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# 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's proposed FY2022 budget requested \$434.4 million for the procurement of the first TAGOS(X).

## 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.

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's five aging TAGOS ships include four *Victorious* (TAGOS-19) class ships (TAGOS 19 through 22) that entered service in 1991-1993, 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 ships use a Small Waterplane Area Twin Hull (SWATH) design, in which the ship's upper part sits on two struts that extend down to a pair of submerged, submarine-

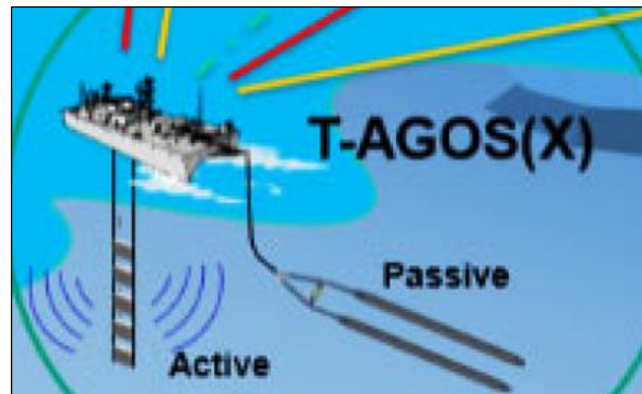
like hulls (**Figure 2**). The struts have a narrow cross section at the waterline (i.e., they have a small waterplane area). The SWATH design has certain limitations, but has features (including very good stability in high seas) that are useful for SURTASS operations.

**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 slide 13, entitled "TAGOS(X) Concept of Operations (CONOPS)," 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 called 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 (see **Table 1**).

**Figure 4. Notional Navy 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**

	<b>TAGOS-19</b>	<b>TAGOS-23</b>	<b>TAGOS(X) (notional)</b>
Length	235 feet	281 feet	356 feet
Maximum speed	10 knots	12 knots	20 knots
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 slide 22, 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

The Navy estimates that TAGOS(X) ships will cost about \$400 million each to procure. The Navy's FY2021 budget projected 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 Project 3261 (TAGOS Design and Total Ship Integration) within Program Element (PE) 0204313N (Ship-Towed Array Surveillance Systems), which is line 211 in the Navy's FY2022 research and development account.

### 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.

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 used the industry studies to inform its understanding of TAGOS(X) design-cost tradeoffs in support of the RFP for the DD&C contract. The Navy posted the RFP for the DD&C contract on November 19, 2021, and amended it on December 21, 2021. Responses to the RFP are due by April 19, 2022.

### 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 U.S. shipyards and associated supplier firms.

### FY2022 Procurement Funding

The Navy's proposed FY2022 budget requested \$434.4 million for the procurement of the first TAGOS(X). The FY2022 DOD Appropriations Act (Division C of H.R. 2471/P.L. 117-103 of March 15, 2022), the Consolidated Appropriations Act, 2022, approves this request. Section 8104 of the act states (emphasis added): "None of the funds provided in this Act for requirements development, performance specification development, concept design and development, ship configuration development, systems engineering, naval architecture, marine engineering, operations research analysis, industry studies, preliminary design, development of the Detailed Design and Construction Request for Proposals solicitation package, or related activities for the T-ARC(X) Cable Laying and Repair Ship or the **T-AGOS(X) Oceanographic Surveillance Ship** may be used to award a new contract for such activities unless these contracts include specifications that all auxiliary equipment, including pumps and propulsion shafts, are manufactured in the United States."

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