



Committee on Transportation and Infrastructure  
U.S. House of Representatives  
Washington DC 20515

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June 2, 2017

**SUMMARY OF SUBJECT MATTER**

**TO:** Members, Subcommittee on Coast Guard and Maritime Transportation  
**FROM:** Staff, Subcommittee on Coast Guard and Maritime Transportation  
**RE:** Hearing on “Building a 21<sup>st</sup> Century Infrastructure for America: Coast Guard Sea, Land and Air Capabilities”

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**PURPOSE**

The Subcommittee on Coast Guard and Maritime Transportation will hold a hearing on Wednesday, June 7, 2017, at 10:00 a.m., in 2167 Rayburn House Office Building to examine the status of the U.S. Coast Guard’s (Coast Guard or Service) infrastructure and the ability of the infrastructure to meet the Service’s needs in the 21<sup>st</sup> Century. The Subcommittee will hear from the Coast Guard, the Government Accountability Office (GAO), and the Navy League of the United States.

**BACKGROUND**

The Subcommittee has held past oversight hearings on the Coast Guard’s acquisition capabilities, the Service’s mission balance, and numerous GAO reports that have reviewed Coast Guard acquisitions and missions. This hearing will review: the status of the Coast Guard’s recapitalization program; new technologies that could assist the Coast Guard; maintenance requirements of its ageing vessels; operating costs for the new vessels; and shore-side infrastructure needs and priorities.

The Coast Guard Acquisition Program Baseline (APB), also referred to as the program of record, is influenced by a number of other Coast Guard documents or procedural requirements - Fleet Mix Analysis (FMA), Mission Needs Statement (MNS), the Capital Investment Plan (CIP), performance gap analysis, and operational requirements.

**Fleet Mix Analysis**

The Coast Guard develops a number of FMA options to understand how a mix of assets can support its missions. The Coast Guard is developing a new FMA, making the 2009 FMA the current document of record. The FMA was used to develop the APB of 91 offshore Cutters –

eight National Security Cutters (NSC), 25 Offshore Patrol Cutters (OPC), and 58 Fast Response Cutters (FRC). According to the 2009 FMA, there are mission gaps with the APB, these gaps are detailed in Figures 1 and 2 in the Appendix.

### **Mission Needs Statement**

The Coast Guard's MNS provides an overview of its statutory missions and its assets' capabilities and capacities<sup>1</sup> in context with current and emerging threats. The first MNS was released in 1996 and updated in 2005 to incorporate new mission demands resulting from the September 11, 2001 terrorist attacks. In 2007, the MNS used to create an approved program of record for the Coast Guard's major acquisition programs at an estimated cost of \$24.2 billion. The 2016 revised MNS failed to provide details on specific assets the Coast Guard needs to meet its mission requirements. Instead, the Coast Guard specified that the new MNS was intended to provide a foundation for long-term investment planning. This effort is to culminate with detailed modeling scenarios to evaluate the effectiveness of various fleet mixes and to inform the CIP. Since the long-term investment planning has yet to be completed, the 2005 MNS remains the baseline document outlining the Coast Guard's mission needs and the required resource hours per asset necessary to achieve the mission set.

### **Capital Investment Plan**

Section 663 of title 14, United States Code, requires the Commandant of the Coast Guard to submit a CIP to the Committee each year in conjunction with the administration's respective budget request. The CIP identifies projected funding levels over the next five fiscal years (FY) for each major acquisition, as well as estimated timelines and total costs to complete each such acquisition. The purpose of the CIP is to ensure Congress has adequate information to conduct proper oversight of the Service's budget, acquisition plans, mission needs, and readiness to conduct operations in future years. The FY 2018 CIP has not been released, leaving the FY 2017 CIP as the current document of record.

