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

Updated May 4, 2022
Summary

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

The Navy’s proposed FY2023 budget requests the procurement of LPD-32, which would be the third LPD-17 Flight II class ship. The Navy estimates the ship’s procurement cost at $1,924.0 million (i.e., about $1.9 billion). The ship has received $251.0 million in prior-year advance procurement (AP) funding. The Navy’s proposed FY2023 budget requests the remaining $1,673.0 million needed to complete the ship’s estimated procurement cost.

Under the Navy’s 355-ship force-level goal, which dates to 2016, a total of 13 LPD-17 Flight II class ships are to be procured. The Navy and DOD since 2019 have been working to develop a new force-level goal to replace the 355-ship goal. In addition to that effort, the Navy is finalizing a study on required numbers of amphibious ships. The Navy’s FY2023 budget submission proposes truncating the LPD-17 Flight II program to three ships by making LPD-32 the final ship in the program. The Marine Corps’ FY2023 unfunded priorities list (UPL), however, includes, as its top unfunded item, $250.0 million in AP funding for a fourth LPD-17 Flight II class ship (LPD-33) to be procured in a future fiscal year.

The Navy’s proposed FY2023 budget also requests continued procurement funding for LHA-9, an LHA-type amphibious assault ship. The Navy estimates the ship’s procurement cost at $3,539.2 million (i.e., about $3.5 billion). The ship has received $350.0 million in prior-year advance procurement (AP) funding and $568.6 million in prior-year procurement funding. The Navy’s proposed FY2023 budget requests a further $1,085.5 million in procurement funding for the ship. Under the Navy’s FY2023 budget submission, the final $1,535.1 million needed to complete the ship’s estimated procurement cost is to be requested for FY2024.

The Navy’s FY2023 budget submission presents LHA-9 as a ship being requested for procurement in FY2023. Consistent with both prior-year congressional authorization and appropriation action and Section 126 of the FY2021 National Defense Authorization Act (NDAA) (H.R. 6395/P.L. 116-283 of January 1, 2021), CRS reports on Navy shipbuilding programs, including this report, treat LHA-9 as a ship that Congress procured (i.e., authorized and provided procurement—not advance procurement [AP]—funding for) in FY2021. 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.

Section 124 of the FY2021 NDAA, as amended by Section 121 of the FY2022 NDAA (S. 1605/P.L. 117-821 of December 27, 2022), provides authority for the Navy to use a block buy contract for the procurement of three LPD-17 class ships and one LHA-type amphibious assault ship.

The Navy’s LPD-17 Flight II and LHA shipbuilding programs pose multiple oversight issues for Congress. Congress’s decisions on the LPD-17 Flight II and LHA programs could affect Navy capabilities and funding requirements and the shipbuilding industrial base.
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Introduction

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

The Navy’s LPD-17 Flight II and LHA shipbuilding programs pose multiple oversight issues for Congress. Congress’s decisions on the LPD-17 Flight II and LHA programs could affect Navy capabilities and funding requirements and the shipbuilding industrial base.

A separate CRS report discusses the Navy’s new 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. 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 in multiship formations called amphibious groups (ARGs). Amphibious ships are also 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.

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1 CRS Report R46374, Navy 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.
Current Types of Amphibious Ships

The Navy’s current amphibious ship force consists entirely of large 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. As mentioned earlier, a separate CRS report discusses the Navy’s new 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.

Amphibious Ship Force at End of FY2021

The Navy’s force of amphibious ships at the end of FY2021 included 31 ships, including 9 amphibious assault ships (2 LHAs and 7 LHDs), 11 LPD-17 Flight I ships, and 11 older LSD-41/49 class ships. The LSD-41/49 class ships are to be replaced by new LPD-17 Flight II class ships.

Amphibious Ship Force-Level Goal Under 355-Plan of 2016

The Navy’s current force-level goal, released in December 2016, calls for achieving and maintaining a 355-ship fleet that includes 38 amphibious ships—12 LHA/LHD-type ships, 13 LPD-17 Flight I class ships, and 13 LPD-17 Flight II class ships (12+13+13). This 38-ship force-level goal predates the LAW program and consequently includes no LAWs.

