, the Army has been working to restructure its watercraft force to improve readiness, prioritize modernization, and reallocate resources. In May 2018, the Commander of U.S. Army Materiel Command sent a memo to the Secretary of the Army proposing ways to identify cost savings as part of a 10 percent budget reduction effort across the Army. The memo suggested the transfer of Army watercraft capabilities to another service or entity and stated that this transfer of capabilities could yield an annual savings of over $140 million in sustainment and procurement costs beginning as soon as fiscal year 2020.

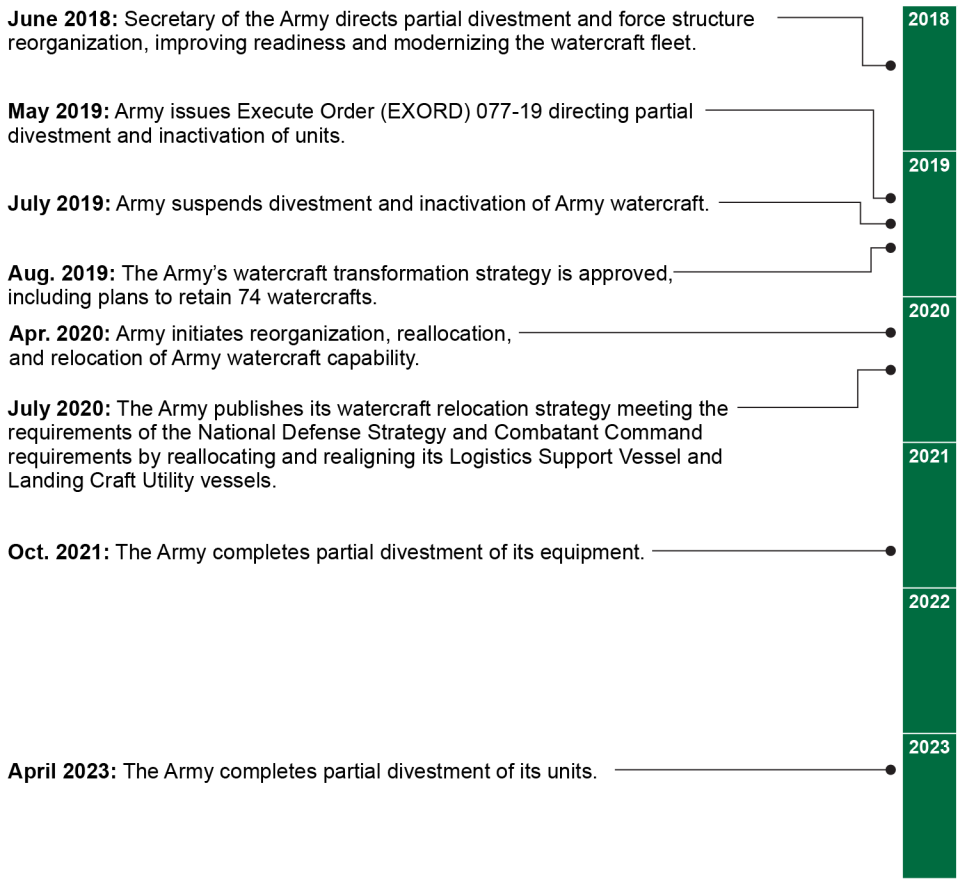
In response to this memo, the Army developed several options. These included 1) retaining the watercraft status quo, 2) divesting the watercraft

mission and all vessels, or 3) completing a partial divestment of its watercraft vessels. The Army concluded that a complete divestment of its watercraft mission and structure, personnel, and vessels could place multiple operational plans at risk and decided to partially divest the fleet.

By May 2019, the Army directed the partial divestment and inactivation of units resulting in the Army selling 64 vessels and ending funding for all Army Reserve Component vessels.[10] In December 2019, the National Defense Authorization Act for Fiscal Year 2020 prohibited the further inactivation of Army watercraft until the Secretary of Defense completed a requirements review for Army watercraft, including reviewing the Army's ability to meet combatant command requirements. In August 2020, according to Army officials, the Secretary of Defense certified the results of this review, which acknowledged that the Army planned to revise its watercraft force structure for a small capability that is sized to one theater and concentrated in the active Army. Figure 2 provides a timeline of the Army's partial divestment of its watercraft.

[10]The 64 vessels the Army divested consisted of four Barge Derricks, 27 Landing Craft Mechanized, 17 Landing Craft Utility, six Large Tugs, and 10 Small Tugs. The buyers of these vessels included the Army Corps of Engineers, private companies, private individuals, and lateral transfers to the Navy.

Figure 2: Timeline of Army Watercraft Partial Divestment



Source: GAO analysis of Army information. | GAO-25-106387

Army Watercraft Current Force Structure and Readiness

As of May 2024, the Army owns 70 watercraft that are nearly evenly assigned to both FORSCOM and USARPAC. This fleet consists of the following six watercraft vessel types:

- Logistics Support Vessels (LSV)
- Landing Craft Utility (LCU)
- Landing Craft Mechanized (LCM)
- Small Tug (ST)
- Modular Causeway Systems (MCS)
- Maneuver Support Vessel (Light) (MSV(Light)) in acquisition

While each vessel type has a specific mission, the Army and Joint Force rely on the LSV and LCU the most due to their ability to perform logistic over-the-shore missions; conduct ship-to-ship and ship-to-shore connections; and transport cargo, such as ammunition and equipment (see fig. 3).

Figure 3: Army Watercraft Vessels by Type, Mission, and Force Structure as of May 2024

Army watercraft vessel type	Mission	Example transportation loads	Force structure of watercraft for FY24	Total watercraft vessels
 **Logistics Support Vessel (LSV)**	Transportation for vehicles, containers and general cargo to remote, under-developed areas along coastlines and inland waterways and is capable of global operations.	• 24 M1 tanks • 37 M1127 Strykers • More than 48 double stacked 20 foot containers	USARPAC (HI): 2 USARPAC FWD: 2 FORSCOM: 3 TRADOC: 1	8
 **Landing Craft Utility (LCU)**	Transportation of 350 short tons of cargo to shore, inter/intratheater lift or short duration transport of up to 320 combat equipped personnel.	• 5 M1A1 Abrams Tanks • 7 Stryker Vehicles • 24 double stacked 20 foot containers	USARPAC (HI): 0 USARPAC FWD: 10 FORSCOM: 6 TRADOC: 1	17
 **Maneuver Support Vessel (light) MSV (Light)**	Transportation and dynamic force positioning of heavy vehicles, equipment, bulk food, and water in support of combatant commanders and multi-domain task forces across the full spectrum of operations when mature ports or road networks are unavailable.	• 1 M1A2 Abrams • 2 Stryker Vehicles • 4 Joint Light Tactical Vehicles • 45 personnel seated	USARPAC (HI): 0 USARPAC FWD: 0 FORSCOM: 0 TRADOC: 0	In acquisition
 **Landing Craft Mechanized (LCM)**	Transportation of personnel, cargo, and equipment during riverine or Joint Logistics-Over-The-Shore operations, among others.	• 2 double stacked 20 foot containers	USARPAC (HI): 0 USARPAC FWD: 0 FORSCOM: 9 TRADOC: 0	9; to be replaced by the MSV (L)
 **Small Tug (ST)**	Transport and repositioning of cargo and fuel barges and cargo of various types in harbors, ports, via inland waterways and along coastlines, including assisting larger tugs in towing, docking, and undocking operations of ships and watercraft.	N/A	USARPAC (HI): 0 USARPAC FWD: 4 FORSCOM: 2 TRADOC: 0	6
 **Modular Causeway System (MCS)**	Provides movement support for cargo and equipment during intra-theater lift, water terminal, waterborne tactical and joint amphibious, riverine, and Joint-Logistics-Over-the-Shore operations.	N/A	USARPAC (HI): 0 USARPAC FWD: 20 FORSCOM: 10 TRADOC: 0	30

FY	Fiscal year	USARPAC (HI)	U.S. Army Pacific Command Hawaii
FORSCOM	U.S. Army Forces Command	TRADOC	U.S. Army Training and Doctrine Command
USARPAC FWD	U.S. Army Pacific Command Forward		

Source: GAO analysis of Army information; U.S. Army/Capt. C. Larsen, U.S. Army /1st Lt. B. Cooper, U.S. Army, Puerto Rico National Guard/Sgt. Pablo Pantoja, U.S. Army Reserve/Capt. C. Larsen, and U.S. Army/Sgt. A. Smith (photos). | GAO-25-106387