The GAO has criticized Coast Guard CIPs for failing to accurately reflect cost and schedule impacts from funding shortfalls. The 2014 GAO report entitled *Better Information on Performance and Funding Needed to Address Shortfalls* (GAO-14-450), recommended that the Coast Guard be required to regularly update the estimated timelines and total costs to complete each acquisition based upon actual appropriations. It also recommended for the Service to develop a long-term fleet modernization plan that identifies all acquisitions needed to meet mission needs and the costs associated with such acquisitions over 20 years. The Coast Guard has not released its 20-year plan.

Status summaries of the Coast Guard's major system acquisition programs and other important capital needs follow.

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<sup>1</sup> The Coast Guard uses *capability* as a qualitative term, to refer to the kinds of missions that can be performed, and *capacity* as a quantitative term, to refer to how much (i.e., to what scale or volume) a mission can be performed.

## **Offshore Cutters**

- **National Security Cutter (NSC):** the APB calls for eight NSCs, which the Service estimates will total \$5.559 billion, averaging \$695 million per cutter. Six NSCs have been delivered, with four fully operational; however, NSC1 is in dry dock for structural enhancement work and NSC2 is expected to commence the same work in August 2017. There are four legacy High Endurance Cutters still active, with a decommissioning schedule of one vessel per year through 2021. (See Figure 3 and 4 in the Appendix regarding the status of NSC production.)

The administration's FY 2018 budget request for the NSC is \$54 million. The FY 2017 appropriation was \$723.6 million, which included funding for post-delivery activities for a ninth NSC, procurement and long lead time materials associated with a tenth NSC, and Structural Enhancement Dry-dock Availability for the NSC2.

- **Offshore Patrol Cutter (OPC):** the APB is 25 OPCs, which the Service estimates will cost a total of \$10.523 billion, averaging about \$421 million per cutter. The Service awarded the OPC contract to Eastern Shipbuilding Group on September 15, 2016. The OPC will replace 14 210-foot and 13 270-foot Medium Endurance Cutters. The Coast Guard is working on a Service Life Extension Plan for these vessels to understand maintenance costs for these vessels while building the OPC. (Figure 5 in the Appendix, provides a chart showing the end-of-service life of each legacy cutter, and a timetable detailing when each new OPC is scheduled to arrive)

The administration's FY 2018 budget request for the OPC is \$500 million to start production on the first OPC. The FY 2017 appropriation for the OPC was \$89 million.

- **Fast Response Cutter (FRC):** the APB details 58 FRCs, which the Service estimates will cost a total of \$3.764 billion, averaging \$65 million per cutter. A total of 44 FRCs have been funded through FY 2017, 23 have been delivered and 21 are fully operational. The FRCs will replace the 110-foot Island-class Patrol Boats, of which 23 are currently operational. (Figure 6 in the Appendix for the ongoing FRC production and decommissioning schedule for the 110 foot Patrol Boats.)

The administration's FY 2018 budget request for the FRC is \$240 million. The FY 2017 appropriation for the FRC was \$340 million to acquire six additional cutters.

- **Polar Icebreaker:** the Coast Guard has one active heavy icebreaker, Coast Guard Cutter (CGC) POLAR STAR, and one active medium icebreaker, CGC HEALY. The Service estimates it will cost roughly \$1 billion for a new heavy polar class icebreaker. (Figure 7 in the Appendix compares the estimated remaining service lives of the CGC POLAR STAR and CGC HEALY with the estimated production schedule of new heavy polar icebreakers.)

The administration's FY 2018 budget request for the polar icebreaker is \$19 million. The FY 2017 appropriation was \$6 million. The Service reprogrammed \$30 million from the

OPC account in FY 2017 to support six different industry studies to decrease the timeframe for the completion of the first heavy polar icebreaker. The contract awards were issued in March 2017. The Coast Guard now estimates delivery of a new heavy icebreaker by 2021.

### **Shoreside infrastructure**

Coast Guard assets are supported by the Service's shore-side infrastructure. In its annual budget request, Coast Guard shore-side infrastructure includes both major and minor shore projects and related survey and design work.