Emerging New Amphibious Ship Force-Level Goal

The Navy and DOD since 2019 have been working to develop a new force-level goal to replace the Navy’s current 355-ship force-level goal. The Navy’s FY2023 30-year (FY2023-FY2052) shipbuilding plan, released on April 20, 2022, includes a table summarizing the results of studies that have been conducted on the successor force-level goal. These studies outline potential future fleets with 6 to 10 LHAs/LHDs and 30 to 54 other amphibious ships, including but not necessarily limited to LPDs and LAWs.

Marine Corps officials state that, from their perspective, a minimum of 66 amphibious ships will be required in coming years, including a minimum of 31 larger amphibious ships (10 LHAs/LHDs and 21 LPDs) plus 35 LAWs (aka “31+35”).

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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 “large-deck” and “small-deck” refer to the size of the ship’s flight deck.


6 For more on the Navy’s 355-ship force-level goal, see CRS Report RL32665, Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress, by Ronald O'Rourke. For a more detailed review of the 38-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.

7 For additional discussion, see CRS Report RL32665, Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress, by Ronald O'Rourke.

8 See, for example, Todd South, “Back to Ship: Marines Need Ships to Fight. Will They Get Them?” Military Times,
At an April 26, 2022, hearing on Department of the Navy (DON) investment programs before the Seapower subcommittee of the Senate Armed Services Committee, the Department of the Navy testified that

In order to ensure the future naval expeditionary force is maximized for effective combat power, while reflecting and supporting the force structure changes addressed in USMC’s Force Design, the Secretary of the Navy directed an amphibious requirement study that will inform refinement of amphibious ship procurement plans and shipbuilding profiles, as well as inform the ongoing overall Naval Force Structure Assessment.9

In January 2022, Navy officials reportedly anticipated that the above-mentioned study would be completed by the end of March 2022.10 At the end of March 2022, the study reportedly was expected to be completed shortly.11 At the beginning of April 2022, the study reportedly was in its final stages.12

The Navy’s FY2023 30-year (FY2023-FY2052) shipbuilding plan, released on April 20 2022, states that “the Navy will begin assessment of a next-generation amphibious ship (i.e., LPD(X)) in FY2023.”13

**Existing LSD-41/49 Class Ships**

The Navy’s 12 aging Whidbey Island/Harpers Ferry (LSD-41/49) class ships (Figure 1) were procured between FY1981 and FY1993 and entered service between 1985 and 1998.14 The LSD-41/49 class includes 12 ships because the class was built at a time when the Navy was planning a 36-ship (12+12+12) amphibious force. LD-41/49 class ships have an expected service life of 40 years; the first ship will reach that age in 2025.

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9 Statement of Frederick J. Stefany, Principal Civilian Deputy, Assistant Secretary of the Navy (Research, Development and Acquisition), Performing The Duties Of The Assistant Secretary of the Navy (Research, Development and Acquisition), and Vice Admiral Scott Conn, Deputy Chief of Naval Operations, Warfighting Requirements And Capabilities (OPNAV N9), and Lieutenant General Karsten S. Heckl, Deputy Commandant, Combat Development and Integration, Commanding General, Marine Corps Combat Development Command, before the Subcommittee on Seapower of the Senate Armed Services Committee on Department of the Navy Fiscal Year 2023 Budget Request for Seapower, April 26, 2022, PDF page 12 of 37.


14 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.
Amphibious Warship Industrial Base

Huntington Ingalls Industries/Ingalls Shipbuilding (HII/Ingalls) of Pascagoula, MS, is the Navy’s current builder of both LPDs and LHA-type ships, although other U.S. shipyards could also build amphibious ships. The amphibious warship industrial base also includes many supplier firms in numerous U.S. states that provide materials and components for Navy amphibious ships. HII states that the supplier base for its LHA production line, for example, includes 457 companies in 39 states.

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. By implication, the Navy’s original LPD-17 design became the 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 to be designated LPD-31, LPD-32, and so on.

15 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.


17 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 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.
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. As a consequence, LPD-17 Flight II, 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. 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 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 Quantity

Under the Navy’s current 38-ship amphibious force-level goal, the Navy would procure a total of 13 LPD-17 Flight II class ships. The Navy’s FY2023 budget submission proposes truncating the LPD-17 Flight II program to three ships by making LPD-32 the final ship in the program. The Marine Corps’ FY2023 unfunded priorities list (UPL), however, includes, as its top unfunded item, $250.0 million in AP funding for a fourth LPD-17 Flight II class ship (LPD-33) to be procured in a future fiscal year.