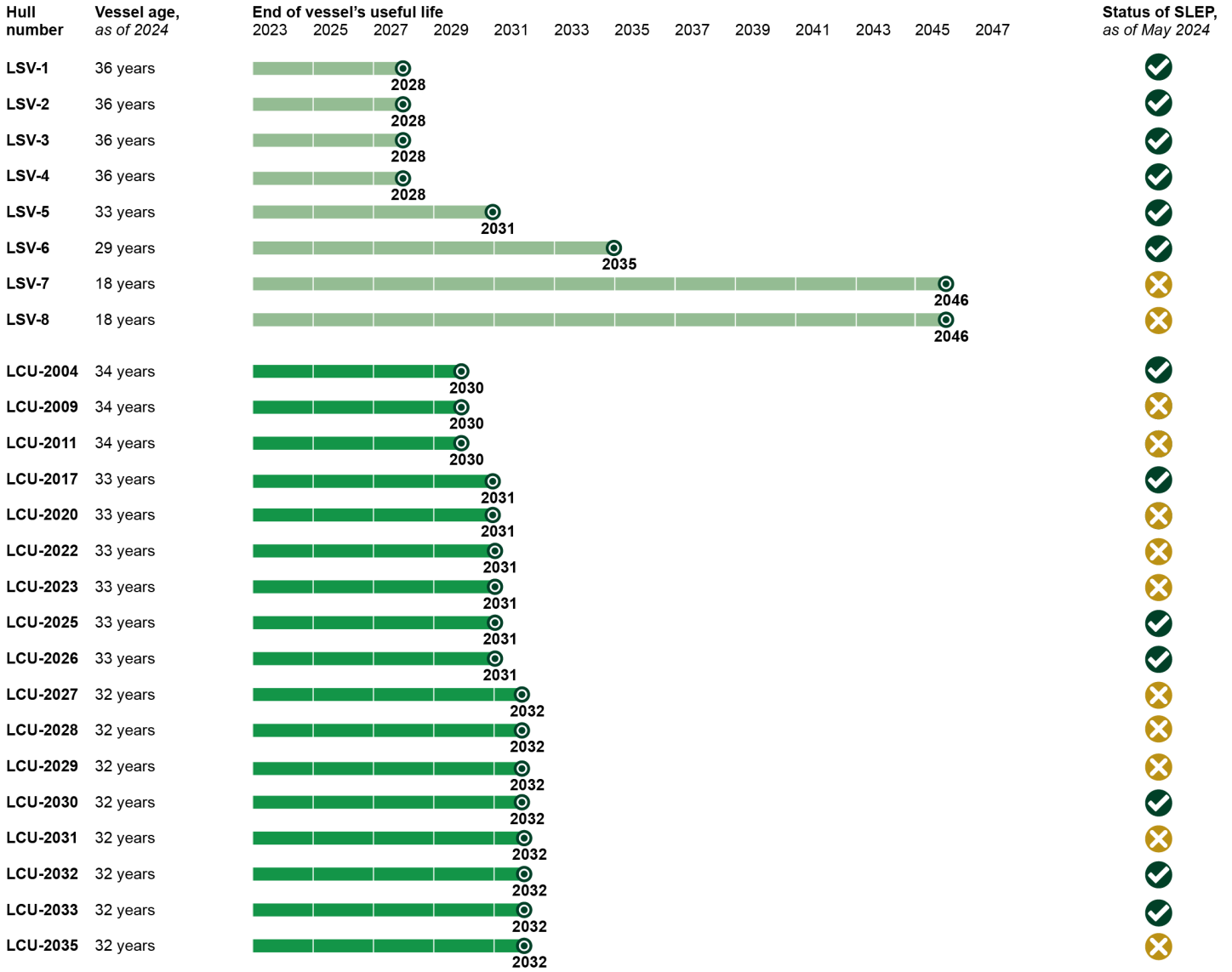
Based on the Army's original 1982 Statement of Requirements for the LSV and LCU, the Army expected each vessel type to have a minimum useful service life of 25 years. The current age of these vessels is as follows:

- **LSV.** The average age of the LSV fleet is 30 years. Six of the Army's eight LSVs were received by the Army between 1988 and 1995 and underwent a service life extension program starting in 2011; two were commissioned in 2006 and have not undergone a service life extension program. The Army expects to retire most of these vessels once they have reached 40 years of service.
- **LCU.** The average age of the LCU fleet is 32 years. All 17 of the Army's LCUs were received by the Army between 1990 and 1992 and are currently undergoing a service life extension program.[11]

Figure 4 shows these two Army primary watercraft vessel types by individual vessel. These vessels range in age from 18 to 36 years, with an end-of-useful-life at 40 years.

[11]As of May 2024, the Army has completed seven LCU service life extension programs, according to Army officials.

Figure 4: Army Watercraft Logistics Support Vessels and Landing Craft Utility Vessels by Age, Useful Life, and Status of Service Life Extension Program as of May 2024



Source: GAO analysis of Army information. | GAO-25-106387

The Army's Ability to Meet Mission Requirements with Its Current Watercraft Fleet Is Limited

Since fiscal year 2020, Army watercraft readiness has declined. The Army has also identified significant capability gaps in its watercraft fleet. Concurrently, the Army has increased its use of watercraft, and plans to increase the use of its fleet, especially in the Indo-Pacific theater. The Army plans to address these capability gaps by acquiring new watercraft and modernizing its current fleet. However, it has not fully considered potential options to mitigate challenges and optimize the use of its existing watercraft fleet to meet current mission requirements. Further, the Army has not addressed the challenges and risks from current gaps in capability.

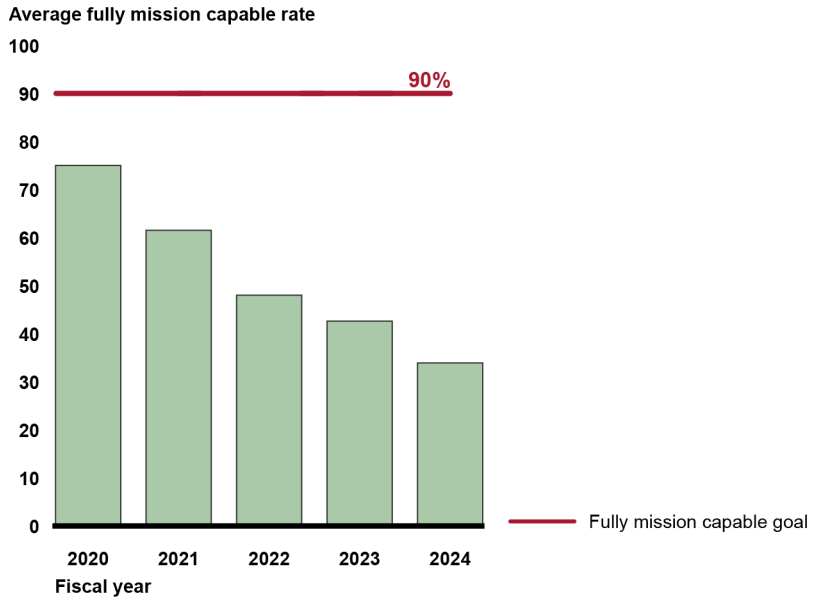
Watercraft Have Not Met Mission Capable Rate Goals

Fully mission capable rates indicate that Army watercraft are ready and available to perform their missions. Army policy identifies a fully mission capable goal of 90 percent for Army ground equipment, to include Army watercraft.[12] However, from fiscal year 2020 through April 2024, the Army watercraft fleet did not meet its fully mission capable goal (see fig. 5). Further, in fiscal year 2024, the watercraft fleet had an average fully mission capable rate of less than 40 percent. Army officials stated that these low mission capable rates, along with the smaller size of the watercraft fleet after divestment, hinder operational readiness and the ability to meet mission requirements.[13] Army officials also stated that with such low rates, usually fewer than half the vessels in the fleet are available at any given time. In addition, officials told us that low mission capable rates and subsequent lack of vessel availability affect the Army's ability to conduct training for watercraft personnel on vessels.

[12]Army Regulation 700-138, *Army Logistics Readiness and Sustainability* (Apr. 23, 2018). Officials stated that watercraft are part of the "ground equipment" category. Fully mission capable is a materiel condition indicating that systems and equipment are safe and have all mission-essential subsystems installed and operating as designated by applicable Army regulation. Army Regulation 750-1, *Army Materiel Maintenance Policy* (Mar. 2, 2023).

[13]Operational readiness is the Army's ability to provide and support combatant commanders' operational plans with trained and ready forces in the quantity and with the capabilities required to achieve Global Force Management Allocation Plan and other operational requirements for Army forces.

Figure 5: Army Watercraft Fleet Average Fully Mission Capable Rate, Fiscal Years 2020-2024



Source: GAO analysis of Army data. | GAO-25-106387

Note: Fully mission capable data for fiscal year 2024 is from October 2023 through April 2024.

The Army Has Identified Significant Capability Gaps with the Current Watercraft Fleet

The Army has identified significant capability gaps with its current watercraft fleet in selected studies and assessments. As shown in table 1, three separate assessments have identified several limitations associated with the current fleet of Army watercraft, such as the limited number of vessels in the fleet after divestment. DOD has identified other limitations as sensitive.

Table 1: Selected Army Watercraft Assessments that Identified Challenges, Risks, or Gaps in Capability of the Fleet

Selected assessment and author	Challenges, risks, or gaps identified
RAND: (U) *The Future of U.S. Army Watercraft* (May 2023) RAND Corporation	• **Legacy Systems** that hinder Army modernization, to include equipment obsolescence, not using the right systems, or reduced ability to support embarked combat-configured troops and equipment for multiday trips. • DOD has identified other limitations as sensitive.
Project Convergence 2022 Final Report (March 2023) U.S. Army Futures Command	• **Additional Capabilities Needed:** Army watercraft need robust, austere access capabilities to conduct maneuver support at extended distance. Watercraft need the necessary speed, capacity, C5ISR capabilities, and survivability to operate in the same space as the combat forces they will support.

Selected assessment and author	Challenges, risks, or gaps identified
(U) *U.S. Indo-Pacific Command Threat Based Assessment* (October 2021) U.S. Army Futures Command	• DOD has identified these limitations as sensitive.

Legend: U = Unclassified; C5ISR = Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance

Source: GAO Analysis of Army Documents. | GAO-25-106387

Note: To meet the demands of a contested environment in the Indo-Pacific theater, the Air Force, Army, Navy, and Marine Corps each developed concepts for more distributed and diversified combat and logistical operations. These concepts, such as Army Multi-Domain Operations, represent attempts to reduce the vulnerability of air, naval, and ground forces and increase their effectiveness against an adversary able to credibly disrupt, contest, or deny U.S. control of the battlespace.

In discussions, Army officials corroborated capability gaps identified in the aforementioned assessments and studies. Moreover, officials told us about other gaps existing in the current Army watercraft fleet that are not discussed here because DOD has identified them as sensitive.

Examples of Army Watercraft Exercise and Transport Missions. Army officials shared examples of exercises and transport missions in the Indo-Pacific that use Army watercraft. Examples of ongoing exercises include:

- **Talisman Sabre:** a biennial bilateral exercise between Australia and the United States,
- **Cobra Gold:** an annual multinational exercise held in Thailand, and
- **Balikatan:** an annual bilateral exercise between the Philippines and the United States.

Examples of transport missions include:

- inter-island movements in Hawaii,
- ammunition moves, and
- use of watercraft in training areas, such as the Pohakuloa Training Area in Hawaii.

In addition, Army watercraft have supported humanitarian aid missions. Most recently, in March 2024, they supported a mission to Gaza in the Palestinian Territories. In 2010, Army watercraft supported a mission to Haiti after a major earthquake.

Source: GAO Analysis of Army Information.| GAO-25-106387

The Army Is Using Its Watercraft More

The Army has increased its use of watercraft to support the priorities of recent national security strategic guidance. Specifically, requirements for Army watercraft to support exercises and transport missions increased from fiscal year 2023 through 2025. In addition, according to officials, requirements for watercraft use in combatant command plans for the Indo-Pacific theater are under development and expected to increase.

