

Navy LPD-17 Flight II and LHA Amphibious Ship Programs: Background and Issues for Congress

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Summary

The Navy is procuring two types of larger amphibious ships: LHA-type “big-deck” amphibious assault ships and LPD-17 Flight II class amphibious ships. Both types are built by Huntington Ingalls Industries/Ingalls Shipbuilding (HII/Ingalls) of Pascagoula, MS.

Section 1023 of the FY2023 National Defense Authorization Act (NDAA) (H.R. 7776/P.L. 117-263 of December 23, 2022) amended 10 U.S.C. 8062 to require the Navy to include not less than 31 operational larger amphibious ships, including not less than 10 LHA/LHD-type “big-deck” amphibious assault ships and the remaining ships to be LPD-type or older LSD-type amphibious ships. Section 129 of the FY2023 NDAA permits the Navy to enter into a block buy contract for procuring a combination of up to five LHA-type and LPD-17 amphibious ships.

Oversight issues for Congress regarding larger amphibious ships include whether the Navy intends to use the authority for an LHA-LPD-17 block-buy contract, technical and cost risk in the LPD-17 Flight II and LHA programs, and the operational readiness of in-service amphibious ships.

The Navy’s Battle Force Ship Assessment and Requirement (BFSAR) study, which was provided to the congressional defense committees in June 2023, calls for achieving a future fleet of 381 manned battle force ships, including 31 larger amphibious ships, consisting of 10 LHA- and LHD-type “big-deck” amphibious assault ships, and 21 LPD- and older LSD-type amphibious ships. While the Biden Administration has not explicitly endorsed the Navy’s 381-ship goal or any other force-level goal for the Navy, the above-mentioned requirement in 10 U.S.C. 8062 for having 31 larger amphibious ships applies in any case. Taking into account the 13 LPD-17 Flight I class ships that were procured in FY1996-FY2017, achieving a force of 21 LPD-type amphibious ships would require procuring a total of 8 ships built to the LPD-17 Flight II design or a follow-on design.

Three LPD-17 Flight II ships were procured in FY2018-FY2023. The Navy’s FY2023 and FY2024 5-year shipbuilding plans did not include the procurement of any additional LPD-17 Flight II ships, and the Navy’s FY2023 and FY2024 30-year shipbuilding plans projected that the Navy in coming years would include fewer than 31 larger amphibious ships. The absence of additional LPD-17 Flight II ships in the Navy’s five-year shipbuilding plans and the projected force of fewer than 31 larger amphibious ships were prominent oversight issues in Congress’s review of the Navy’s proposed FY2023 and FY2024 budgets, leading to the above-mentioned Section 1023 of the FY2023 (NDAA) and additional provisions relating to amphibious ships in the FY2024 NDAA (H.R. 2670/P.L. 118-31 of December 22, 2023).

The Navy’s FY2025 five-year shipbuilding plan includes three additional LPD-17 Flight II class ships to be procured in FY2025, FY2027, and FY2029, and the Navy’s FY2025 30-year shipbuilding plan projects that the Navy in coming years will maintain 31 amphibious ships. The Navy’s proposed FY2025 budget requests \$1,562.0 million (i.e., about \$1.6 billion) to complete the procurement cost of the LPD-17 Flight II ship requested for procurement in FY2025.

Marine Corps officials in public remarks have called attention to the number of in-service amphibious ships that are not operationally ready because they are undergoing or need maintenance and repair work, and have stated that inadequate numbers of operationally ready amphibious ships have resulted in instances of where the Navy has not been able to meet requests from U.S. regional combatant commanders for amphibious ships for day-to-day forward presence or responding to contingencies.

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Introduction

This report provides background information and issues for Congress on two types of amphibious ships being procured by the Navy: LHA-type “big-deck” amphibious assault ships and LPD-17 Flight II class amphibious ships. Both types are built by Huntington Ingalls Industries/Ingalls Shipbuilding (HII/Ingalls) of Pascagoula, MS.

Oversight issues for Congress regarding larger amphibious ships include whether the Navy intends to use authority provided by Congress for an LHA-LPD-17 block-buy contract, technical and cost risk in the LPD-17 Flight II and LHA programs, and the operational readiness of in-service amphibious ships. Decisions that Congress makes on procurement amphibious ships could substantially affect Navy capabilities and funding requirements and the shipbuilding industrial base.

A separate CRS report discusses the Navy’s Medium Landing Ship (LSM) program, previously known as the Light Amphibious Warship (LAW) program.¹

Background

U.S. Navy Amphibious Ships

Roles and Missions

Navy amphibious ships are operated by the Navy, with crews consisting of Navy personnel. They are battle force ships, meaning ships that count toward the quoted size of the Navy and toward the Navy’s force-level goal. The primary function of Navy amphibious ships is to lift (i.e., transport) embarked U.S. Marines and their weapons, equipment, and supplies to distant operating areas, and enable Marines to conduct expeditionary operations ashore in those areas. Although amphibious ships can be used to support Marine landings against opposing military forces, they are also used for operations in permissive or benign situations where there are no opposing forces. Due to their large storage spaces and their ability to use helicopters and landing craft to transfer people, equipment, and supplies from ship to shore without need for port facilities,² amphibious ships are potentially useful for a range of combat and noncombat operations.³

On any given day, some of the Navy’s amphibious ships, like some of the Navy’s other ships, are forward-deployed to various overseas operating areas. Amphibious ships typically are forward-deployed in multiship formations called amphibious groups (ARGs). Amphibious ships are also

¹ CRS Report R46374, *Navy Medium Landing Ship (LSM) (Previously Light Amphibious Warship [LAW]) Program: Background and Issues for Congress*, by Ronald O'Rourke.

² Amphibious ships have berthing spaces for Marines; storage space for their wheeled vehicles, their other combat equipment, and their supplies; flight decks and hangar decks for their helicopters and vertical take-off and landing (VTOL) fixed-wing aircraft; and in many cases well decks for storing and launching their landing craft. (A well deck is a large, garage-like space in the stern of the ship. It can be flooded with water so that landing craft can leave or return to the ship. Access to the well deck is protected by a large stern gate that is somewhat like a garage door.)