Procurement Schedule

The first LPD-17 Flight II class ship, LPD-30, was procured in FY2018. The Navy’s FY2023 budget submission presents the second LPD-17 Flight II class amphibious ship, LPD-31, as a ship that was procured in FY2021. Consistent with congressional action on the Navy’s FY2020 budget, this CRS report treats LPD-31 as a ship that Congress procured (i.e., authorized and provided procurement—not advance procurement—funding for) in FY2020. (For additional discussion, see the Appendix.)


19 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.
Figure 2. LPD-17 Flight II Design
Artist’s rendering


Procurement Cost
LPD-17 Flight II class ships have a current unit procurement cost of about $1.9 billion.

LHA-9 Amphibious Assault Ship
LHA-type amphibious assault ships are procured once every few years. LHA-8 (Figure 3) was procured in FY2017. The Navy’s FY2023 budget submission estimates the procurement cost of the next amphibious assault ship, LHA-9, at $3,539.2 million (i.e., about $3.5 billion).

The Navy’s FY2023 budget submission, like its FY2022 and FY2021 budget submission, presents LHA-9 as a ship projected for procurement in FY2023. Consistent with congressional action on the Navy’s FY2020 and FY2021 budgets, this CRS report treats LHA-9 as a ship that Congress procured (i.e., authorized and provided procurement—not advance procurement—funding for) in FY2021. 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. (For additional discussion, see the Appendix.)

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20 The Navy’s FY2022 budget submission did not show an LHA as having been procured in FY2020 or FY2021, and referred to LHA-9 as an “FY23 ship.” (Department of Defense, Fiscal Year (FY) 2022 Budget Estimates, Navy, Justification Book Volume 1 of 1, Shipbuilding and Conversion, Navy, May 2021, p. 271 [PDF page 291 of 390].)

FY2021 and FY2022 Legislation

Authority for LPD-LHA Block Buy Contract

Section 124 of the FY2021 National Defense Authorization Act (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, 2022), permits 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 be 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.\(^2\)

Ship Procurement Dates

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

\(^2\) 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.

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)

**FY2023 Procurement Funding Request**

The Navy’s proposed FY2023 budget requests the procurement of LPD-32, which would be the third LPD-17 Flight II class ship. The Navy estimates the ship’s procurement cost at $1,924.0 million (i.e., about $1.9 billion). The ship has received $251.0 million in prior-year advance procurement (AP) funding. The Navy’s proposed FY2023 budget requests the remaining $1,673.0 million needed to complete the ship’s estimated procurement cost.

The Navy’s FY2023 budget submission proposes truncating the LPD-17 Flight II program to three ships by making LPD-32 the final ship in the program. The Marine Corps’ FY2023 unfunded priorities list (UPL), however, includes, as its top unfunded item, $250.0 million in AP funding for a fourth LPD-17 Flight II class ship (LPD-33) to be procured in a future fiscal year.

The Navy’s proposed FY2023 budget also requests continued procurement funding for LHA-9, an LHA-type amphibious assault ship. The Navy estimates the ship’s procurement cost at $3,539.2 million (i.e., about $3.5 billion). The ship has received $350.0 million in prior-year advance procurement (AP) funding and $568.6 million in prior-year procurement funding. The Navy’s proposed FY2023 budget requests a further $1,085.5 million in procurement funding for the ship. Under the Navy’s FY2023 budget submission, the final $1,535.1 million needed to complete the ship’s estimated procurement cost is to be requested for FY2024.
Issues for Congress

Future Amphibious Ship Force-Level Goal

One issue for Congress concerns the future amphibious ship force-level goal, which could affect future procurement quantities for LPD- and LHA-type amphibious ships. As noted earlier:

- The Navy’s FY2023 30-year (FY2023-FY2052) shipbuilding plan, released on April 20, 2022, includes a table summarizing the results of studies that have been conducted on the successor force-level goal. These studies outline potential future fleets with 6 to 10 LHAs/LHDs and 30 to 54 other amphibious ships, including but not necessarily limited to LPDs and LAWs.
- Marine Corps officials state that, from their perspective, a minimum of 66 amphibious ships will be required in coming years, including a minimum of 31 larger amphibious ships (10 LHAs/LHDs and 21 LPDs) plus 35 LAWs (aka “31+35”).