Increased exercise and transport mission support requirements. Army watercraft requirements to support exercises and transport missions in the Indo-Pacific increased in fiscal year 2024 and 2025 compared to fiscal year 2023 levels, according to our analysis of Army watercraft mission requirements. Exercises and transport missions are the primary way of training to meet mission requirements for combatant command campaign plans, according to Army officials. The Army frequently used watercraft to support exercises and transport missions in the Pacific (see sidebar). For example, Army watercraft participated in various exercises and events in 2023, including Tradewinds, Pacific Utility and Logistics Support Enablers–Watercraft (PULSE-W), Operation Deep Freeze, and African Lion, among others.[14] U.S. Indo-Pacific Command (INDOPACOM) officials also told us that Army watercraft are an important capability needed in the Indo-Pacific theater for intratheater transport, sustainment, and limited strategic competition. Moreover, in March 2024, the President of the United States directed the U.S. military to support a humanitarian mission in Gaza, the Palestinian Territories. According to Army officials, the Army sent over 500 personnel and multiple watercraft vessels—three LSVs, three LCUs, two Landing Craft Mechanized (LCM), and a Modular Causeway System to establish a temporary pier off the coast of Gaza in support of the mission.[15]

The Army plans to increase the number of missions for its watercraft from 37 in fiscal year 2023 to 46 missions in fiscal year 2025—an approximate 24 percent increase, according to our analysis. Most of these watercraft missions have been and will be conducted by vessels that are assigned to USARPAC in the Indo-Pacific theater. Specifically, in fiscal years

[14]Tradewinds is an annual U.S. Southern Command sponsored multinational exercise. PULSE-W is a rotation of Army vessels that support various exercises and missions in the Indo-Pacific region. Operation Deep Freeze is a joint service, defense support-of-civil authorities activity mission to support the delivery of supplies to the National Science Foundation's McMurdo Station in Antarctica. African Lion is an U.S. Africa Command annual multinational exercise led by U.S. Army Southern European Task Force, and is conducted in Morocco, Ghana, Senegal, and Tunisia.

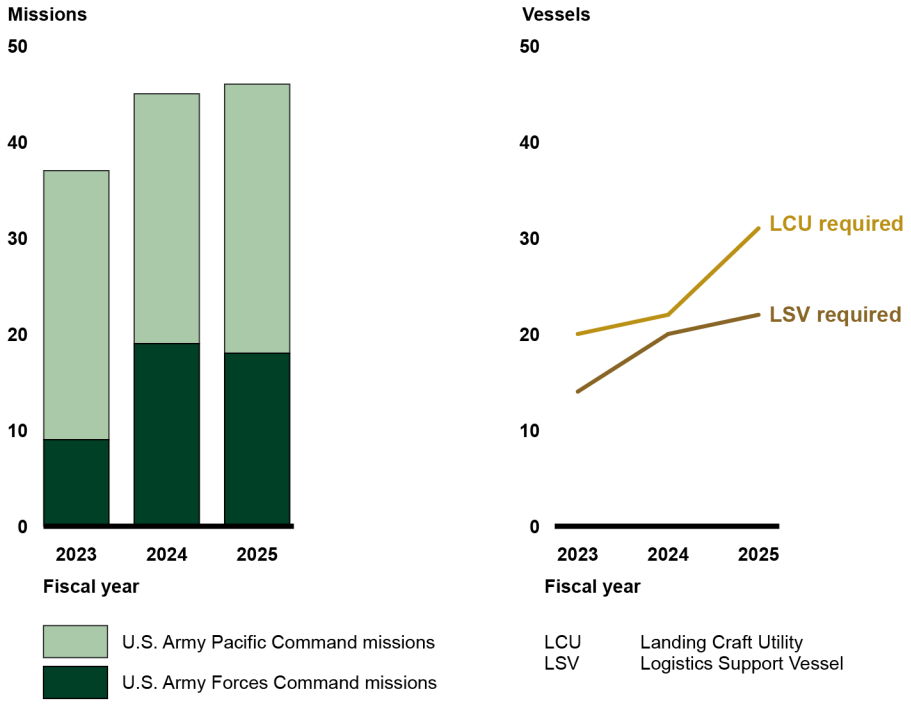
[15]The LCM is a small watercraft that provides ship-to-shore transport. It can operate in shallow inlets and rivers and land on unimproved beaches and has a carrying capacity equivalent to two double-stacked 20-foot containers. The Transportation Modular Causeway System consists of a roll-on/roll-off discharge facility, a causeway ferry, a floating causeway, and Modular Warping Tugs. This system is used as an interface between Army watercraft and cargo vessels to support joint amphibious operations, riverine operations, and logistics-over-the-shore (LOTS) operations—the capability to move forces, cargo and sustainment through austere/degraded ports or over bare beaches.

- 2023, USARPAC conducted approximately 76 percent of all missions (28 out of 37);
- 2024, USARPAC will conduct 58 percent of all missions (26 out of 45); and
- 2025, USARPAC is scheduled to conduct 61 percent of all missions (28 out of 46).

In light of the increased number of missions for its watercraft, the Army identified the total number and types of vessels—specifically LSVs and LCUs—needed to support these missions from fiscal year 2023 through 2025.[16] The result was that the total number of LSVs and LCUs required to support USARPAC and FORSCOM missions combined increased by 56 percent from fiscal year 2023 through fiscal year 2025, with USARPAC requiring the majority of the LSVs and LCUs. Specifically, on average 91 percent of LSV vessel requirements and 74 percent of LCU vessel requirements during this 3 fiscal-year period are assigned to USARPAC missions (see fig. 6).

[16]According to Army officials, over the course of a fiscal year the number of vessels needed to meet missions is determined by requirement needs. Consequently, the number of vessels needed annually for missions may exceed the total number of vessels the Army has in its fleet. Correspondingly, as the number of watercraft missions increased, the total number of vessels needed to meet these mission requirements also increased from fiscal year 2023 through 2025.

Figure 6: Number of Army Logistics Support Vessel and Landing Craft Utility Watercraft Vessels and Missions Required by U.S. Army Pacific Command and U.S. Army Forces Commands, Fiscal Years 2023-2025



Source: GAO analysis of Army data. | GAO-25-106387

Combatant command campaign and operations plans. According to INDOPACOM officials, INDOPACOM is currently revising intratheater transportation requirements needed to support the 2022 National Defense Strategy.[17] Officials stated these requirements, which will include missions for Army watercraft, are determined by analyzing time-phased force and deployment data.[18] According to INDOPACOM officials, their analysis of this data portends an increased need for intratheater transport, which is the primary mission of Army watercraft. However, the current number of Army watercraft vessels operating in the Indo-Pacific theater is insufficient to support INDOPACOM's most stressing operation

[17]One of the defense priorities of the 2022 National Defense Strategy is to deter aggression by prioritizing the People's Republic of China challenge in the Indo-Pacific region.

[18]The time-phased force and deployment data is defined as time-phased force, non-unit cargo, and personnel data combined with movement data for the operation plan, operation order, or ongoing rotation of forces.

plan, according to USARPAC officials. Moreover, Army officials stated that other emerging campaign plans in other combatant commands are also signaling higher demand for Army watercraft.

The Army Is Revising Its Watercraft Strategy and Developing New Watercraft

To address challenges, risks, and gaps in its watercraft fleet, the Army is taking several actions. These actions include revising its 2018 watercraft strategy, developing a new watercraft modernization strategy, and procuring new watercraft.

Revising Army Watercraft Strategy. In 2018, prior to the partial divestment of Army watercraft, the Army finalized its Army Watercraft Enterprise Strategy 2019-2050. The strategy provided restructuring guidance for the fleet and outlined a vision for modernization and planned employment of watercraft capability to meet future operational demands. For example, the 2018 strategy listed near-, mid-, and far-term priorities from 2019 through 2050, which included the acquiring and fielding of new watercraft vessels, extending the service life of certain watercraft systems, and updating watercraft policy and doctrine. The Army implemented aspects of this strategy with several Execute Orders (EXORD) and memoranda. Specifically:

- Army EXORD 077-19 and associated fragmentary orders—a series of orders from 2019 to 2021—implemented various steps and actions to begin watercraft transformation and divestment efforts, including developing a watercraft modernization strategy;
- Army EXORD 206-20 Army Watercraft Relocation Strategy—this 2020 order implemented actions to relocate and strategically position the remaining watercraft after divestment; and
- Army Structure Memorandums for 2022-2026, 2024-2028, and 2025-2029—these directive memorandums from 2019, 2022, and 2024 respectively, identify approved force structure changes in support of Army watercraft transformation including establishing a new watercraft

organizational structure—the Composite Watercraft Company (CWC).[19]

According to Army officials, the Army has taken actions based on the 2018 strategy, EXORDs, and memoranda to attempt to mitigate challenges, risks, and gaps in and to its current watercraft fleet including

- replacing engines, generators, and other shipboard systems to extend the service life of its LCU fleet by approximately 10 years, as part of a service life extension program (SLEP);[20]
- modernizing LSV and LCU bridge communications suites to improve and standardize command, control, communications, computers, cyber, intelligence, surveillance, and reconnaissance (C5ISR), and joint interoperability capabilities; and
- forward positioning the current watercraft fleet by planning to move 64 percent of the fleet to the Indo-Pacific theater by fiscal year 2030.

These actions are ongoing. For example, the Army has completed service-life extensions on seven out of 17 LCU vessels as of May 2024. The Army also plans to complete the bridge communication suite upgrades in fiscal year 2024 and position most of the fleet in the Indo-Pacific theater by fiscal year 2030.

Developing a New Watercraft Modernization Strategy. According to Army officials, the Army is currently drafting a revised watercraft modernization strategy that identifies the desired characteristics and end state for the future Army watercraft fleet. The draft Army watercraft

[19]The Army created the CWC to enhance its ability to command and control its watercraft fleet. Specifically, each CWC is designed to have the flexibility to operate in multiple locations within a single theater and be capable of meeting National Defense Strategy and combatant commander requirements. Each CWC consists of a headquarters and an operations and maintenance section and has the ability to provide mission command and operations planning for up to 16 Army watercraft. The Army designed the CWC to provide mission command of all types of watercraft operations, including intratheater lift, water terminal/harbor operations, waterborne tactical and joint amphibious operations, riverine, or logistics over-the-shore operations. Currently, there are two CWCs—the 329th CWC activated at Joint Base Fort Langley-Eustis in October 2021, and the 5th CWC in Japan activated in April 2023. The Army plans to establish a third and fourth CWC in fiscal year 2027 and 2029, respectively.