³ Amphibious ships and their embarked Marine forces can be used for launching and conducting humanitarian-assistance and disaster-response (HA/DR) operations; peacetime engagement and partnership-building activities, such as exercises; other nation-building operations, such as reconstruction operations; operations to train, advise, and assist foreign military forces; peace-enforcement operations; noncombatant evacuation operations (NEOs); maritime-security operations, such as anti-piracy operations; smaller-scale strike and counterterrorism operations; and larger-scale ground combat operations. Amphibious ships and their embarked Marine forces can also be used for maintaining forward-deployed naval presence for purposes of deterrence, reassurance, and maintaining regional stability.

sometimes forward-deployed on an individual basis, particularly for conducting peacetime engagement activities with foreign countries or for responding to smaller-scale or noncombat contingencies.

Types of Amphibious Ships

The Navy's current amphibious ship force currently consists entirely of larger amphibious ships, including the so-called "big-deck" amphibious assault ships, designated LHA and LHD, which look like medium-sized aircraft carriers, and the smaller (but still quite sizeable) amphibious ships, designated LPD or LSD, which are sometimes called "small-deck" amphibious ships.⁴ As mentioned earlier, a separate CRS report discusses the Navy's Medium Landing Ship (LSM) program, previously known as the Light Amphibious Warship (LAW) program, which is a program to build a new type of amphibious ship that would be much smaller than the Navy's current LHA/LHD- and LPD/LSD-type amphibious ships.⁵

Amphibious Ship Force-Level Goal

Requirement in 10 U.S.C. 8062

10 U.S.C. 8062(b) requires the Navy to include not less than 31 operational amphibious warfare ships, consisting of not less than 10 LHA/LHD-type "big-deck" amphibious assault ships and the remaining ships to be LPD/LSD-type amphibious ships. The requirement for the Navy to include these numbers and types of amphibious ships was added to 10 U.S.C. 8062 by Section 1023 of the FY2023 (NDAA) (H.R. 7776/P.L. 117-263 of December 23, 2022).

Force-Level Goal Under Navy's 381-Ship Plan

The Navy's Battle Force Ship Assessment and Requirement (BFSAR) study, which was provided to the congressional defense committees in June 2023, calls for achieving a future fleet of 381 manned battle force ships, including 31 larger amphibious ships, consisting of 10 LHA- and LHD-type "big-deck" amphibious assault ships and 21 LPD- and older LSD-type amphibious ships. While the Biden Administration has not explicitly endorsed the Navy's 381-ship goal or any other force-level goal for the Navy, the above-mentioned requirement in 10 U.S.C. 8062 for having 31 larger amphibious ships applies in any case.⁶

FY2023 and FY2024 NDAA Provisions

The FY2023 NDAA included the following provisions relating to the amphibious ship force-level goal:

⁴ U.S. Navy amphibious ships have designations starting with the letter L, as in amphibious *landing*. LHA can be translated as landing ship, helicopter-capable, assault; LHD can be translated as landing ship, helicopter-capable, well deck; LPD can be translated as landing ship, helicopter platform, well deck; and LSD can be translated as landing ship, well deck. Whether noted in the designation or not, almost all these ships have well decks. The exceptions are LHAs 6 and 7, which do not have well decks and instead have expanded aviation support capabilities. For an explanation of well decks, see footnote 2. The terms "big-deck" and "small-deck" refer to the size of the ship's flight deck.

⁵ CRS Report R46374, *Navy Medium Landing Ship (LSM) (Previously Light Amphibious Warship [LAW]) Program: Background and Issues for Congress*, by Ronald O'Rourke

⁶ For more on the Navy's 381-ship goal, see CRS Report RL32665, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, by Ronald O'Rourke. For a review of earlier amphibious ship force structure requirements, see Appendix A of archived CRS Report RL34476, *Navy LPD-17 Amphibious Ship Procurement: Background, Issues, and Options for Congress*, by Ronald O'Rourke.

- Section 1022 amended 10 U.S.C. 8026 to require the Secretary of the Navy to ensure that the views of the Commandant of the Marine Corps are given appropriate consideration before a major decision is made by an element of the Department of the Navy outside the Marine Corps on a matter that directly concerns amphibious force structure and capability.
- Section 1023, as noted earlier, amended 10 U.S.C. 8062 to require the Navy to include not less than 31 operational larger amphibious ships, including 10 LHA/LHD-type ships and the remaining ships to be LPD or LSD type ships.
- Section 1025 amended 10 U.S.C. 8695 to state that, in preparing a periodic battle force ship assessment and requirement, the Commandant of the Marine Corps shall be specifically responsible for developing the requirements relating to amphibious warfare ships.

The FY2024 National Defense Authorization Act (NDAA) (H.R. 2670/P.L. 118-31 of December 22, 2023) included the following provisions relating to the amphibious ship force-level goal:

- Section 348 directed the Navy to submit, as part of its FY2025 budget submission, a 30-year shipbuilding plan that “meets the statutory requirement to maintain 31 amphibious warships as found in section 8062(b) of title 10, United States Code,” and prohibited the obligation and expenditure of more than 50% of FY2024 funds for Administration and Servicewide Activities within the Operation and Maintenance, Navy (OPN), account until such a plan is submitted.
- Section 1019 amended 10 U.S.C. 8695(e), which sets forth the role of the Commandant of the Marine Corps in the preparation of an annual Navy battle force ship assessment and requirement, to state that the Commandant shall be specifically responsible for not only “for developing the requirements relating to amphibious warfare ships,” as previously stated in 10 U.S.C. 8695(e), but also “for naval vessels with the primary mission of transporting Marines.”

Current and Projected Numbers of Amphibious Ships

The Navy’s force of amphibious ships at the end of FY2023 included 31 larger ships, including 9 LHA/LHD-type “big-deck” amphibious assault ships, 12 LPD-17 Flight I class ships, and 10 older LSD-41/49 class ships. The Navy’s FY2025 budget submission projects that the Navy at the end of FY2024 will include 32 larger amphibious ships, including 9 LHA/LHD-type “big-deck” ships, 13 LPD Flight I class ships, and 10 LSD-41/49 class ships, and that the Navy at the end of FY2025 will include 31 larger amphibious ships, including 9 LHA/LHD-type “big-deck” ships, 13 LPD Flight I class ships, and 9 LSD-41/49 class ships. The Navy’s FY2025 30-year (FY2025-FY2054) shipbuilding plan projects that the Navy will include 31 larger amphibious ships for the entire 30-year period.