Potential oversight questions for Congress include the following:

- Has the Navy completed its study of amphibious ship force-level requirements? When does the Navy anticipate informing Congress of the results of the study?
- What are the comparative potential costs and operational risks associated with an amphibious force that includes
  - 6 LHAs/LHDs and 30 LPDs and LAWs?
  - 10 LHAs/LHDs and 54 LPDs and LAWs?
  - 10 LHAs/LHDs, 21 LPDs, and 35 LAWs?²³
- To what extent, if any, do the Navy and Marine Corps disagree regarding future required levels of LHA- and LPD-type amphibious ships?²⁴

Proposed Truncation of LPD-17 Flight II Procurement

Another issue for Congress concerns the Navy’s proposal to truncate the LPD-17 Flight II program to three ships by making LPD-32 the final ship in the program. Truncating LPD-17 Flight II procurement to three ships would make for a total of 16 LPD-17 Flight I and Flight II ships (13 LPD-17 Flight I ships procured in earlier years, and 3 LPD-17 Flight II ships). As discussed above, the Navy is currently studying requirements for amphibious ships. The Navy’s FY2023 30-year shipbuilding plan states: “The Navy will begin assessment of a next-generation amphibious ship (i.e., LPD(X)) in FY2023.”²⁵

An April 22, 2022, press report states:

Top Navy officials this week said the service’s budget plan to buy only one more San Antonio-class (LPD-17) Flight II amphibious transport dock ship, LPD-32, and end the

²³ For press reports bearing on the issue of operational risks, see Caitlin M. Kenney, “‘We Should Have Been There’: Marine General Laments the State of the Amphib Navy,” Defense One, April 29, 2022; Mallory Shelbourne, “Marines Couldn’t Meet Request to Surge to Europe Due to Strain on Amphibious Fleet,” USNI News, April 26, 2022.
²⁴ For a press report on this question, see Mallory Shelbourne, “Navy and Marines Divided Over the Amphibious Fleet’s Future as Delays and Cancellations Mount in FY 2023 Budget Request,” USNI News, April 3, 2022.
program buys time for long term assessments to decide on the future of the amphibious force...

“So the plan, as you see, adds an LPD in FY ‘23 and that, frankly, will buy time for the Force Structure Assessment...to go through its paces, to finish the amphibious study that [the Secretary of the Navy] asked to have done and to have that inform in [Program Objective memorandum (POM)] ’24 or even POM ’25 what the future of the amphibious ships will look like,” Jay Stefany, Performing the Duties of Assistant Secretary of the Navy for Research, Development and Acquisition, told reporters during a media roundtable on April 20.

Stefany said the decision may ultimately call for a modified LPD-17 design] or new hull [design] and when they would be needed, but the current budget plans allow time for that.

“If you look at the building profile, there would not need to be another LPD or some other amphib bought until FY'25 because we do have the FY'23 ship in the budget,” he added.

Stefany said by FY ‘23 the Navy will have the Force Structure Assessment and that year the Navy will start the process that goes into starting a new program or continuing a modified version of the current LPD program.

“We may ultimately decide to do a modification, you know Block III [of the LPD-17 design] if you will, or Flight III for LPD, we don’t know. But I think the idea was we would start the process in FY’22. When the actual ship might show up [in the shipbuilding plan] is pending the process happening,” Stefany said.26

Potential oversight questions for Congress include the following:

- If the Navy has not yet completed its study of amphibious-ship requirements, and has not yet released a new force-level goal to replace the 355-ship goal, how can the Navy know that the requirement for LPD-17s will be no more than 16 ships, particularly when some of the studies that have been done to support the development of the Navy’s new force-level goal have included possible total numbers of LPDs that are greater than 16?

- How might the required number of LPDs be affected by the LPD(X) next-generation amphibious ship?

- The Marine Corps’ FY2023 unfunded priorities list (UPL) includes, as its first item, an unfunded priority for $250.0 million in advance procurement (AP) funding for the future procurement of a fourth LPD-17 Flight II class ship (LPD-33) in a future fiscal year. Is that consistent with the Navy’s proposal to end procurement of LPD-17 Flight II class ships with the procurement of a third and final LPD-17 Flight II ship in FY2023?