[20]According to Army Pamphlet 525-30, *Army Strategic Readiness Assessment Procedures* (June 9, 2015), SLEPs extends capital asset life by retrofit, major modification, remanufacturing, betterment, or enhancement. SLEP for Army watercraft extends the service life of vessels in the current watercraft fleet and improves operational readiness while future vessels are developed.

modernization strategy will outline the vision and future end state for Army watercraft by 2030 and 2040, as described by officials and briefing documents. The briefing documents also describe the key characteristics, such as speed, payload, and survivability, among others, that a modernized watercraft fleet should possess to support the joint force in a multi-domain environment. In January 2024, officials told us the Army was still revising the unpublished watercraft modernization strategy based on senior leader review. This revision may include efforts to improve watercraft capability and capacity in the interim to meet mission requirements while continuing to develop future capability and capacity. Officials stated that, when finalized, the watercraft modernization strategy should include a detailed and holistic strategy to address the current National Defense Strategy and other strategic guidance. However, as of July 2024, the Army watercraft modernization strategy had not been finalized and would not be released until approved by Army senior leaders, which Army officials expected would occur in early 2025.

Procuring New Watercraft. The Army is also acquiring new vessels—the MSV (Light) and MSV (Heavy)—to modernize and add capabilities to its watercraft fleet and meet future needs for watercraft missions. The MSV (Light) will support the movement, maneuver, support, and sustainment of combat forces. It will be capable of operating throughout the littorals, maneuvering in shallow coastal waters, and in narrow inland waterways and rivers. According to Army officials and briefing documents, the Army plans to acquire 13 MSV (Light) vessels by fiscal year 2036. The first prototype vessel is planned to undergo testing in the Indo-Pacific theater in fiscal year 2025 after a maintenance and refit period, according to Army officials. The Army expects to field the first two MSV (Light) vessels in fiscal year 2028.

Similarly, the MSV (Heavy) is expected to replace the LSV, whose planned useful life will end between 2028-2038 for most vessels. The Army expects the MSV (Heavy) to provide maneuver support for multi-domain operations and provide capabilities to meet the Army's future intratheater, operational, and tactical movement and maneuver support requirements, including sustainment operations. The MSV (Heavy) is currently in concept development, and the Army has not yet determined how many it plans to produce and purchase or when the first MSV (Heavy) would be fielded.

The Army Has Not Fully Considered Options to Mitigate Challenges Faced by the Current Fleet

While the Army has taken steps to revise its strategy and develop new watercraft for its future fleet, it will take years to procure new watercraft vessels. Meanwhile, the Army has neither fully considered options to make optimal use of its current fleet nor mitigated its current challenges, risks, and gaps.

The Army recognizes it faces challenges, risks, and gaps in and to its current watercraft fleet, including how to make optimal use of its current fleet, and has started to consider interim mitigating or bridging solutions until it can bring the MSVs into service. For example, an October 2023 executive summary document showed that Army Futures Command conducted a cursory classified analysis to assess whether the Army should pursue the development of the MSV (Heavy) or joint development of the Navy's Landing Ship Medium as the future heavy Army watercraft.[21] The unclassified executive summary of the analysis stated that the Landing Ship Medium is not a suitable replacement for Army heavy lift requirements due to the Landing Ship Medium's smaller size in comparison to the MSV (Heavy). Specifically, Army Future Command's analysis showed that approximately 2.5 Landing Ship Mediums would be equivalent to one MSV (Heavy), based on current designs for the vessels. Army officials also noted the Landing Ship Medium's slower speed makes it an unsuitable replacement for the MSV (Heavy).

During our review, we also discussed with Army officials other potential actions the Army might take to mitigate risks, challenges, and gaps in its capability to meet current mission requirements. These potential actions include:

- moving all Army watercraft to the Indo-Pacific theater;
- using civilian vessels, contracted and leased vessels, or other types of vessels to increase capacity of the fleet;[22] and
- reintroducing the use of Army Reserve watercraft personnel to improve staffing of watercraft units and vessels.

[21]GAO recently published a review of the Navy's Landing Ship Medium program as part of its annual assessment of selected weapon programs. GAO, *Weapon Systems Annual Assessment: DOD Is Not Yet Well-Positioned to Field Systems with Speed*, GAO-24-106831 (Washington, D.C.: June 17, 2024).

[22]According to Army officials, examples of civilian vessels, contracted and leased vessels, and other types of vessels the Army could use to improve the capacity of the watercraft fleet include offshore support vessels (OSVs), retired Navy replenishment and supply vessels and seagoing ferries, and other existing military vessels such as the Joint High-Speed Vessel or Expeditionary Fast Transport.

Army officials noted that these options may not be feasible and would entail additional costs if implemented. For example,

- moving all Army watercraft to the Indo-Pacific theater would require ensuring there is adequate infrastructure to support both the watercraft fleet and associated personnel,
- using civilian vessels would require modifications to those vessels to meet military requirements, and
- reintroducing reserve component watercraft personnel would impose training costs to ensure personnel are currently licensed and certified to operate and maintain Army watercraft (see sidebar).

Using Reserve Component Personnel to Staff Army Watercraft Units

According to an Army Reserve official, as of January 2024 the Army Reserve had a total of 330 watercraft personnel—both enlisted and warrant officers—in the Army Reserve. According to Army officials, Army watercraft units can request these Reserve component personnel to help with personnel shortages for missions, but Army officials cite challenges to using them. These challenges include

- the cost of activating these personnel,
- the limited time available to train them, and
- the absence of watercraft in the Reserve component since the 2019 divestment to train on.

Army officials from the 7th Transportation Brigade (Expeditionary) (TBX) told us that they had preliminary discussions with the 3rd TBX (Reserve Component) officials in December 2023 to gauge interest in helping the reserve unit's watercraft personnel gain experience and time on vessels.

Source: Interviews with Army officials. | GAO-25-106387

In addition, Army officials stated that any courses of action or options aimed at mitigating identified challenges, risks, and gaps and optimizing the current watercraft fleet would need to be assessed for costs, benefits, feasibility, and affordability to help inform Army senior leader decision-making. However, because the Army has not yet published its new watercraft modernization strategy, it has not fully considered the costs and benefits of any potential mitigation options. According to officials, any potential mitigation options to address identified challenges, risks, and gaps affecting Army watercraft would have to be considered in light of the modernization strategy. As a result, the Army has not developed a mitigation plan to specifically address the challenges, risks, and gaps facing its current fleet. It also had not, according to officials, developed an assessment of the costs and benefits of potential options to optimize the use of its current fleet. Officials contend that the actions it has taken to extend the life of its vessels, forward position the fleet, and issue a series of guiding documents constitute the Army's mitigation plan to address the challenges, risks, and gaps facing the current watercraft fleet. Although these actions and documents show the Army is taking steps to modernize its fleet and improve its ability to meet watercraft mission requirements, none of these documents provided specific information about how to address the challenges, risks, and gaps affecting the current watercraft fleet.

For example, the watercraft transformation and divestment EXORDs and force structure memoranda implementing aspects of the 2018 watercraft enterprise strategy did not expressly identify any specific challenges, risks, gaps, or mitigating actions in relation to the challenges for Army watercraft capability and capacity outlined above. In addition, the watercraft relocation strategy EXORD did not identify specific challenges, gaps, or mitigations for watercraft. However, it implied risk by stating that

the divested and repositioned fleet would not be able to meet all operational requirements. Army officials also stated that no single document or plan exists that contains all potential mitigations or bridging solutions to address the challenges, risk, or gaps identified above that affect the current watercraft fleet. Further, Army officials contend that when the watercraft modernization strategy is finalized and released, it may address some of the challenges currently facing the fleet. However, until the strategy is finalized, it remains unclear whether it will definitively achieve what Army officials have asserted. Specifically, it is unclear whether the strategy will include any mitigation plans to address the current challenges, risks, and gaps affecting the watercraft fleet. It is also unclear if any assessments of the cost and benefit of any potential options to optimize the fleet will be completed.

Army guidance provides that both operational and non-operational activities are subject to the Army's risk management framework, which among other things calls for the identification of events that can cause mission failure, the assessment of risk, the analysis of mitigation options, and documentation of decisions.[23] Additionally, guidance from the Office of Management and Budget states that risk management practices must be forward-looking and designed to help leaders make better decisions, alleviate threats, and identify previously unknown opportunities to improve the efficiency and effectiveness of operations.[24] Further, *Standards for Internal Control in the Federal Government* state that management should identify, analyze, and respond to risks related to achieving defined objectives.[25] Army guidance also indicates that cost-benefit analyses should be tailored to focus on the development of optimal solutions and alternatives that include both non-financial and non-quantifiable benefits.[26] According to this guidance, the result of any cost-benefit analysis should be used to support senior leader decision-making by

[23]*See* Army Techniques Publication 5-19, *Risk Management* (Nov. 9, 2021); *see also* Army Regulation 385-10, *The Army Safety and Occupational Health Program* (July 24, 2023).

[24]Office of Management and Budget Circular No. A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control* (July 15, 2016).

[25]GAO-14-704G.

[26]For more information on the use of cost benefit analysis, see Office of the Deputy Assistant Secretary of the Army (Cost and Economics) *U.S. Army Cost Benefit Analysis Guide, 3rd Edition (V3.3)* (Updated as of Jan. 21, 2020).

providing an accurate and complete picture of both the estimated costs and expected benefits of potential courses of action or alternatives.

By developing a mitigation plan to address challenges to the watercraft fleet, reduce risk, and mitigate gaps, the Army can enhance its ability to meet the current and near-term mission requirements of its fleet. In addition, by assessing the costs and benefits of potential options to improve the ability of Army watercraft to meet mission requirements, the Army will be able to make better resource-informed decisions on what actions to implement. This is especially a concern in the Indo-Pacific area of operations where the need for Army watercraft is most pronounced.

Army Watercraft Governance Bodies Have Not Addressed Watercraft Maintenance Challenges

The Army has struggled to address a series of longstanding maintenance challenges with its watercraft fleet. Lengthy delays in completing planned maintenance, use of handwritten systems to manage maintenance, and delays in updating repair manuals for upgraded systems have adversely affected the fleet's operational readiness. For several years, the Army's governance body to address these and other watercraft management functions was unable to integrate Army watercraft maintenance efforts, which remained diffused among various entities across the Army. In February 2024, the Army established the Army Watercraft Enterprise Executive Board, which has since taken positive steps to provide oversight and coordination. However, the Board has not fully adopted leading practices of effective governance bodies into its framework that will enable it to develop comprehensive and cohesive strategies to address longstanding maintenance challenges.