Existing LSD-41/49 Class Ships

The Navy procured a total of 12 Whidbey Island/Harpers Ferry (LSD-41/49) class ships (**Figure 1**) procured between FY1981 and FY1993. The ships entered service between 1985 and 1998.⁷ The LSD-41/49 class included 12 ships because the class was built at a time when the Navy was

⁷ The class was initially known as the Whidbey Island (LSD-41) class. The final four ships in the class, beginning with *Harpers Ferry* (LSD-49), were built to a modified version of the original LSD-41 design, prompting the name of the class to be changed to the Harpers Ferry/Whidbey Island (LSD-41/49) class. Some sources refer to these 12 ships as two separate classes.

planning a 36-ship amphibious force that included 12 LSD-41/49 class ships. LSD-41/49 class ships have an expected service life of 40 years. The Navy began retiring LSD-41/49 class ships in 2021.

Figure 1. LSD-41/49 Class Ship



Source: Cropped version of U.S. Navy photo dated July 13, 2013, showing the *Pearl Harbor* (LSD-52).

Amphibious Warship Industrial Base

Huntington Ingalls Industries/Ingalls Shipbuilding (HII/Ingalls) of Pascagoula, MS, is the Navy's current builder of both LHA- and LPD-type amphibious ships, although other U.S. shipyards could also build amphibious ships.⁸ The amphibious warship industrial base also includes many supplier firms in numerous U.S. states that provide materials and components for Navy amphibious ships. The Amphibious Warship Industrial Base Coalition (AWIBC), an association of many of these firms, describes itself as "a coalition of 650 companies in 39 states and 249 Congressional districts."⁹

LPD-17 Flight II Program

Program Origin and Name

The Navy decided in 2014 that the LSD-41/49 replacement ships would be built to a variant of the design of the Navy's San Antonio (LPD-17) class amphibious ships. (A total of 13 LPD-17 class ships [LPDs 17 through 29] were procured between FY1996 and FY2017.) Reflecting that decision, the Navy announced on April 10, 2018, that the replacement ships would be known as the LPD-17 Flight II class ships.¹⁰ By implication, the Navy's original LPD-17 design became the

⁸ Amphibious ships could also be built by U.S. shipyards such as HII/Newport News Shipbuilding (HII/NNS) of Newport News, VA; General Dynamics/National Steel and Shipbuilding Company (GD/NASSCO) of San Diego, CA; and (for LPDs at least) General Dynamics/Bath Iron Works (GD/BIW) of Bath, ME. The Navy over the years has from time to time conducted competitions among shipyards for contracts to build amphibious ships.

⁹ See, for example, Amphibious Warship Industrial Base Coalition, "Amphibious Warship Suppliers Return to Capitol Hill to Advocate for Amphibious Warships," press release dated March 8, 2024.

¹⁰ Megan Eckstein, "Navy Designates Upcoming LX(R) Amphibs as San Antonio-Class LPD Flight II," *USNI News*, April 11, 2018. Within a program to build a class of Navy ships, the term *flight* refers to a group of ships within the (continued...)

LPD-17 Flight I design. The first LPD-17 Flight II class ship is designated LPD-30. Subsequent LPD-17 Flight II class ships are designated LPD-31, LPD-32, and so on.

Whether the LPD-17 Flight II class ships constitute their own shipbuilding program or an extension of the original LPD-17 shipbuilding program might be a matter of perspective. As a matter of convenience, this CRS report refers to the Flight II class shipbuilding effort as a separate program. Years from now, LPD-17 Flight I and Flight II class ships might come to be known collectively as either the LPD-17 class, the LPD-17/30 class, or the LPD-17 and LPD-30 classes. On October 10, 2019, the Navy announced that LPD-30, the first LPD-17 Flight II class ship, will be named Harrisburg, for the city of Harrisburg, PA.¹¹ As a consequence, LPD-17 Flight II ships, if treated as a separate class, would be referred to as Harrisburg (LPD-30) class ships.

Design

Compared to the LPD-17 Flight I design, the LPD-17 Flight II design (**Figure 2**) is somewhat less expensive to procure, and in some ways less capable—a reflection of how the Flight II design was developed to meet Navy and Marine Corps operational requirements while staying within a unit procurement cost target that had been established for the program.¹² In many other respects, however, the LPD-17 Flight II design is similar in appearance and capabilities to the LPD-17 Flight I design. Of the 13 LPD-17 Flight I class ships, the final two (LPDs 28 and 29) incorporate some design changes that make them transitional ships between the Flight I design and the Flight II design.

Procurement Cost

LPD-17 Flight II class ships have a current estimated unit procurement cost of about \$2.0 billion.

Procurement Quantity and FY2025 Funding Request

The first LPD-17 Flight II class ship (LPD-30) was procured in FY2018, the second (LPD-31) in FY2020 (the Navy states that the year was FY2021),¹³ and the third (LPD-32) in FY2023. The Navy’s proposed FY2025 budget requests the procurement of a fourth LPD-17 Flight II ship in FY2025, and requests \$1,562.0 million (i.e., about \$1.6 billion) to complete the procurement cost of this ship.

class that are built to a particular version of the class design. The LPD-17 Flight II program was previously known as the LX(R) program and before that as the LSD(X) program.

¹¹ Secretary of the Navy Public Affairs, “SECNAV Names Future Amphibious Transport Dock Ship in Honor of the city of Harrisburg, Pennsylvania,” *Navy News Service*, October 10, 2019.