- What impact would the truncation of LPD-17 Flight II procurement to a total of three ships have on the shipyard that builds LPD-17 Flight IIs (HII/Ingalls—the Ingalls shipyard of Pascagoula, MS, which is part of Huntington Ingalls Industries) in terms of workloads, employment levels, and costs for building other Navy warships (including DDG-51 destroyers and LHA-type amphibious assault ships) that are built at that yard? What impact would the truncation of LPD-17 Flight II procurement have on supplier firms associated with construction of LPD-17 Flight II ships?

Advance Procurement (AP) Funding for LPD-33

A related issue for Congress is whether to provide advance procurement (AP) funding in FY2023 for the procurement of a fourth LPD-17 Flight II ship (LPD-33) in a future fiscal year. As noted earlier, the Marine Corps’ FY2023 unfunded priorities list (UPL) includes, as its first item, an unfunded priority for $250.0 million in advance procurement (AP) funding for the future procurement of a fourth LPD-17 Flight II class ship (LPD-33) in a future fiscal year. Potential oversight questions for this issue are broadly similar to those listed above for the previous issue concerning the proposed truncation of the LPD-17 Flight II program.

Use of Block Buy Contract Authority

Another issue for Congress is whether the Navy intends to use the LPD-LHA block buy contracting authority provided Congress in Section 124 of the FY2021 NDAA, as amended by Section 121 of the FY2022 NDAA (S. 1605/P.L. 117-821 of December 27, 2022), and if not, then what, if anything, Congress should do in response. In considering this issue, Congress may consider, among other things, how using a block buy contract might affect the procurement costs and funding profiles of the LPD-17 Flight II and LHA-type ships being procured, and how it might 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 a June 22, 2021, hearing before the Senate Armed Services Committee on the Department of the Navy’s proposed FY2022 budget, General David Berger, the Commandant of the Marine Corps, stated that using the block buy authority would reduce the combined cost of the four ships by $722 million.27 At a June 17, 2021, hearing before the Seapower and Projection Forces subcommittee of the House Armed Services Committee on seapower programs in the Department of the Navy’s proposed FY2022 budget, Frederick J. Stefany, Acting Assistant Secretary of the Navy for Research, Development and Acquisition (ASN RDA) (i.e., the Navy’s acting acquisition executive), stated that this would equate to a reduction of 7.1%.28 At a June 8, 2021, hearing before the Seapower subcommittee of the Senate Armed Services Committee on Navy and Marine Corps investment programs, the Department of Navy witnesses were asked about the Navy’s intentions regarding the block buy contracting authority granted by Section 124. Stefany replied that


29 This is a reference to the Department of the Navy or the Department of Defense.
But—in—I’ll just let you know the initial indications we’re getting from the department is that they would like to defer this decision so that they can make an overall, as they do their overall [FY]23 budget review this summer and fall, of the overall force structure, work with Admiral Kilby and General Smith on the right mix of ships of the future, the commitment of four ships at once, they would like to make—defer that commitment until they are able to make that force-structure assessment.

So, right now, indicators are that we are not gonna be able to execute that, but it’s not a done deal. It’s going through the process within the department for a final decision sir.30

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

Regarding technical and cost risk in the LPD-17 Flight II program, a June 2021 Government Accountability Office (GAO) report—the 2021 edition of GAO’s annual report surveying DOD major acquisition programs—states the following about the LPD-17 Flight II program:

Current Status

In March 2020, the first Flight II ship construction began on LPD 30. The Navy purchased LPD 31 in April 2020 and plans for construction to start in 2022.

According to the program, the Flight II design is approximately 80 percent complete and includes roughly 200 changes from the Flight I design. The Navy is implementing these changes across three ships, including adding some planned Flight II enhancements to LPD 28 and 29, the last two Flight I ships. For example, LPD 28 includes a new mast design and LPD 29 will be the first LPD ship to include the Navy’s new Enterprise Air Surveillance Radar (EASR). Program officials characterized Flight II design changes as more similar to the types of changes expected on a follow-on ship rather than a lead ship. However, risks remain in this approach. For example, EASR is still in testing, so any delays in completing or integrating it could affect LPD 29, the last Flight I ship, which, according to the program office, is approximately 49 percent complete as of February 2021.

Program officials said COVID-19 had some effect on the program although they have yet to develop formal estimates of related cost or schedule changes. Program officials said the number of people working on LPD 30 construction is about half of that planned due to COVID-19-related labor shortages. Consequently, the program expects there may be delays to LPD 30.