The Army Faces Persistent Maintenance Challenges

Significant maintenance challenges have contributed to substantial downtime of Army watercraft and adversely affected the fleet's operational readiness, including:

- **Delays completing planned maintenance.** All Army watercraft require on-condition cyclic maintenance, which is periodic maintenance to ensure the safety and seaworthiness of vessels. Responsibility for vessel maintenance is dispersed among three separate offices: Army Materiel Command, the Army Watercraft Program Office, and the Watercraft Inspection Branch.[27] The Army plans for OCCM to take 90 to 120 days for an LCU, and 120 to 180

[27]In this report, we refer to the Product Director for Army Watercraft Systems as the Army Watercraft Program Office for clarity.

Unanticipated Delays Continue to Prevent a Logistic Support Vessel from Returning to Operations

According to Army officials, following the deactivation of the Reserve Watercraft Component in 2018, the Logistic Support Vessel (LSV-8) remained unattended in Baltimore Reserve for nearly 2 years. Army officials said this period of inactivity led to several maintenance challenges, according to these officials, from 2020 through 2022 the vessel required extensive repairs and overhaul.

Officials stated that in March 2023, the LSV-8 entered the shipyard for repair and overhaul with a completion date set for August 2023. However, the vessel required more work, and the repair timeline was extended by 6 months, according to officials.

Army officials attribute repair delays to the cumulative effect of unaddressed issues and complex repair contracts. They said that the absence of a regular crew exacerbated the situation, leading to delayed detection and repair of various problems and significantly prolonging the return of the LSV-8 to operational status. As of May 2024, the LSV-8 had completed its maintenance and was at Fort Eustis, Virginia according to these officials.

Source: GAO analysis of Army information. U.S. Army (photo). | GAO-25-106387

days for an LSV.[28] However, some Army vessels remain in shipyards much longer (see sidebar). For example, one LSV spent 297 days in OCCM, 177 more than the minimum number of days the Army plans for these vessels to remain in maintenance—representing an increase of 147.5 percent—and 117 days more the maximum—an increase of 47.5 percent.

Army officials said that delays occurred for several reasons, including vessels having to await entry to the shipyard, unanticipated pauses in the work, or vessels being retained for an extended period after having undergone maintenance. In each case, these issues delayed the return of these vessels to their units. Further, according to Army officials, aging vessels, supply shortages, and obsolete parts can exacerbate OCCM times. According to Army maintenance documents from May 2024, the Army completed SLEP and OCCM as scheduled for one of its LCU vessels; however, this same maintenance work remains unfinished for five LCUs. Of the five, three are scheduled to complete SLEP and OCCM between August 2024 and April 2025. Additionally, the Army extended the time in drydock for two LCUs because the vessels missed their original completion date. In one case, the Army extended the vessel's completion date by 1061 days, and as of May 2024, the vessel remains non-operational and has spent a total of 2,101 days in the shipyard (see sidebar).

[28]According to U.S. Army Tank-automotive and Armaments Command (TACOM) officials, OCCM schedules are affected by the condition of vessels, additional work found during OCCM. They are also affected by obsolescence issues, equipment supply availability, and weather conditions. For vessels undergoing SLEP, the Army performs OCCM concurrently. The 90 days for an LCU and 90 to 120 days for an LSV apply specifically to vessels that undergo OCCM only.

Army's Landing Craft Utility Vessel Out of Service for Over 5 Years

The Landing Craft Utility (LCU) vessel, LCU-2017, has been in a shipyard undergoing a concurrent Service Life Extension Program (SLEP) and cyclical maintenance since 2018, according to Army officials. It was initially scheduled to be operational by January 2021.

Officials reported several factors contributing to significant delays, including additional maintenance work beyond the initial scope of the planned SLEP and cyclical maintenance. Notably, Army officials told GAO that after LCU-2017 began SLEP in Morgan City, LA, over 40% of the hull was discovered to be damaged, requiring significant unplanned repairs. According to the officials, the Army had to revise the contract seven times due to the expanded scope of work. The expanded scope of work added further delays and costs, exceeding the initial maintenance estimate by over $1.2 million.

Moreover, Army officials reported that frequently shipyard repair personnel could not locate required parts, previously thought to be on hand, leading to stoppages.

Army officials said that In December 2023, LCU-2017 was moved to Fort Eustis, VA, for final repairs and testing. In May 2024, officials told GAO that the vessel had completed SLEP but was still undergoing additional maintenance and adjusting its timelines again, estimating it would return the vessel to service in September 2024.

Source: GAO analysis of Army information. U.S. Army, Lt. Col. Gregg Moore (photo). | GAO-25-106387

- **Handwritten systems to manage maintenance.** The Watercraft Inspection Branch is responsible for scheduling and supporting maintenance of Army watercraft, mainly for OCCM and other sustainment-level maintenance; it also coordinates for some field-level maintenance activities.[29] While subordinate to Army Materiel Command, the Watercraft Inspection Branch, according to Army officials, uses handwritten work orders to record maintenance data instead of the Army-wide enterprise data systems that are called for by guidance.[30] According to officials, the resulting lack of watercraft maintenance data in its enterprise-wide data systems prevents the Army from analyzing trends to derive insights that could help address significant maintenance delays. For example, the lack of maintenance data hinders the ability to develop strategies for reducing delays experienced because of the supply of repair parts. According to officials, managing the supply of replacement parts efficiently is critical, given the Army's aging fleet. Specifically, because of the age of the Army's watercraft fleet, demand for replacement parts increase and, over time, parts often become obsolete. Leveraging maintenance data could help the Army mitigate this issue and enhance Army Materiel Command's data collection and analysis.
- **Delays updating repair manuals required contractor personnel to sail on vessels.** According to Army officials, Army personnel are prohibited from sailing vessels that lack updated manuals for all onboard systems. Army officials said that, as a stopgap, the Army hires Contractor Logistics Support experts to sail on the vessel. Army guidance discusses the update of technical manuals and other publications as part of the maintenance process throughout the life

[29]Subordinate to TACOM, the Watercraft Inspection Branch is responsible for the performance of all marine condition surveys incident to the repair and overhaul of Army watercraft when the maintenance or repair action is to be accomplished at the sustainment level. This includes all marine condition surveys incident to the accomplishment of OCCM as defined by Army Regulation 750-1.

[30]Army Regulation 750-1, *Army Materiel Maintenance Policy* (Mar. 2, 2023).

cycle.[31] The guidance similarly requires review and update of technical manuals following the maintenance and repair of a vessel that results in a permanent change in its condition. Army officials stated that the Army Watercraft Program Office, which is a subordinate entity to the Assistant Secretary of the Army, Acquisition, Logistics and Technology, is responsible for ensuring vessels have the appropriate manuals required for Army personnel to sail vessels. Officials also stated that the Army Watercraft Program Office is also responsible for providing contractor logistic support experts if manuals are not available. According to the Army Watercraft Program Office, the Army spent approximately $8.46 million in contractor logistics support from fiscal year 2018 through fiscal year 2022, and approximately $7.8 million in fiscal year 2023 alone. As of March 2024, the Army has already spent approximately $1.7 million on contractor logistics support for fiscal year 2024, according to Army Watercraft Program Office figures, and Army officials stated that the Army will continue spending funds to operate these vessels with contractor support until the requisite manuals are completed sometime in 2026.

The development of the manuals is a collaborative process that requires coordination from across the Army. For example, the program office, Army Materiel Command, and Army Training and Doctrine Command all have roles in the development and use of manuals.[32] However, the Army continues to lack the coordination needed to ensure the effective participation of several stakeholders to publish the manuals. As of April 2024, the Army had not updated eight of 27 maintenance technical manuals needed for all LCUs that have undergone service life extension; it does not expect to complete them until the third quarter of fiscal year 2026.

[31] Id.

[32] *See* Army Regulation 25-30, *Army Publishing Program* (June 14, 2021) (effective July 14, 2021).

Army Implemented Measures to Address Landing Craft Utility Vessel Safety Issue

In 2010, the Army identified safety concerns with the operation of the LCU bow ramp, which is used for loading and unloading people and equipment. In January 2014, a written proposal to address the issue cited three instances where an LCU lost bow ramp safety components. Despite the risk of catastrophic failure and loss of life, the Army did not replace bow ramp components essential for safety. In 2022, the bow ramp detached from an LCU vessel while in open seas, falling into the Pacific near Yokohama, Japan. On June 14, 2023, GAO briefed the Deputy Chief of Staff of the Army for Operations, Plans, and Training about a significant safety concern with the Landing Craft Utility (LCU).

Immediately following GAO's briefing, the Army issued an Execute Order attributed to GAO's findings, recalling all LCUs until maintenance work ensured the integrity of the bow ramp. By June 28, 2023, the Army had inspected all LCUs, and approximately one-third of the fleet failed the inspection and were pending repairs. According to Army officials, as of May 2024, 14 LCUs had been repaired and the remaining LCUs were in the process of being repaired while undergoing maintenance. These officials said that presently, the Army is developing a permanent solution to ensure the continued integrity of the bow ramp.

Source: GAO analysis of Army information. U.S. Army Sgt. Barbara J. Liau (photo). | GAO-25-106387

In 2011, the Army established a governance body—the Army Watercraft System Board of Directors—to provide decision-making and coordination of Army watercraft management functions among the various stakeholders. However, for various reasons, the Watercraft Board of Directors was unable to integrate Army watercraft efforts which, as shown above, remained diffused among various entities that were dispersed across the Army. As a result, the Watercraft Board of Directors acted only in an advisory role—lacking ability to compel unified, Army-wide approaches to address the challenges identified above. Moreover, the Army Watercraft System Board of Directors:

- only met twice a year, according to Army officials—a frequency too low to catalyze coordination among stakeholders; and
- made decisions without coordinating with key stakeholders, such as the decision to extend the 36-month cycle for On Condition Cyclic Maintenance (OCCM)—safety and seaworthiness maintenance and

inspections—for these vessels without the input of key stakeholders, such as USARPAC.[33]

In addition, while it had a charter that defined roles and responsibilities, the Watercraft Board of Directors did not have a framework for decision-making and coordination among various Army watercraft stakeholders. For example, the Watercraft Board of Directors did not:

- establish procedures for integrating stakeholder input into consolidated decisions,
- develop protocols for its internal conduct, such as defining the frequency of its meetings, or
- establish processes and procedures to define how and when it would disclose information to stakeholders, affecting coordination.