¹² The Navy’s unit procurement cost targets for the LPD-17 Flight II program were \$1,643 million in constant FY2014 dollars for the lead ship, and an average of \$1,400 million in constant FY2014 dollars for ships 2 through 11. (Source: Navy briefing on LX(R) program to CRS and CBO, March 23, 2015.) The cost target for the lead ship was greater than the cost target for the subsequent ships primarily because the procurement cost of the lead ship incorporates much or all of the detail design and nonrecurring engineering (DD/NRE) costs for the program. Incorporating much or all of the DD/NRE costs of for a shipbuilding program into the procurement cost of the lead ship in the program is a traditional Navy shipbuilding budgeting practice.

¹³ For further discussion, see the **Appendix**.

Figure 2. LPD-17 Flight II Design

Artist's rendering



Source: Cropped version of Huntington Ingalls Industries rendering accessed March 2, 2021, at <https://newsroom.huntingtoningalls.com/file?fid=5c9a85ca2cfac22774673031>.

LHA-9 Amphibious Assault Ship

LHA-type amphibious assault ships (**Figure 3** and **Figure 4**) are procured once every few years. The most recent such ship to be procured, LHA-9, was procured in FY2023. The Navy's FY2025 budget submission estimates its procurement cost at \$3,834.3 million (i.e., about \$3.8 billion). Under the Navy's FY2025 budget submission, the next LHA-type ship, LHA-10, is programmed for procurement in FY2027 at an estimated total procurement cost of \$ 4,560.2 million (i.e., about \$4.6 billion). The ship has received \$289.0 million in FY2023 advance procurement (AP) funding, and the Navy's proposed FY2025 budget requests another \$61.1 million in AP funding for the ship.

Proposed Retirements of LSD-41/49-Class Ships

The Navy's FY2025 budget submission proposes retiring one LSD-41/49 class amphibious ship in FY2025, two in FY2026, one in FY2028, and one in FY2029, all at age 40.

NDAA Provisions Authorizing Block Buys

FY2021 and FY2022 NDAA's

Section 124 of the FY2021 NDAA (H.R. 6395/P.L. 116-283 of January 1, 2021), as amended by Section 121 of the FY2022 NDAA (S. 1605/P.L. 117-821 of December 27, 2021), permitted the Navy to enter into a block buy contract in FY2021 or FY2022 for the procurement of three LPD-17 class ships and one LHA-type amphibious assault ship. Such a contract would have been the first block buy contract to cover the procurement of ships from two separate ship classes. Using block buy contracting could reduce the unit procurement costs of LPD-17 Flight II and LHA-type

ships and affect Congress's flexibility for making changes to Navy shipbuilding programs in response to potential changes in strategic or budgetary circumstances during the period covered by the block buy contract.¹⁴ The Navy did not use this authority.

Figure 3. LHA-8 Amphibious Assault Ship

Artist's rendering



Source: Rendering accompanying Tyler Rogoway, "The Next America Class Amphibious Assault Ship Will Almost Be In a Class of its Own," *The Drive*, April 17, 2018. A note on the photo credits the photo to HII.

FY2023 NDAA

Section 129 of the FY2023 NDAA permits the Navy to enter into a block buy contract for procuring a combination of up to five LPD-17 and LHA-type amphibious ships. Similar to the point made in the previous paragraph, such a contract would be the first block buy contract to cover the procurement of ships from two separate ship classes. As noted above, using block buy contracting could reduce the unit procurement costs of LPD-17 Flight II and LHA-type ships and affect Congress's flexibility for making changes to Navy shipbuilding programs in response to potential changes in strategic or budgetary circumstances during the period covered by the block buy contract. At an April 17 hearing on FY2025 seapower and projection forces programs before the Seapower and Projection Forces subcommittee of the House Armed Services Committee, the Department of the Navy (DON) testified that HII/Ingalls had informed DON that, as estimated by HII/Ingalls, using the block buy contract authority could reduce the combined procurement cost

¹⁴ For more on block buy contracting, see CRS Report R41909, *Multiyear Procurement (MYP) and Block Buy Contracting in Defense Acquisition: Background and Issues for Congress*, by Ronald O'Rourke. See also Megan Eckstein, "Ingalls Eyeing LPD Cost Reductions, Capability Increases As Future Fleet Design Evolves," *USNI News*, January 21, 2021.

of the ships being procured under the contract by about \$914 million.¹⁵ As of April 2024, the Navy has not used this authority.

Figure 4. LHA-7 Amphibious Assault Ship

Shown with 20 F-35B Joint Strike Fighters (JSFs) on Flight Deck



Source: Photograph accompanying Stavros Atlamazoglou, “The US’s Experimental ‘Lightning Carriers’ Are ‘Much More Capable’ than China’s Current Carriers, US Admiral Says,” *Business Insider*, December 6, 2022. The article credits the photograph to U.S. Marine Corps/Sgt. Samuel Ruiz.

Issues for Congress

Use of Block Buy Contract Authority

One issue for Congress is whether the Navy intends to use the LPD-LHA block buy contracting authority provided by Congress in Section 129 of the FY2023 NDAA, and if not, then what, if anything, Congress should do in response. As noted earlier, using block buy contracting could reduce the unit procurement costs of LPD-17 Flight II and LHA-type ships and affect Congress’s flexibility for making changes to Navy shipbuilding programs in response to potential changes in strategic or budgetary circumstances during the period covered by the block buy contract. As noted earlier, at an April 17 hearing on FY2025 seapower and projection forces programs before the Seapower and Projection Forces subcommittee of the House Armed Services Committee, the Department of the Navy (DON) testified that HII/Ingalls had informed DON that, as estimated by HII/Ingalls, using the block buy contract authority could reduce the combined procurement cost of the ships being procured under the contract by about \$914 million.

A May 2, 2024, press report stated:

¹⁵ Source: Spoken testimony of Lieutenant General Karsten Heckl, Deputy Commandant, Combat Development and Integration, and Commanding General, Marine Corps Combat Development Command, as reflected in the CQ transcript for the hearing. See also Justin Katz, “Multi-Ship Amphib Buy Could Net \$900M in Savings, Say Navy, Marine Corps officials,” *Breaking Defense*, April 18, 2024.

As the Navy works towards bolstering its fleet and rebuilding a struggling shipbuilding industry, its secretary said he is confident a decision on a multi-year procurement agreement for amphibious warships could be coming in the next few weeks....