The administration's FY 2018 budget request for Major Shore, Housing, Aids-to-Navigation (ATON), and Survey and Design is \$10 million, which is \$135 million less than the FY 2017 appropriation of \$145 million.

Shore Facilities and ATON funding supports survey and design, and provides for the recapitalization, construction, rebuilding, and improvement of the Coast Guard's shore facilities, military housing, ATON, and related equipment. Shore facilities support all Coast Guard operations and address the shore-side needs of the Service's operational communities. This funding also provides infrastructure upgrades to berth new assets when they are delivered and to ensure that these facilities are fully functional and ready prior to arrival of new assets. Survey and design work includes funding required for planning, environmental and engineering studies, and real property and land acquisitions for future year shore-side projects.

Minor shore construction projects usually require less advanced planning than major projects and generally fall under (1) emergency repair projects (with cost estimates of greater than 50 percent of the replacement value), or (2) minor facility improvements (costing more than \$1 million) to adapt to evolving or increased Coast Guard mission needs. The administration's FY 2018 budget request for minor shore is \$5 million, which is the same as the FY 2017 appropriated level, and was also the funding level for FY 2015 and FY 2016.

Major Acquisition Systems Infrastructure (MASI) includes shore facility infrastructure modifications, upgrades, and new construction associated with homeporting new or modified cutters, boats, and/or aircraft. It also includes logistic, maintenance, and training support for new or modified assets. The administration's FY 2018 budget request for MASI is \$60 million, \$8 million more than the FY 2017 appropriation of \$52 million.

The Coast Guard has a sizable backlog of unmet shore-side infrastructure projects. Its FY 2017 prioritized shore backlog includes 30 projects with a cost of \$465 million. Its FY 2017 unprioritized shore backlog consists of 68 projects with a preliminary cost estimate of \$1.08 billion. The Coast Guard's total FY 2017 shore infrastructure project backlog cost estimate is \$1.55 billion.

In addition, the Coast Guard has deferred shore maintenance projects. Its FY 2016 Quarter 4 backlog reaches a total cost of \$707.7 million, covering projects at units or parent commands in 44 states and one territory.

The Coast Guard also has a backlog in Environmental Compliance and Restoration (EC&R) projects, which were listed in the administration's FY 2018 budget request. There are 152 backlog projects totaling \$118.4 million. Estimated costs include restoration work to be completed in various stages (i.e., investigation work, site remediation work, and long-term management). The Service states that the FY 2018 budget request of \$13.4 million will support investigations and remediation at seven sites, initiate partial cleanup at two sites, complete all necessary response actions at five sites, and sustain progress in conducting long-term monitoring at 24 sites.

The Service reported on April 7, 2016, that it executed a Reimbursable Work Authorization (RWA) in 2015 with the General Services Administration to sell 14 properties, consisting of 162 housing units and eight land parcels. All of the 2015 properties are expected to be transferred in 2017. (Figure 8 in the Appendix summarizes all the Coast Guard properties submitted to the GSA for divestiture.)

### **Aircraft**

The Coast Guard has land-based fixed-wing aircraft, notably the HC-144A, the HC-130H/J, and the HC-27J aircraft. The HC-144As and the HC-27Js provide medium-range fixed-wing capability and the HC-130Hs and the HC-130Js provide long-range surveillance fixed-wing capability. The Coast Guard uses these fixed-wing aircraft to conduct airborne surveillance, detection, classification, and identification of vessels and other aircraft. The Coast Guard is waiting on an updated FMA to determine the best mix of its fleets of fixed-wing aircraft.