In at least one instance, the absence of clear procedures, protocols, and processes in the Watercraft Board of Directors' charter hindered the Army's ability to remedy a significant and potential life-threatening safety issue. The safety issue involved entities dispersed across the Army. Specifically, the Maritime Safety Office, the office responsible for establishing maritime safety policy for the Army—which entails interpreting safety standards for watercraft—had attempted since 2010 to elevate concerns about a critical defect in the bow ramp of the LCU class of vessels. In 2023, during our review, we uncovered the issue and reported it to Army leadership who took immediate measures to address the problem, as detailed in the sidebar.

Additionally, the Watercraft Board of Directors established itself as an advisory board and was unable to consolidate diverse, Army-wide interests into integrated watercraft plans and strategies. For example,

[33]On-condition cyclic maintenance (OCCM) is a sustainment-level service. This service is required to meet numerous, vessel specific, federal statutory and regulatory requirements. All Army watercrafts are required to undergo OCCM per the intervals established in Army guidance. LCU and LSV vessels are required to undergo OCCM every 48 months. *See* Department of the Army Pamphlet 750-1, *Army Materiel Maintenance Procedures* (Washington, DC: Feb. 2, 2023). In August 2019, the Board decided to extend the 36-month cycle for OCCM for these vessels to 48 months. TACOM, a member of the Board, told meeting participants that this change was partly meant to mitigate maintenance delays by reducing frequency of vessels visiting shipyards, and that this measure would reduce the total number of non-mission capable days for vessels as well as accrue significant cost savings. The Board, however, did not consult users of Army watercraft, including units under U.S. Army Pacific Command when it made the decision. As a result, TACOM's analysis did not consider the units' perspectives on how extending the time between required maintenance inspections could affect unit maintenance.

Army officials said that in December 2022 the Watercraft Board of Directors tried to address the question of whether the Army should extend the service life of its aging LCU fleet or acquire new vessels. According to these officials, the aim was to arrive at a unified position that would serve as the guiding strategy for all Army watercraft efforts, including the allocation of funds to maintain older vessels or procure new ones. Army officials said that, ultimately, the Watercraft Board of Directors was unable to arrive at a decision that synchronized the various agendas of the Army watercraft community. According to officials, it could not reconcile the position of Army Futures Command, which favored investment in new vessels, with the position of Army component commands, particularly USARPAC, which determined day-to-day operational requirements.

The Watercraft Board of Directors had also planned to address the systemic challenges to watercraft maintenance identified above through integrated solutions. However, because the board did not have an oversight and coordination framework, these challenges persisted. According to Army officials, in 2023, the Army disbanded the Watercraft Board of Directors because the board had been unable to rectify the persistent maintenance challenges facing the Army watercraft fleet.

The Army's New Governance Board Has Partially Adopted One of Six Key Leading Practices

In February 2024, the Army established a new governing body for its watercraft enterprise, the Army Watercraft Enterprise Executive Board (Watercraft Governance Board). The Board was established in response to a lack of progress in providing coordination and oversight for the management of Army watercraft, including addressing the maintenance challenges identified above.[34] The new Board aims to provide the needed oversight authority, which will allow it to integrate and coordinate Army-wide watercraft activities. The Army has also started taking steps towards establishing a charter for the Board, according to officials.

We have previously identified the six leading practices for effective governing bodies based on established internal control and corporate governance standards. These six practices are: (1) defining roles, responsibilities, and areas of authority; (2) overseeing functions of the enterprise; (3) developing processes for internal functions of the board; (4) assessing performance of the governance framework; (5) disclosing information to stakeholders; and (6) developing processes for

[34]Headquarters, Department of the Army Execute Order 043-24, *Establishment and Execution of Army Watercraft Enterprise Governance* (Feb. 22, 2024).

communication with stakeholders.[35] A governance framework that provides oversight and coordination is necessary for effective governance, as documented by our *Standards for Internal Control in the Federal Government*. These standards provide that management should identify, analyze, and respond to risks related to achieving defined objectives, to include designing specific actions to respond to the analyzed risks to achieve its objectives.[36]

Our analysis found that although the Governance Board has taken steps to partially adopt one key leading practice of effective governing bodies, it has not yet adopted the other five, as reflected in table 2.

Table 2: Extent to Which the Army's Watercraft Governance Enterprise Board Has Adopted GAO's Leading Practices of Effective Governance

Leading practice	Extent to which the Board has adopted the practice
Define roles, responsibilities, and areas of authority	Partially adopted
Oversee functions of the enterprise	Not adopted
Develop processes for internal functions of the board	Not adopted
Assessing performance of the governance framework	Not adopted
Disclose information to stakeholders	Not adopted
Develop processes for communication with stakeholders	Not adopted

Source: GAO analysis. | GAO-25-106387

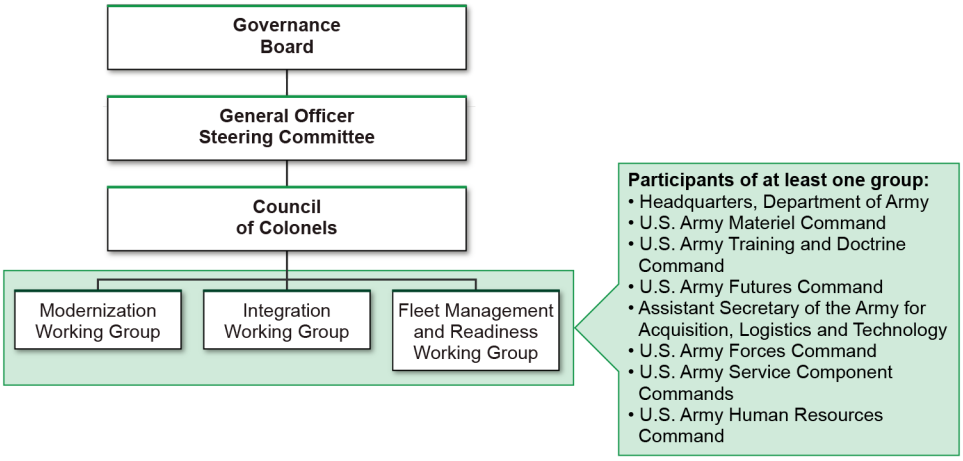
Note: See Appendix I for definitions of each leading practice. A determination of "Fully adopted" means that the Army's Watercraft Enterprise exhibits all the underlying characteristics to meet the leading practice; "Partially adopted" means that the framework exhibits some-but not all-of the underlying characteristics of the corresponding leading practice; "Not adopted" means that the Army has not taken steps that exhibit any of the underlying characteristics of the corresponding leading practice.

[35]GAO, *Capital Police Board: Fully Incorporating Leading Governance Practices Would Help Enhance Accountability, Transparency, and External Communication,* GAO-17-112 (Washington, D.C.: Feb. 7, 2017). To identify the leading practices, GAO used multiple sources that detailed best practices for effective governing bodies, including the corporate governance standards criteria from the G20/Organization for Economic Cooperation that was published in 2015 and updated in 2023, GAO-14-704G; Organization for Economic Cooperation and Development (2023), G20/OECD Principles of Corporate Governance, (Paris, France: June 2023); and Business Roundtable, Principles of Corporate Governance, 2016. See Appendix 1 for definitions of each leading practice.

[36]GAO-14-704G.

As shown in table 2, the Governance Board has taken steps toward adopting the first leading practice—defining roles, responsibilities, and areas of authority. Specifically, documentation from a March 2023 Army Watercraft Board of Directors meeting provided a mission statement and clarified the objectives of both the Governance Board and the Army Watercraft Enterprise. Further, the Army developed initial aspects of a governance framework that detailed the organizational structure of the Army Watercraft Enterprise. Overseen by the Governance Board, the Enterprise's organizational structure includes a steering committee, subordinate council, and working groups (see fig. 7).

Figure 7: Organizational Structure of the Army Watercraft Enterprise



Source: GAO analysis of Army information. | GAO-25-106387

An underlying criterion for meeting the first leading practice is for governing bodies to establish their authorities for oversight and coordination and to clearly communicate these authorities throughout the enterprise to ensure understanding. In February 2024, the Army issued EXORD 043-24, *Establishment and Execution of Army Watercraft Enterprise Governance*, formally directing the establishment of the Army Watercraft Enterprise Executive Board.[37] This EXORD defines roles for various entities across the Army and assigns those entities to the subordinate council and working groups. This creates a structure for coordination and decision-making that, among other things, enables the Army to ensure compliance with existing maintenance regulations. The

[37]Headquarters, Department of the Army Execute Order 043-24, *Establishment and Execution of Army Watercraft Enterprise Governance* (Feb.22, 2024).

EXORD also establishes the Governance Board's role across the watercraft enterprise, thereby acting as a document that broadly communicates the Governance Board's authorities and ensuring its legitimacy in overseeing and coordinating activities related to the management of watercraft, including efforts to address maintenance challenges.

Army officials said that EXORD 043-24 is the first step in formally establishing a framework for providing oversight and coordination of Army watercraft responsibilities. These officials said that the Army is also working on a charter, a framework, and other guidance to further enable the Governance Board's operations. Based on the leading practice, when promulgated, this charter, framework and guidance should specify which decisions require the board's approval and when.

Based on our analysis of the Governance Board's actions compared to our identified leading practices for effective governing bodies, the Governance Board has not yet taken steps to address the remaining five leading principles as of May 2024. Specifically, it has not yet developed:

- mechanisms to oversee the activities of the enterprise, such as procedures specifying the manner and frequency for overseeing compliance with maintenance requirements;
- processes for how to conduct itself internally, such as specificity as to the frequency of board meetings, and a framework for making decisions;[38]
- plans for assessing the performance of the framework, such as a strategy with clear goals for measuring its effectiveness in coordinating efforts to address maintenance challenges;
- processes and procedures defining how and when it should disclose information to stakeholders, such as guidance establishing the frequency and types of information that the board is required to provide stakeholders; and,
- mechanisms to enable communication between the Governance Board and stakeholders, such as a platform to facilitate access for stakeholders to raise issues and provide input.

[38]The Execute Order establishing the Board provides only that it will meet annually and/or by exception.

By developing and issuing a governance framework that reflects all six leading practices of effective governing bodies into its governance framework, the Army will enable the Governance Board's efforts to provide oversight and coordination. Further, the Army will be better positioned to develop integrated strategies to identify, analyze, and take actions to respond to risk, such as persistent maintenance challenges, including unanticipated maintenance delays, incomplete capturing of maintenance data, and outdated maintenance manuals that continue to adversely affect watercraft readiness.