Secretary of the Navy Carlos Del Toro told reporters May 2 at the Modern Day Marine conference that “close discussions with the shipyard” have been underway to “negotiate the best deal possible on behalf of the American taxpayer.”

Del Toro said he feels confident that “hopefully, over the next several weeks, we’ll be able to have a negotiated deal that we can announce.” Multi-year procurement is a special method to contract for multiple years of requirements in a single contract. The agreement would be to build three San Antonio-class amphibious transport docks and one America-class big deck amphibious warship.¹⁶

An April 23, 2024, press report stated

Navy Secretary Carlos Del Toro said he expects “a major announcement” in the next few weeks on a new multi-year procurement agreement to build three San Antonio-class amphibious warships and an America-class big deck amphibious warship at HII’s Ingalls Shipbuilding in Mississippi.

The Navy has been negotiating “as low a price as possible” for the ships that the sea services view as essential to future expeditionary missions, Del Toro said at the Stimson Center on Tuesday [April 23]....

In discussing the pending announcement, Del Toro mentioned the Modern Day Marine exposition, which opens April 30 in Washington, as the likely venue.

“We’ll do the same thing with the amphibs” as were done with multi-year procurement contracts to build two nuclear-powered aircraft carriers¹⁷ with HII’s Newport News Shipbuilding to achieve savings in construction and provide stability to the yard’s workforce planning, he added.¹⁸

Technical and Cost Risk in LPD-17 Flight II and LHA Programs

Another potential issue for Congress is technical and cost risk in the LPD-17 Flight II and LHA programs.

LPD-17 Flight II Program

A June 2024 Government Accountability Office (GAO) report—the 2024 edition of GAO’s annual report surveying DOD major acquisition programs—stated the following about the LPD-17 Flight II program:

Current Status

The Office of the Secretary of Defense paused the program in the spring of 2023 to study the costs and capabilities of the platform. As of January 2024, the Navy-led study has been

¹⁶ Laura Heckmann, “MDM News: Navy Expects Multi-Year Procurement Decision on Amphibs Soon,” *National Defense*, May 2, 2024. See also Lee Hudson, “Navy, HII Aim to Close Multiship Amphib Deal over Next ‘Several Weeks,’” *Politico Pro*, May 2, 2024.

¹⁷ The Navy is using a two-ship block buy contract for the aircraft carriers CVN-80 and CVN-81 to reduce the combined procurement cost of the two ships. For further discussion, see CRS Report RS20643, *Navy Ford (CVN-78) Class Aircraft Carrier Program: Background and Issues for Congress*, by Ronald O’Rourke.

¹⁸ John Grady, “SECNAV Del Toro Previews Major Amphibious Warship Buy,” *USNI News*, April 23, 2024. See also Rich Abbott, “SECNAV Confirms Amphib Multi-Ship Buy Coming Soon,” *Defense Daily*, April 23, 2024; Nick Wilson, “Navy to Advance Amphibious Warship Block Buy in the Coming Weeks,” *Inside Defense*, April 23, 2024.

completed. The Navy is evaluating program quantities and if the acquisition strategy for using what the Navy refers to as a block buy would generate cost savings for LPD Flight II purchases.

The Navy now expects delivery of LPD 30 in fiscal year 2026, a delay of approximately 6 months since our last assessment. The Navy attributed LPD 30 delays to COVID-19-related labor shortfalls in the 2020 to 2022 time frame. Navy program officials stated that the shipyard is holding hiring events and accelerating training efforts to grow its workforce in response to this challenge.

The program continues to track risks associated with the integration of a new surface radar system as construction of LPD 30 and 31 continues. The new radar was developed to standardize the Navy's surface search radars in response to the Navy's ship collisions. The radar has been installed on several in-service ships but has yet to go through independent testing. Navy officials anticipate that the program's master plan for operational testing—to include testing the integration of the new radar system—will be approved prior to LPD 30 delivery and testing, which begins in 2026. While fleet officials reported some issues with the new radar, radar program officials are confident that they can fix the issues and the radar will meet requirements.

Program Office Comments

We provided a draft of this assessment to the program office for review and comment. It provided technical comments, which we incorporated where appropriate. According to the program office, the Navy continues to successfully manage and deliver LPD 17 class ships. The program reported that it received funding for LPD 30, 31, and 32, and has budgeted for LPD 33, 34, and 35. The program also stated that in 2023, it: (1) conducted final contract trials for LPD 28; (2) took LPD 29 to sea with a new radar; (3) continued construction of LPD 30 and 31; and (4) placed LPD 32 under contract for construction.¹⁹

LHA Program

A January 2024 report from DOD's Director, Operational Test and Evaluation (DOT&E)—DOT&E's annual report for FY2023—stated the following about the LHA program:

TEST ADEQUACY

In February 2023, DOT&E published an LHA 6 Flight 0 FOT&E report based on evaluation conducted between March and April 2022 on USS Tripoli (LHA 7), as detailed in the FY22 Annual Report. Testing was adequate to demonstrate LHA 6 Flight 0 capability to support Marine Corps aviation operations in the F-35B-heavy configuration consisting of 20 F-35B aircraft, 3 SH-60S Seahawk helicopters, a Marine Aviation Combat Element, and a Marine Command Element. Testing evaluated the ability to embark, operate, support, and maintain the fixed- and rotary-wing aircraft in this configuration. The LHA 6 program conducted this FOT&E period of the LHA 6 Flight 0 in accordance with a DOT&E-approved test plan, and tests were observed by DOT&E. The LHA 6 program plans to use test observations to inform future F-35B-heavy operational concepts and tactics, techniques, and procedures.

As first reported in the FY21 Annual Report, DOT&E and the LHA 6 program have yet to agree on an LHA Flight 1 LFT&E strategy to evaluate the survivability of the LHA 6 Flight 1 against air-delivered or underwater kinetic threats. Specific DOT&E concerns are the lack of fire testing for embarked vehicle spaces and the lack of a Full Ship Shock Trial.

