Congressional Research Service
Informing the legislative debate since 1914

IN FOCUS

May 27, 2021

Navy TAGOS(X) Ocean Surveillance Shipbuilding Program: Background and Issues for Congress

Introduction

The Navy wants to procure in FY2022 the first of a planned new class of seven TAGOS(X) ocean surveillance ships. The Navy estimates that TAGOS(X) ships will cost about $400 million each. The issue for Congress is whether to approve, reject, or modify the Navy's funding requests and acquisition strategy for the program.

TAGOS Ships in the Navy

TAGOS ships (**Figure 1** and **Figure 2**) support Navy antisubmarine warfare (ASW) operations. As stated in the Navy's FY2021 budget submission, TAGOS ships "use the Surveillance Towed-Array Sensor System (SURTASS) to gather undersea acoustic data. They also carry electronic equipment to process and transmit that data via satellite to shore stations for evaluation." **Figure 3** shows a simplified diagram of a TAGOS(X) ship with its SURTASS arrays trailing below and behind the ship.

In the designation TAGOS (also written as T-AGOS), the T means they are operated by the Military Sealift Command (MSC); the A means they are auxiliary (i.e., support) ships; the G means they have a general or miscellaneous mission; and the OS means the mission is ocean surveillance. In the program designation TAGOS(X), the X means that the new TAGOS ship's precise design has not yet been determined.

Figure 1. USNS *Impeccable* (TAGOS-23)

Source: U.S. Navy photograph accompanying "Ocean Surveillance Ships," Military Sealift Command, accessed May 25, 2021.

Current TAGOS Ships

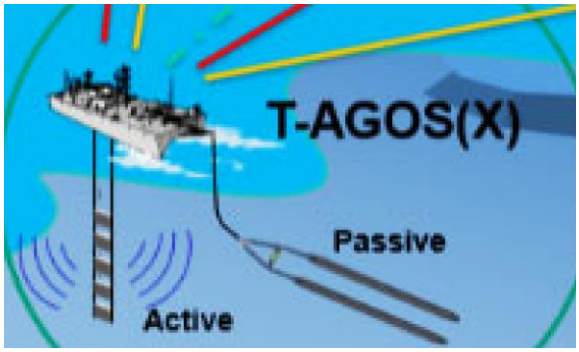
The Navy currently operates five aging TAGOS ships—four *Victorious* (TAGOS-19) class ships (TAGOS 19 through 22) that entered service between 1991 and 1993, and one *Impeccable* (TAGOS-23) class ship that entered service in 2000. As of the end of FY2020, all five were homeported at Yokohama, Japan.

The five in-service TAGOS ships are Small Waterplane Area Twin Hull (SWATH) ships. In a SWATH ship, the upper part of the ship sits on top of two struts that extend down to a pair of submerged hulls that look like submarine hulls (**Figure 2**). The struts have a narrow cross section at the waterline (i.e., they have a small waterplane area). The SWATH design has certain limitations, but has features (including very good stability in high seas) that are useful for SURTASS operations.

Figure 2. USNS *Effective* (TAGOS-21) in Dry Dock

Source: U.S. Navy photograph 070913-N-2638R-004 posted at Wikimedia Commons, accessed May 25, 2021.

Figure 3. TAGOS(X) Ship with SURTASS Arrays



Source: Detail from briefing slide entitled "TAGOS(X) Concept of Operations (CONOPS)," slide 13 in Industry Day briefing for TAGOS(X) program, June 26, 2019, accessed May 26, 2021, at GovTribe.com.

TAGOS(X) Program

Quantity, Schedule, and Design

The Navy wants to build seven TAGOS(X) ships as replacements for its five in-service TAGOS ships. The Navy's FY2021 budget submission calls for procuring the first four TAGOS(X)s at a rate of one per year in FY2022-FY2025. The Navy's notional design for the TAGOS(X) (**Figure 4**) employs a SWATH design that would be larger and faster than the in-service TAGOS ships. **Table 1** compares the TAGOS-19 and TAGOS-23 designs to the Navy's notional TAGOS(X) design.