Program Office Comments

We provided a draft of this assessment to the program office for review and comment. The program office provided technical comments, which we incorporated where appropriate. The program office reported that Flight II will provide increased capability, including improved command and control capabilities, over the ships being replaced. It also stated

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that the shipbuilder is currently building three LPD 17 ships: LPD 28, LPD 29, and LPD 30.\footnote{Government Accountability Office, \textit{Weapon Systems Annual Assessment[;] Updated Program Oversight Approach Needed}, GAO-21-22, p. 194.}

\section*{LHA Program}

Regarding technical risk in the LHA program, a January 2022 report from DOD’s Director, Operational Test and Evaluation (DOT&E)—DOT&E’s annual report for FY2021—stated the following:

\subsection*{Test Adequacy}

The Navy and Marine Corps conducted an operational assessment of the LHA 8 ship design between October 20 and November 19, 2020 in accordance with DOT&E-approved test plans. During the three, 3-day events, subject matter experts in operations and maintenance reviewed the LHA 8 design to identify risks that could affect operational effectiveness and suitability. The operational assessment also informed operational testers on the required FOT&E [Follow-on Operational Test and Evaluation] scope and design.

The Navy does not yet have a well-defined LFT&E [Live Fire Test and Evaluation] plan required to evaluate the survivability of the LHA 8 to air delivered or underwater kinetic threats.

\subsection*{Performance}

\subsubsection*{Effectiveness}

Not enough data are yet available to provide a preliminary assessment of the LHA 8 operational effectiveness due to the ship’s stage of development. Operational assessment of the LHA 8 design indicated that the well deck adds needed capability to launch and recover surface connectors, but several design features could negatively affect operational effectiveness of the LHA Flight 1 ships. Additional details are summarized in the classified DOT&E LHA 6 Flight 1 Operational Assessment report published in September 2021.

\subsection*{Suitability}

Not enough data are yet available to provide a preliminary assessment of the LHA 8 operational suitability due to the ship’s stage of development. The LHA 8 operational assessment could not measure reliability, maintainability, or availability of LHA 8. Final assessment of LHA 8 operational suitability will be published after the completion of the LHA 8 FOT&E.

\subsection*{Survivability}

The Navy has initiated the vulnerability modeling of the LHA Flight 1 design, but no relevant data are yet available to assess ship survivability either against kinetic or cyber threats.

\subsection*{Recommendations}

The Navy should:

1. Validate the sufficiency of modified ship-space following operational assessment to support Marine Corps Tier-2 equipment.

2. Conduct land-based operational testing of the LHA 8 combat system to ensure the system is mature enough for at-sea operational test of the platform, and test EASR’s electronic protection capability.
3. Continue to fund the maintenance availability for the current Self-Defense Test Ship (e.g., Paul F. Foster) to ensure its readiness to support LHA 8 combat system testing.

4. Continue to fund the procurement and installation of the necessary LHA 8 combat system elements on Self-Defense Test Ship.

5. Develop FOT&E test plans informed by the LHA 8 operational assessment.


7. Develop an adequate LFT&E strategy to assess ship survivability of the LHA 6 Flight 1 ships, including the survivability of the ship to lethal, underwater threat-induced shock effects.\textsuperscript{32}

The June 2021 GAO report stated the following about the LHA program:

**Current Status**

From January 2020 to August 2020, LHA 8 construction progress increased from 5 percent to almost 19 percent complete. LHA 9 is expected to save costs by using the same design as LHA 8. As a result of receiving advanced procurement funding in 2019, the program office stated that it plans to accelerate the contract award of LHA 9 from fiscal year 2024 to late fiscal year 2021.

The Navy is continuing to mitigate risks from the integration of the Enterprise Air Surveillance Radar (EASR), a new rotating radar system for LHA 8 based on the preexisting Air and Missile Defense Radar program. The Navy has completed a design change to adjust the mast and antennas on top of the ship to avoid interference from EASR, according to program officials. However, the program will be limited to laboratory testing the change until EASR is delivered for installation in 2021.

The program is attempting to avoid repeating quality issues, such as issues with the ship’s main reduction gears that resulted in delays to LHA 7 delivery. Program officials stated that these quality issues increase schedule risk for LHA 8 but stated that there are currently no delays. Program officials stated that they added contract incentives for better quality control management of the ship’s construction, in part to address the quality issues with the ship’s main reduction gears, such as poor welds. Program officials also told us the shipbuilder built more covered facilities to protect all equipment, including the gears, from weather.