PERFORMANCE

¹⁹ Government Accountability Office, *Weapon Systems Annual Assessment[:] DOD Is Not Yet Well-Positioned to Field Systems with Speed*, GAO-24-106831, June 2024, p. 152.

EFFECTIVENESS

LHA 6 Flight 0 ships are operationally effective in supporting Marine Corps aviation operations in the F-35B-heavy configuration. USS Tripoli demonstrated the capability to conduct representative flight operations with 20 embarked F-35Bs throughout two days of mission exercises. USS Tripoli supported reliable launch and recovery of the F-35B. The Navy also demonstrated sufficient capability to conduct casualty control in the F-35B-heavy configuration during the simulated events of an aircraft fire on the flight deck and in the hangar of an LHA Flight 0 ship.

LHA 6 Flight 0 ships have limited special access program facility (SAPF) capacity, degrading the planning and execution of real-world missions with sustained operations in the F-35B-heavy configuration. Full details are in the LHA 6 Flight 0 FOT&E report.

SUITABILITY

LHA 6 Flight 0 is operationally suitable for amphibious warfare and standard ACE operations. USS Tripoli experienced no material issues and demonstrated sufficient reliability to support strike and defensive counter air missions in the F-35B-heavy configuration. Additionally, the ship's command, control, and communications systems were sufficient to support the demonstrated missions. Full details are in the LHA 6 Flight 0 FOT&E report.

The embarkation of an F-35B-heavy ACE created crewing requirements that exceeded the 12-hour routine operations. The Navy will likely need to develop a crewing plan for supplementing the ship's crew when operations exceed 12 hours with the embarkation of an F-35B-heavy ACE.

SURVIVABILITY

No data are available to change the survivability assessment of LHA 6 Flight 0 from IOT&E or assess survivability of LHA 6 Flight 1.

RECOMMENDATIONS

The Navy should:

1. Investigate SAPF space options that support sustained operations with an F-35B-heavy ACE embarked. If SAPF space cannot be increased to support mission requirements, the Navy and Marine Corps should investigate the feasibility of relaxing the requirement for the SAPF as necessary to support F-35B operations.
2. Investigate supplemental crewing options for sustained LHA 6 Flight 0 operations with an F-35B-heavy ACE embarked.
3. As recommended in the last two Annual Reports, deliver the LHA 6 Flight 1 LFT&E strategy for DOT&E approval in FY24. Identify funding in the updated TEMP for embarked vehicle fire testing and a Full Ship Shock Trial.²⁰

Operational Readiness of In-Service Amphibious Ships

Another issue for Congress concerns the operational readiness of in-service amphibious ships. Marine Corps officials in public remarks have called attention to the number of in-service amphibious ships that are not operationally ready because they are undergoing or are in need of maintenance and repair work, and have stated that inadequate numbers of operationally ready amphibious ships have resulted in instances of where the Navy has not been able to meet requests from U.S. regional combatant commanders for amphibious ships for day-to-day forward presence

²⁰ Director, Operational Test & Evaluation, *FY 2023 Annual Report*, January 2024, pp. 203-204.

or responding to contingencies.²¹ The situation has prompted the Marine Corps to explore alternatives for deploying Marines on other kinds of ships that are not designed for embarking and transporting Marine forces.²²

Legislative Activity for FY2025

Summary of Congressional Action on FY2025 Funding Request

Table 1 summarizes congressional action on the Navy's FY2025 procurement and advance procurement (AP) funding request for the LPD-17 Flight II and LHA programs.

Table 1. Summary of Congressional Action on FY2025 Procurement Funding Request

Millions of dollars, rounded to nearest tenth

	Request	Authorization			Appropriation		
		HASC	SASC	Enacted	HAC	SAC	Enacted
LPD-33 advance procurement (AP) funding	0	0			0		
LPD-33 procurement funding	1,562.0	1,562.0			1,562.0		
LPD-17 Flight II cost-to-complete funding	19.2	19.2			19.2		
LHA-10 advance procurement (AP) funding	61.1	61.1			61.1		
LHA cost-to-complete funding	115.4	19.2			19.2		

Source: Table prepared by CRS based on Navy's FY2025 budget submission, committee and conference reports, and explanatory statements on FY2025 National Defense Authorization Act and FY2025 DOD Appropriations Act.

Notes: **HASC** is House Armed Services Committee; **SASC** is Senate Armed Services Committee; **HAC** is House Appropriations Committee; **SAC** is Senate Appropriations Committee.

FY2025 National Defense Authorization Act (H.R. 8070)

House

The House Armed Services Committee, in its report (H.Rept. 118-529 of May 31, 2024) on H.R. 8070, recommended the funding levels shown in the HASC column of **Table 1**.

Section 132 of H.R. 8070 would amend subsection (c) of Section 129 of the FY2023 National Defense Authorization Act (H.R. 7776/P.L. 117-263 of December 23, 2022)—the provision that

²¹ See, for example, Mallory Shelbourne, "Marines, Navy Crafting Long-Term Fixes for Amphibious Warship Shortages," *USNI News*, May 3, 2024; Drew F. Lawrence and Konstantin Toropin, "Marines Can't Count on Navy Ships to Carry Them to Global Emergencies, One of the Service's Top Generals Says," *Military.com*, January 25, 2024. See also James G. Foggo, "Evacuating Sudan: An Amphibious Gap and Missed Opportunity," *Defense News*, May 3, 2023; Justin Katz, "Short on Amphibs for Turkey, Sudan, the Marines Grapple with Crisis Response Ethos," *Breaking Defense*, May 1, 2023; Nancy A. Youssef, "Grounding of U.S. Marine Unit Spotlights Lack of Ships in Asia-Pacific," *Wall Street Journal*, April 30, 2023. Richard R. Burgess, "Berger: Lack of Amphibs Left AFRICOM with No Sea-Based Option for Sudan Evacuation," *Seapower*, April 28, 2023; Konstantin Toropin, "'I Let Down the Combatant Commander': Marine Leader Regrets His Forces Weren't Available for Recent Crises," *Military.com*, April 28, 2023.