Conclusions

Army watercraft play a critical role for the joint force by providing logistical capabilities, such as intratheater transportation in support of amphibious and riverine operations to counter emerging threats from near-peer adversaries. However, while the demand for Army watercraft continues to increase, especially in the Indo-Pacific theater, the size of the watercraft fleet has dropped by almost half over the past 6 years—from 134 watercraft in 2018 to 70 watercraft as of May 2024. The challenges facing the Army's current watercraft fleet are wide-ranging and include a reduced number of vessels in the fleet after divestment. These challenges limit the Army's ability to meet mission requirements in the Indo-Pacific theater where the need for Army watercraft is most pronounced. Although the Army plans to address these challenges through the implementation of a watercraft modernization strategy and building new vessels, it has not fully considered potential options to enhance its ability to meet the current and near-term mission requirements. By assessing the costs and benefits of potential options to improve the ability of Army watercraft to meet current and near-term mission requirements, the Army will be able to make better resource-informed decisions on what actions to implement.

In addition, ongoing maintenance challenges such as lengthy delays, relying on handwritten systems, and not updating manuals continue to affect the Army's small watercraft enterprise and the readiness of the fleet continues to decline. The Army's approach to managing its watercraft fleet contributed to the persistence of these maintenance challenges. While the Army may now be better positioned to address these challenges through the establishment of a new Governance Board, it should continue to incorporate the leading practices for effective governing bodies, such as clear mechanisms for the board to oversee functions of the enterprise. Incorporating these leading practices into its newly established Governance Board will aid the Army's efforts to effectively address persistent watercraft maintenance challenges, including significant and unanticipated maintenance delays, fully

capturing maintenance data within Army enterprise-wide systems, and ensuring that maintenance manuals are issued in a timely manner.

Recommendations for Executive Action

We are making four recommendations to the Department of the Army:

The Secretary of the Army should ensure that the Deputy Chief of Staff G-3/5/7, in consultation with the Commander, U.S. Indo-Pacific Command and Commander, U.S. Army Pacific Command, develops a mitigation plan addressing challenges to the watercraft fleet, reducing risks, and bridging and mitigating gaps in Army watercraft capability and capacity, to meet current and near-term mission and campaign plan requirements in the Indo-Pacific theater. (Recommendation 1)

The Secretary of the Army should ensure that Headquarters, Department of the Army G-3/5/7 in consultation with Commander, Indo-Pacific Command, and Commander, U.S. Army Pacific Command, assesses the costs and benefits of potential courses of action to improve the ability of Army watercraft to meet current and near-term mission requirements. (Recommendation 2)

The Secretary of the Army should ensure that the Army Watercraft Governance Board develops and issues a governance framework that reflects GAO's leading practices for effective governance. (Recommendation 3)

The Secretary of the Army should ensure that the Army Watercraft Governance Board, in conjunction with other Army stakeholders, take actions to develop integrated strategies that identify, analyze, and respond to persistent maintenance challenges, including significant and unanticipated maintenance delays, fully capturing maintenance data within Army enterprise-wide system, and ensuring that maintenance manuals are issued in a timely manner. (Recommendation 4)

Agency Comments

We provided a draft of this report to DOD for review and comment. The Army, on behalf of DOD, provided written comments. The Army concurred with all four recommendations. In its comments, the Army stated it has ongoing actions and plans that, if implemented will address our recommendations. The Army also provided technical comments on our report, which we incorporated as appropriate. The Army's comments are reprinted below in appendix II.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, and the Secretary of the Army. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

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

Diana Maurer
Director, Defense Capabilities and Management

Appendix I: Objectives, Scope, and Methodology

In this report, we assess the extent to which 1) the Army's watercraft fleet is able to meet current and future mission requirements, and 2) the Army has taken steps to address or mitigate maintenance challenges to its watercraft fleet.

To address these objectives, we focused our review and analysis on Army organizations identified as being relevant to Army watercraft readiness, maintenance, sustainment, modernization, and force structure issues.[1] To observe the different types and missions of Army watercraft vessels, we toured an Army Logistics Support Vessel, Landing Craft Utility, Landing Craft Mechanized, Small Tug, and a Modular Causeway System. Our analysis included a review of more than a dozen organizations such as U.S. Indo-Pacific Command, U.S. Army Pacific Command, U.S. Army Forces Command, and U.S. Army Futures Command, among other Army offices. We also reviewed relevant information such as requirements, policies, handbooks, and Army watercraft information. We also reviewed federally funded research completed by the RAND corporation.

To address our first objective, we analyzed mission capable rates from October 2019 through April 2024 and current and future mission requirements for Army watercraft. We also reviewed documentation on Army watercraft, such as information on the restructuring of the Army's watercraft fleet, and Army watercraft challenges, risks, and gaps.

We analyzed Army watercraft mission capable rates and goals from October 2019 through April 2024, the last month for which complete data were available at the time of our work. We conducted data reliability assessments for the data provided by the Army for watercraft mission capable rates. To do this, we reviewed related documentation; held interviews with knowledgeable agency officials; and performed electronic data testing for missing data, duplicates, data outliers, and obvious errors. Additionally, we shared our analysis of the Army's mission capable rate data with officials from the Army Materiel Command and Headquarters, Department of the Army that manage Army watercraft. Army officials agreed with the results and accuracy of our data analysis of Army watercraft fully mission capable averages for October 2019 through April 2024. As a result, we determined these data to be sufficiently reliable for

[1]Background information included Army watercraft operations and maintenance guidance, as well as other sources, such as Army execute orders and background materials from federally funded research reports, Congressional Research Service reports, and Army watercraft articles published by DOD and others.

reporting the averages and trends since October 2019 through April 2024 that we provide in this report.

We also analyzed a series of guiding documents that Army officials stated are being followed to guide watercraft modernization efforts until the Army watercraft modernization strategy is published. These documents include

- U.S. Army, Deputy Chief of Staff, G-4, *The Army Watercraft Enterprise Strategy 2019-2050* (June 6, 2018);
- (U) Headquarters, Department of the Army, *Execute Order 077-19 In Support of Army Watercraft Transformation Through Divestment of Capability and Force Structure by Inactivation of Units* (May 31, 2019), and subsequent Fragmentary Orders 1 through 4;[2]
- (U) Department of the Army, Office of the Deputy Chief of Staff, G-3/5/7, *Army Structure Memorandum 2022-2026* (Dec. 11, 2019);
- (U) Headquarters, Department of the Army, *Execute Order 206-20, Army Watercraft Relocation Strategy* (July 21, 2020); and
- (U) Department of the Army, Office of the Deputy Chief of Staff, G-3/5/7, *Army Structure Memorandum 2024-2028* (Jan. 12, 2022) and *Army Structure Memorandum 2025-2029* (Feb. 27, 2024).

We analyzed these documents to determine the extent to which the Army had identified challenges, risks, and gaps affecting its current watercraft fleet and had implemented any formal mitigation plans to address identified issues. We also analyzed risk management guidance from the Army, Office of Management and Budget, and *Standards for Internal Control in the Federal Government*, as well as Army guidance on cost benefit analysis.[3] Significant to this audit was the internal control principle that agency management should identify, analyze, and respond to risks related to achieving defined objectives. Additionally, guidance from the Office of Management and Budget on enterprise risk management

[2] (U) Headquarters, Department of the Army Execute Order 077-19, *In Support of Army Watercraft Transformation Through Divestment of Capability and Force Structure by Inactivation of Units* (May 31, 2019) Fragmentary Order 1 to EXORD 077-19 (July 26, 2019); Fragmentary Order 2 to EXORD 077-19 (Aug. 16, 2019); Fragmentary Order 3 to EXORD 077-19 (Apr. 10, 2020); Fragmentary Order 4 to EXORD 077-19 (Apr. 27, 2021).

[3]Army Technique Publications 5-19, *Risk Management* (Nov. 9, 2021), Office of the Deputy Assistant Secretary of the Army (Cost and Economics), *U.S. Army Cost Benefit Analysis Guide, 3rd Edition (V3.3)* (Updated as of Jan. 21, 2020); Office of Management and Budget, Circular No. A-123 *Management's Responsibility for Enterprise Risk Management and Internal Control* (July 15, 2016), and GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: Sept. 10, 2014).

identifies that risk management practices should help leaders make better decisions, alleviate threats, and identify opportunities to improve the efficiency and effectiveness of government operations.

Additionally, we collected and analyzed watercraft mission requirements data for United States Army Forces Command and United States Army Pacific Command for fiscal year 2023 through fiscal year 2025. The data also included the number of Landing Craft Utility and Logistics Support Vessels required to support those mission requirements by fiscal year. Through interviews with knowledgeable Army officials and reviews of data completeness, we found the data related to Army watercraft current and future mission requirements for fiscal year 2023 through fiscal year 2025 to be sufficiently reliable for the purposes of our reporting objective.

Further, we interviewed Army and United States Indo-Pacific Command officials about Army watercraft mission requirements and current and future Army watercraft capability and capacity, including identified challenges, risks, and gaps affecting the current watercraft fleet. We focused on U.S. Indo-Pacific Command because, according to Army officials, the People's Republic of China is DOD's pacing threat and the demand for Army watercraft in that area of responsibility is greater than in any other theater.

To address our second objective, we obtained and reviewed Army watercraft maintenance guidance to identify maintenance goals and standards. We collected and analyzed relevant maintenance information from program officials to determine the current state of Army watercraft readiness and identified key maintenance challenges. We reviewed Army watercraft governance structures, policies, and procedures, regarding the Army Watercraft Board of Directors and the newly established Army Watercraft Enterprise Executive Board (the Watercraft Governance Board).

To evaluate the extent to which the Army has incorporated leading practices from internal control and other standardized governance practices in the development of its governance framework for Army watercraft, we analyzed Army's guidance, such as an Execute Order issued in February 2024 that established the Army Watercraft Governance Board and related roles and responsibilities.[4] We compared

[4]Department of the Army, *Execute Order 043-24 Establishment and Execution of Army Watercraft Enterprise Governance* (Feb. 22, 2024).

the guidance to GAO's identified six leading practices for effective governing bodies.[5] These six leading practices are generally defined as:

Leading Practice 1—Define Roles, Responsibilities, and Areas of Authority: Clearly define authority and responsibility, establish reporting lines, and identify decisions requiring board approval. Set formal reporting requirements, limit record access to authorized individuals, and ensure accountability for records management. Educate stakeholders about the board's role in oversight responsibilities to ensure clarity and understanding.