Figure 4. Notional Design for TAGOS(X)

Source: Artist's rendering accompanying press released entitled "Halter Marine Secures Contract for Industrial Studies for T-AGOS Program," Halter Marine, July 20, 2020.

Table 1. TAGOS Ship Designs

	TAGOS-19	TAGOS-23	TAGOS(X) (notional)
Length	235 feet	281 feet	356 feet
Maximum speed	10 knots	12 knots	20 knots
Full load displacement	3,384 tons	5,330 tons	8,500 tons
Accommodations	~48	54	68

Sources: "Ocean Surveillance Ships - T-AGOS," U.S. Navy, and "Ocean Surveillance Ships," Military Sealift Command, accessed May 26, 2021, and briefing slide entitled "T-AGOS Class Comparison," slide 22 from Industry Day briefing for TAGOS(X) program, June 26, 2019, accessed May 26, 2021, at GovTribe.com.

The Navy's desire to replace the five in-service TAGOS ships with seven larger and faster TAGOS(X)s can be viewed as a response by the Navy to the submarine modernization efforts of countries such as China and Russia. For more on China's submarine modernization effort, see CRS Report RL33153, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, by Ronald O'Rourke.

Procurement Cost

As mentioned earlier, the Navy estimates that TAGOS(X) ships will cost about $400 million each to procure. The Navy's FY2021 budget submission projects procurement funding for the TAGOS(X) program for FY2022-FY2025 in the Navy's shipbuilding account (the Shipbuilding and Conversion, Navy, or SCN, appropriation account) in annual amounts of $437.1 million, $427.9 million, $418.7 million, and $399.4 million.

Research and Development Funding

Research and development work on the TAGOS(X) program is funded through the Navy's research and development account in Project 3261 (TAGOS Design and Total Ship Integration) within Program Element (PE) 0204313N (Ship-Towed Array Surveillance Systems). PE 0204313N is line 213 in the Navy's FY2021 research and development account. For FY2021, the Navy requested $10.9 million for Project 3261. As part of its action on the Navy's FY2021 budget, Congress approved this request.

Acquisition Strategy

The Navy wants to use a single shipbuilder to build all seven TAGOS(X)s. The Navy intends to competitively award in FY2022 a firm fixed-price contract for the detailed design and construction (DD&C) of the lead ship, with options for building up to six additional ships.

On June 26 and 27, 2019, the Navy held an industry day for the TAGOS(X) program to brief the program to interested firms. Representatives from 11 shipyards and 27 other firms attended. In January 2020, the Navy released a request for proposals (RFP) for contracts to perform initial industry studies for the program. On July 2, 2020, the Navy awarded four contracts for these studies to BMT Designers and Planners of Arlington, VA (with a contract value $2.37 million); Bollinger Shipyards of Lockport, LA ($2.78 million); Thoma-Sea Marine Constructors of Houma, LA ($2.26 million); and VT Halter Marine of Pascagoula, MS ($2.17 million). The Navy will use the industry studies to inform its understanding of TAGOS(X) design-cost tradeoffs in support of the RFP that the Navy will release for the DD&C contract.

Issues for Congress

Potential issues for Congress for the TAGOS(X) program include the following:

- whether the Navy has accurately identified the required number and capabilities (and resulting size and cost) of TAGOS(X) ships needed to perform future missions;
- whether the Navy's estimated procurement cost for TAGOS(X)s is accurate; and
- the impact of the TAGOS(X) program on the U.S. shipbuilding industrial base, including both shipyards and supplier firms.

FY2022 Procurement Funding

The Navy's proposed FY2022 budget is scheduled to be submitted to Congress on May 28, 2020.

Ronald O'Rourke, Specialist in Naval Affairs

IF11838

Disclaimer