²² See, for example, Megan Eckstein, "Ship Shortage Forces Marines to Consider Alternate Deployments," *Defense News*, January 25, 2024.

permits the Navy to enter into a block buy contract for procuring a combination of up to five LPD-17 and LHA-type amphibious ships—to insert “across programs” after “advance procurement,” so that the subsection as amended would read (emphasis added):

Authority for Advance Procurement.--The Secretary of the Navy may enter into one or more contracts for advance procurement **across programs** associated with a ship or ships for which authorization to enter into a contract is provided under subsection (a), and for systems and subsystems associated with such ships in economic order quantities when cost savings are achievable.

FY2025 DOD Appropriations Act (H.R. 8774)

House

The House Appropriations Committee, in its report (H.Rept. 118-557 of June 17, 2024) on H.R. 8774, recommended the funding levels shown in the HAC column of **Table 1**.

Appendix. Procurement Dates of LPD-31 and LHA-9

This appendix presents background information regarding the procurement dates of LPD-31 and LHA-9. In reviewing the bullet points presented below, it can be noted that procurement funding is funding for a ship that is either being procured in that fiscal year or has been procured in a prior fiscal year, while advance procurement (AP) funding is funding for a ship that is to be procured in a future fiscal year.²³

Overview

An institutional issue for Congress in FY2021 concerned the treatment in the Navy's proposed FY2021 budget of the procurement dates of LPD-31 and LHA-9. The Navy's FY2021 budget submission presented LPD-31 as a ship requested for procurement in FY2021 and LHA-9 as a ship projected for procurement in FY2023. Consistent with congressional action on the Navy's FY2020 and FY2021 budgets regarding the procurement of LPD-31 and LHA-9, this CRS report treats LPD-31 and LHA-9 as ships that Congress procured (i.e., authorized and provided procurement funding for) in FY2020 and FY2021, respectively. Potential oversight issues for Congress included the following:

- By presenting LPD-31 as a ship requested for procurement in FY2021 (instead of a ship that was procured in FY2020) and LHA-9 as a ship projected for procurement in FY2023 (instead of a ship that was procured in FY2021), was DOD, in its FY2021 budget submission, disregarding or mischaracterizing the actions of Congress regarding the procurement dates of these three ships? If so
 - Was DOD doing this to inflate the apparent number of ships requested for procurement in FY2021 and the apparent number of ships included in the five-year (FY2021-FY2025) shipbuilding plan?
 - Could this establish a precedent for DOD or other parts of the executive branch in the future to disregard or mischaracterize the actions of Congress regarding the procurement or program-initiation dates for other Navy ships, other Navy programs, other DOD programs, or other federal programs? If so, what implications might that have for the preservation and use of Congress's power of the purse under Article 1 of the Constitution, and for maintaining Congress as a coequal branch of government relative to the executive branch?

The Navy's FY2024 budget submission, similar to its FY2023, FY2022, and FY2021 budget submissions, presents LHA-9 as a ship procured or projected for procurement in FY2023. Navy officials have described the listing of LHA-9 in the Navy's FY2023 budget submission as a ship being requested for procurement in FY2023 as an oversight.

LPD-31—an LPD-17 Flight II Class Amphibious Ship

The Navy's FY2021 budget submission presented LPD-31, an LPD-17 Flight II class amphibious ship, as a ship requested for procurement in FY2021. This CRS report treats LPD-31 as a ship that Congress procured (i.e., authorized and provided procurement funding for) in FY2020,

²³ For additional discussion, see CRS Report RL31404, *Defense Procurement: Full Funding Policy—Background, Issues, and Options for Congress*, by Ronald O'Rourke and Stephen Daggett.

consistent with the following congressional action on the Navy's FY2020 budget regarding the procurement of LPD-31:

- The House Armed Services Committee's report (H.Rept. 116-120 of June 19, 2019) on H.R. 2500, the FY2020 National Defense Authorization Act, recommended authorizing the procurement of an LPD-17 Flight II class ship in FY2020, showing a quantity increase of one ship above the Navy's request and recommending procurement (not just AP) funding for the program.²⁴
- The Senate Armed Services Committee's report (S.Rept. 116-48 of June 11, 2019) on S. 1790, the FY2020 National Defense Authorization Act, recommended authorizing the procurement of an LPD-17 Flight II class ship in FY2020, showing a quantity increase of one ship above the Navy's request and recommending procurement (rather than AP) funding for the program.²⁵
- The conference report (H.Rept. 116-333 of December 9, 2019) on S. 1790/P.L. 116-92 of December 20, 2019, the FY2020 National Defense Authorization Act, authorized the procurement of an LPD-17 Flight II class ship in FY2020, showing a quantity increase of one ship above the Navy's request and recommending procurement (rather than AP) funding for the program.²⁶ Section 129 of S. 1790/P.L. 116-92 authorizes the Navy to enter into a contract, beginning in FY2020, for the procurement of LPD-31, and to use incremental funding to fund the contract.
- The Senate Appropriations Committee's report (S.Rept. 116-103 of September 12, 2019) on S. 2474, the FY2020 DOD Appropriations Act, recommended funding for the procurement of an LPD-17 Flight II class ship in FY2020, showing a quantity increase of one ship above the Navy's request and recommending procurement (rather than AP) funding for the program.²⁷
- The final version of the FY2020 DOD Appropriations Act (Division A of H.R. 1158/P.L. 116-93 of December 20, 2019) provided procurement (not AP) funding for an LPD-17 Flight II class ship. The paragraph in this act that appropriated funding for the Navy's shipbuilding account, including this ship, includes a provision stating "*Provided further*, That an appropriation made under the heading 'Shipbuilding and Conversion, Navy' provided for the purpose of 'Program increase—advance procurement for fiscal year 2020 LPD Flight II and/or multiyear procurement economic order quantity' shall be considered to be for the purpose of 'Program increase—advance procurement of LPD-31'." This provision relates to funding appropriated in the FY2019 DOD Appropriations Act (Division A of H.R. 6157/P.L. 115-245 of September 28, 2018) for the procurement of an LPD-17 Flight II class ship in FY2020, as originally characterized in the explanatory statement accompanying that act.²⁸

²⁴ H.Rept. 116-120, p. 379, line 012.