Leading Practice 2—Oversee Functions of the Board: Establish procedures for selecting and overseeing management, conduct oversight, and address any identified deficiencies. Oversee strategic, financial, and operating plans, and monitor their implementation. Centralize risk management to identify internal and external risks to objectives.

Leading Practice 3—Conduct Performance Evaluations and Reviews: Continuously review the board internal structure to ensure clear lines of accountability, setting performance objectives and monitoring outcomes. Conduct ongoing evaluations of work performance to identify opportunities for improving and enhancing accountability, while codifying these practices.

Leading Practice 4—Develop Processes for Internal Functions of the Board: Establish regular leadership meetings and defined frequency and length of board meetings while developing agendas in documented discussions. Provide a robust orientation for new members and maintain logs to track progress.

Leading Practice 5—Disclose Information to Stakeholders: Document internal controls, transactions, significant events, and the governance structure and policies while overseeing the disclosure and communication

[5]GAO, *Capital Police Board: Fully Incorporating Leading Governance Practices Would Help Enhance Accountability, Transparency, and External Communication,* GAO-17-112 (Washington, D.C.: Feb. 7, 2017). To identify the leading practices, GAO used multiple sources that detailed best practices for effective governing bodies, including the corporate governance standards criteria from the G20/Organization for Economic Cooperation that was published in 2015 and updated in 2023**;** GAO-14-704G; Organization for Economic Cooperation and Development, G20/OECD *Principles of Corporate Governance 2023,* Paris, France: June 2023; and Business Roundtable, Principles of Corporate Governance, 2016.

process to ensure stakeholders can make informed decisions and access essential information.

Leading Practice 6—Develop Processes for Communication With Stakeholders: Grant stakeholders access to participate in decision-making, use diverse mechanisms to communicate and solicit feedback, and establish procedures and timeframes to respond promptly to their concerns. Ensure these practices are well documented to enhance effective communication.

To determine the extent to which the Army has adopted GAO's six leading practices of effective governing bodies in relation to the governance of its watercraft, we performed a content analysis of the Army's Watercraft Enterprise Governance Framework and associated orders. Specifically, we evaluated whether the actions the Army took in relation to the governance of its watercraft fully exhibited, partially exhibited, or did not exhibit the underlying characteristics that describe each leading practice. We examined the individual conditions that define the characteristic and used professional judgement to determine whether the evidence aligned with the description of each individual condition needed to meet the corresponding characteristic. We determined that the actions the Army took in relation to the governance of its watercraft

- *fully exhibited* an underlying characteristic of a leading practice when those actions met all individual conditions that describe the characteristic,
- *partially exhibited* a characteristic when those actions met some—but not all—of the conditions, and
- *did not exhibit* a characteristic when those actions did not meet any of the conditions necessary to meet the characteristic.

Two GAO analysts conducted this analysis independently. The analysts agreed on all determinations for the characteristics. Analysts then independently determined that the Army *adopted* a leading practice when all the underlying characteristics corresponding to the leading practice were exhibited, determined that it *partially adopted* the leading practice when it exhibited some—but not all—of the characteristics, and that the Army *did not adopt* the leading practice when it either did not exhibit any of the corresponding characteristics or partially but not fully exhibited any of the characteristics. The first and second analysts discussed the results of their reviews and encountered no disagreements.

We also assessed the Army's progress against *Standards for Internal Control in the Federal Government* principles, which provide that management should identify, analyze, and respond to risks related to achieving defined objectives. Further, they provide that management should design specific actions to respond to the analyzed risks to achieve its objectives.[6] We also interviewed relevant officials in U.S. Indo-Pacific Command, U.S Army Pacific Command, and U.S. Army Forces Command to gain an understanding of Army watercraft maintenance issues and implementing its Army watercraft governance board.

During our review, we interviewed knowledgeable officials and where appropriate, obtained documentation from the following organizations:

- U.S. Indo-Pacific Command
- U.S. Army Pacific Command
- 8th Theater Sustainment Command
- U.S. Army Forces Command
- 7th Transportation Brigade
- Maritime and Intermodal Training Department
- U.S. Army Office of the Chief of Transportation
- Army Maritime Standards and Safety Office
- Headquarters, Department of the Army
- U.S. Army Futures Command
- U.S. Army Training and Doctrine Command
- U.S. Army Materiel Command
- U.S. Army Tank-automotive and Armaments Command
- Army Watercraft Inspection Branch
- Program Executive Office, Combat Support and Combat Service Support, Product Manager Army Watercraft Systems

We conducted this performance audit from November 2022 to October 2024, 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

[6]GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: Sept. 10, 2014).

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.

Appendix II: Comments from the Department of Defense

SECRETARY OF THE ARMY
WASHINGTON

23 SEP 2024

Ms. Diana Maurer
Director, Defense Capabilities and Management
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Maurer:

Enclosed is the Army response (with comments) to GAO Draft Report, GAO-24-106387SU, "Army Watercraft: Actions Needed to Optimize Small but Critical Fleet" dated July 31, 2024 (GAO Code 106387). The Army concurs with the draft report.

The Army appreciates the opportunity to review the draft report. The enclosed sensitivity review confirms that the report does not contain classified or Controlled Unclassified Information. My point of contact is Mr. Dale N. Fletcher, Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), dale.n.fletcher.civ@army.mil or 703-614-8694.

Sincerely,

Christine R. Wormuth

Enclosures

Enclosure 1

GAO DRAFT REPORT DATED JULY 31, 2024
GAO-24-106387SU (GAO CODE 106387)

"ARMY WATERCRAFT: ACTIONS NEEDED TO OPTIMIZE SMALL BUT CRITICAL FLEET"

DEPARTMENT OF THE ARMY (DA) COMMENTS TO THE GAO RECOMMENDATIONS

RECOMMENDATION 1: The Secretary of the Army should ensure that the Deputy Chief of Staff, G-3/5/7, in consultation with the Commander, U.S. Indo-Pacific Command and Commander, U.S. Army Pacific Command, develops a mitigation plan addressing challenges to the watercraft fleet, reducing risks, and bridging and mitigating gaps in Army watercraft capability and capacity, to meet current and near-term mission and campaign plan requirements in the Indo-Pacific theater.

DA RESPONSE: The Army concurs with this recommendation. The Army is actively pursuing a holistic approach to mitigate the gaps in Army watercraft capability and capacity. The Army recently activated a Composite Watercraft Company (CWC) in the Pacific, drawing upon five vessels from Army Preposition Stock (APS). The February 2024 approved Total Army Analysis (TAA) 2025-2029 increased force structure by two more CWCs in Fiscal Year 2027 (FY27) and FY29. An additional five vessels will be withdrawn from APS for the activating a CWC in FY27 for the Pacific. The Army Watercraft Modernization Strategy (AWMS), once approved, will provide an outline for watercraft investment opportunities/priorities for the Army. The development of the AWMS is directly supported by U.S. Army Futures Command (AFC), Contested Logistics-Cross Functional Team (CL-CFT) as outlined in their draft investment prioritization memorandum. The investment memorandum once approved will detail the current operational gaps, near-term investment options, and modernization considerations set against the campaign requirements. The Army is prioritizing improvements in readiness of the existing fleet, while simultaneously making investments in a modernized fleet to meet the needs of the 2040 Force. The Maneuver Support Vessel (Light) (MSV(L)) prototype is scheduled to enter the test and evaluation phase in the Pacific next year and the first production MSV(L) will be assigned to the U.S. Army Pacific Command. The Army is currently programming 13 vessels to be built with the First Unit Equipped by FY28.

RECOMMENDATION 2: The Secretary of the Army should ensure that Headquarters, Department of the Army G-3/5/7, in consultation with Commander, U.S. Indo-Pacific Command, and Commander, U.S. Army Pacific Command, assesses the costs and benefits of potential courses of action to improve the ability of Army watercraft to meet the current and near-term mission requirements.

DA RESPONSE: The Army concurs with this recommendation. A key component of the AFC draft investment prioritization memorandum addresses the associated cost and benefits of

multiple options, from improved health of the current fleet, developing contract solutions, partnering with our allies, to designing and fielding added capabilities including the potential for advanced autonomous solutions. Action is underway in consultation with Commander, U.S. Indo-Pacific Command, and Commander, U.S. Army Pacific Command, to provide Army Senior Leaders (ASL) the corresponding risk associated with the proposed options.

RECOMMENDATION 3: The Secretary of the Army should ensure that the Army Watercraft Governance Board develops and issues a governance framework that reflects GAO's leading practices for effective governance.

DA RESPONSE: The Army concurs with this recommendation. The Army Watercraft Governance forum is a maturing enterprise closely monitored by the Office of the Deputy Chief of Staff, G-3/5/7. Actions are ongoing to solidify the framework and execute a clear and concise charter synchronizing fleet wide actions. The Army is ensuring all best practices are utilized in the development of the governance framework.

RECOMMENDATION 4: The Secretary of the Army should ensure that the Army Watercraft Governance Board, in conjunction with other Army stakeholders, take actions to develop integrated strategies that identify, analyze, and respond to persistent maintenance challenges, including significant and unanticipated maintenance delays, fully capturing maintenance data within Army enterprise-wide system, and ensuring that maintenance manuals are issued in a timely manner.

DA RESPONSE: The Army concurs with this recommendation. The Army Watercraft Governance Board is comprised of three distinct but interconnected working groups. Working group 2, "The Army Watercraft Fleet Management & Readiness" led by the Office of the Deputy Chief of Staff, G-4, synchronizes all key stakeholders to identify, analyze, and develop options for ASL approval, to improve and modernize all maintenance related functions across the spectrum of options to produce a more resilient Army Watercraft Fleet. In addition, the Army Watercraft Governance Board will ensure their actions are synchronized within existing Army processes such as TAA, Senior Leader Readiness Forum and the Program Objective Memorandum, which execute ASL guidance and priorities.

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Diana Maurer, (202) 512-9627 or maurerd@gao.gov

Staff Acknowledgments

In addition to the contact named above, Guy LoFaro (Assistant Director), Nicole Volchko (Analyst in Charge), Chad Hinsch, Alberto Leff, Amie Lesser, Lillian Ofili, Michael Pose, Michael Silver, and Lillian Moyano Yob made key contributions to this report.

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