**Program Office Comments**

We provided a draft of this assessment to the program office for review and comment. The program office provided technical comments, which we incorporated where appropriate. The program office stated that as of January 15, 2021, LHA 8 is roughly 28 percent complete. It also stated that the Navy has continued to work with the contractor to mitigate technical risks to the design changes and address quality issues, and has finalized the new arrangement of the mast and antennas with the contractor.\textsuperscript{33}

\textsuperscript{32} Department of Defense, Director, Operational Test & Evaluation, *FY2021 Annual Report*, January 2022, p. 158.

Legislative Activity for FY2023

Summary of Congressional Action on FY2023 Funding Request

The Navy’s proposed FY2023 budget requests the procurement of LPD-32, which would be the third LPD-17 Flight II class ship. The Navy estimates the ship’s procurement cost at $1,924.0 million (i.e., about $1.9 billion). The ship has received $251.0 million in prior-year advance procurement (AP) funding. The Navy’s proposed FY2023 budget requests the remaining $1,673.0 million needed to complete the ship’s estimated procurement cost.

The Marine Corps’ FY2023 unfunded priorities list (UPL), however, includes, as its top unfunded item, $250.0 million in AP funding for a fourth LPD-17 Flight II class ship (LPD-33) to be procured in a future fiscal year.

The Navy’s proposed FY2023 budget also requests continued procurement funding for LHA-9, an LHA-type amphibious assault ship. The Navy estimates the ship’s procurement cost at $3,539.2 million (i.e., about $3.5 billion). The ship has received $350.0 million in prior-year advance procurement (AP) funding and $568.6 million in prior-year procurement funding. The Navy’s proposed FY2023 budget requests a further $1,085.5 million in procurement funding for the ship. Under the Navy’s FY2023 budget submission, the final $1,535.1 million needed to complete the ship’s estimated procurement cost is to be requested for FY2024.

Table 1 summarizes congressional action on the Navy’s FY2023 procurement and advance procurement (AP) funding request for the LPD-17 Flight II and LHA-9 programs.

Table 1. Summary of Congressional Action on FY2023 Procurement Funding Request

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Source: Table prepared by CRS based on Navy’s FY2023 budget submission, committee and conference reports, and explanatory statements on FY2023 National Defense Authorization Act and FY2023 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.
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. 34

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 FY2023 budget submission, like its FY2022 and FY2021 budget submissions, treats LHA-9 as a ship to be procured 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, consistent with the following congressional action on the Navy’s FY2020 budget regarding the procurement of LPD-31:

34 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.
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.\(^{35}\)

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.\(^{36}\)

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.\(^{37}\)

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.\(^{38}\)

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.\(^{39}\)

**LHA-9 Amphibious Assault Ship**

The Navy’s FY2023 budget submission, like its FY2022 and FY2021 budget submissions, presents the amphibious assault ship LHA-9 as a ship projected for procurement in FY2023. This CRS report treats LHA-9 as a ship that Congress procured (i.e., authorized and provided

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\(^{35}\) H.Rept. 116-120, p. 379, line 012.  
\(^{37}\) H.Rept. 116-333, p. 1566, line 012. See also p. 1144 for associated report language.  
\(^{38}\) S.Rept. 116-103, p. 118, line 12. See also p. 122 for associated report language.  
\(^{39}\) See PDF page 176 of 559, line 12, of the explanatory statement for H.R. 6157/P.L. 115-245.
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.40

- 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.41 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.42

- 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-9.43

- 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.44 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.”45 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 of the FY2020 National Defense Authorization Act), and procurement (not AP) funding (provided in the FY2021 DOD Appropriations Act).

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40 S.Rept. 116-48, p. 433, line 15.
41 H.Rept. 116-333, p. 1566, line 015.
42 S.Rept. 116-103, p. 118, line 15.
43 Explanatory statement for Division A of H.R. 1158, PDF page 175 of 414, line 15.
44 Reprograming action (Form DD 1415) FY 20-01 RA, February 13, 2020, page 3 of 5.
45 Explanatory statement for Division C of H.R. 133/P.L. 116-260, PDF page 204 of 469, line 17.
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