²⁵ S.Rept. 116-48, p. 433, line 12. See also pp. 23-24 for associated report language.

²⁶ H.Rept. 116-333, p. 1566, line 012. See also p. 1144 for associated report language.

²⁷ S.Rept. 116-103, p. 118, line 12. See also p. 122 for associated report language.

²⁸ See PDF page 176 of 559, line 12, of the explanatory statement for H.R. 6157/P.L. 115-245.

LHA-9 Amphibious Assault Ship

The Navy's FY2024 budget submission, similar to its FY2023, FY2022, and FY2021 budget submissions, presents LHA-9 as a ship procured or projected for procurement in FY2023. This CRS report treats LHA-9 as a ship that Congress procured (i.e., authorized and provided procurement funding for) in FY2021, consistent with the following congressional action on the Navy's FY2020 and FY2021 budgets regarding the procurement of LHA-9:

- The Senate Armed Services Committee's report (S.Rept. 116-48 of June 11, 2019) on S. 1790, the FY2020 National Defense Authorization Act, recommended authorizing the procurement of LHA-9 in FY2020, showing a quantity increase of one ship above the Navy's request and recommending procurement (rather than AP) funding for the program.²⁹
- The conference report (H.Rept. 116-333 of December 9, 2019) on S. 1790/P.L. 116-92 of December 20, 2019, the FY2020 National Defense Authorization Act, authorized the procurement of LHA-9 in FY2020, showing a quantity increase of one ship above the Navy's request and recommending procurement (rather than AP) funding for the program.³⁰ Section 127 of S. 1790/P.L. 116-92 authorizes the Navy to enter into a contract for the procurement of LHA-9 and to use incremental funding provided during the period FY2019-FY2025 to fund the contract.
- The Senate Appropriations Committee's report (S.Rept. 116-103 of September 12, 2019) on S. 2474, the FY2020 DOD Appropriations Act, recommended funding for the procurement of an LHA amphibious assault ship in FY2020, showing a quantity increase of one ship above the Navy's request and recommending procurement (rather than AP) funding for the program.³¹
- The final version of the FY2020 DOD Appropriations Act (Division A of H.R. 1158/P.L. 116-93 of December 20, 2019) provided procurement (not AP) funding for an LHA amphibious assault ship. The explanatory statement for Division A of H.R. 1158/P.L. 116-93 stated that the funding was for LHA-9.³²
- The procurement (not AP) funding provided for LHA-9 in the FY2020 DOD Appropriations Act (see previous bullet point) was subsequently reprogrammed to provide support for counter-drug activities of the Department of Homeland Security (DHS) along the U.S. southern border.³³ The final version of the FY2021 DOD Appropriations Act (Division C of H.R. 133/P.L. 116-260 of December 27, 2020, the Consolidated Appropriations Act, 2021), however, once again provided procurement (not AP) funding for an LHA amphibious assault ship. The explanatory statement for Division C of H.R. 133/P.L. 116-260 stated that the funding is for "Program increase—LHA 9."³⁴ As a result of the FY2021 procurement (not AP) funding for LHA-9, the ship once again has an authorization (provided in the FY2020 National Defense Authorization Act), authority for using incremental funding in procuring it (provided by Section 127

²⁹ S.Rept. 116-48, p. 433, line 15.

³⁰ H.Rept. 116-333, p. 1566, line 015.

³¹ S.Rept. 116-103, p. 118, line 15.

³² Explanatory statement for Division A of H.R. 1158, PDF page 175 of 414, line 15.

³³ Reprogramming action (Form DD 1415) FY 20-01 RA, February 13, 2020, page 3 of 5.

³⁴ Explanatory statement for Division C of H.R. 133/P.L. 116-260, PDF page 204 of 469, line 17.

of the FY2020 National Defense Authorization Act), and procurement (not AP) funding (provided in the FY2021 DOD Appropriations Act).

Provision in FY2021 NDAA Relating to Ship Procurement Date

The Department of Defense's (DOD's) decision to present LPD-31 and LHA-9 in its FY2021 budget submission as ships requested for procurement in FY2021 and FY2023, respectively, even though Congress procured the two ships in FY2020 and FY2021, respectively, posed an institutional issue for Congress regarding the preservation and use of Congress's power of the purse under Article 1 of the Constitution, and for maintaining Congress as a coequal branch of government relative to the executive branch. Section 126 of the FY2021 NDAA (H.R. 6395/P.L. 116-283 of January 1, 2021) states

SEC. 126. TREATMENT IN FUTURE BUDGETS OF THE PRESIDENT OF SYSTEMS ADDED BY CONGRESS.

In the event the procurement quantity for a system authorized by Congress in a National Defense Authorization Act for a fiscal year, and for which funds for such procurement quantity are appropriated by Congress in the Shipbuilding and Conversion, Navy account for such fiscal year, exceeds the procurement quantity specified in the budget of the President, as submitted to Congress under section 1105 of title 31, United States Code, for such fiscal year, such excess procurement quantity shall not be specified as a new procurement quantity in any budget of the President, as so submitted, for any fiscal year after such fiscal year.

Regarding the original Senate version of this provision, the Senate Armed Services Committee's report (S.Rept. 116-236 of June 24, 2020) on the FY2021 National Defense Authorization Act (S. 4049) states

Treatment of weapon systems added by Congress in future President's budget requests (sec. 126)

The committee recommends a provision that would preclude the inclusion in future annual budget requests of a procurement quantity of a system previously authorized and appropriated by the Congress that was greater than the quantity of such system requested in the President's budget request.

The committee is concerned that by presenting CVN-81 as a ship that was procured in fiscal year 2020 (instead of as a ship that was procured in fiscal year 2019), LPD-31 as a ship requested for procurement in fiscal year 2021 (instead of as a ship that was procured in fiscal year 2020), and LHA-9 as a ship projected for procurement in fiscal year 2023 (instead of as a ship that was procured in fiscal year 2020), the Department of Defense, in its fiscal year 2021 budget submission, is disregarding or mischaracterizing the actions of Congress regarding the procurement dates of these three ships. (Page 11)

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