- **HC-144A:** the HC-144A has replaced the HU-25 Guardian. Acquisition of the HC-144A is suspended at 18 aircraft.
- **HC-27Js:** the Coast Guard is in the process of receiving 14 HC-27J aircraft from the U.S. Air Force per the *2014 National Defense Authorization* (P.L.113-66). Five have been regenerated from storage and are conducting initial training at the C-27J Asset Project Office in Elizabeth City, N.C. The administration's FY 2018 budget request includes \$52 million for missionization work for the HC-27J.
- **HC-130H/J:** the HC-130Hs will be modified to update unreliable radar and obsolete electronics to maintain the fleet until the HC-130Js are recapitalized. The Coast Guard is acquiring HC-130Js and installing a mission system that is being used in the HC-144. (Appendix Figure 9 for the decommissioning - commissioning schedule.)

The Coast Guard's fleet of rotary-wing aircraft includes the HH-60 and HH-65 helicopters. The HH-60 is a medium-range recovery helicopter, and the HH-65 is a short-range recovery helicopter. Both helicopters deploy from land-based air stations. The HH-65 is also deployed routinely aboard the Coast Guard's fleets offshore cutters. The administration's FY 2018 budget request includes \$22 million in funding for HH-65 helicopter enhancement and upgrades.

- **HH-65:** the HH-65 aircraft are undergoing a conversion/sustainment project to modernize the fleet. The project has six segments including engine replacement, flight data system replacement, and cockpit modernization. This project culminates with the delivery of 22 aircraft in each FY 2019 and 2020, and an additional 19 aircraft in FY 2021.

In FY 2018, the Coast Guard is continuing operational testing of small Unmanned Aircraft Systems (sUAS) onboard its NSC to assess effectiveness of these assets to fulfill unmanned air surveillance capability requirements. According to the Commandant of the Coast Guard, the Coast Guard does not “have enough surveillance platforms to track and take down the threats to our nation. The Coast Guard must acquire land-based, unmanned or remotely piloted systems in a meaningful way.” The administration’s FY 2018 budget request includes \$500,000 for sUAS.

### **WITNESS LIST**

Vice Admiral Charles W. Ray  
Deputy Commandant for Operations  
United States Coast Guard

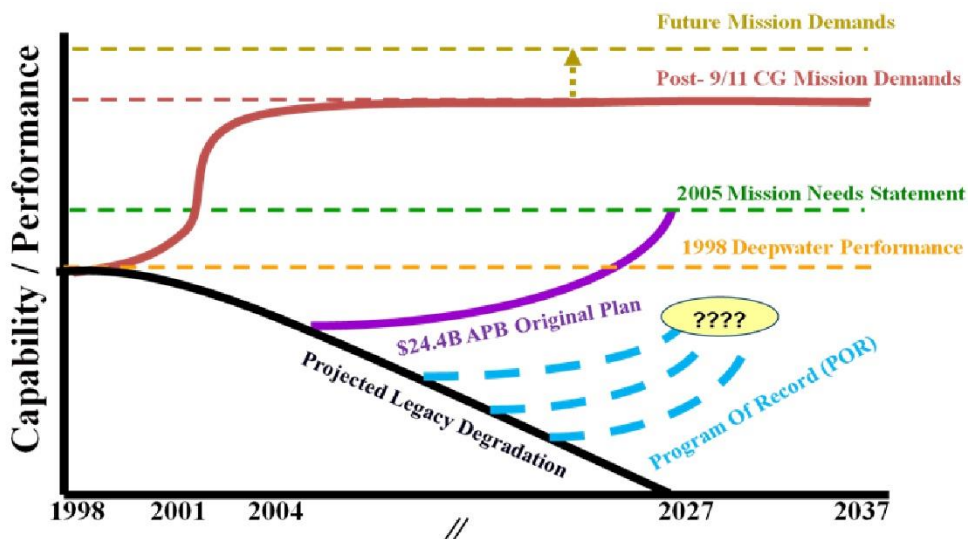
Vice Admiral Sandra L. Stosz  
Deputy Commandant for Mission Support  
United States Coast Guard

Ms. Marie A. Mak  
Director of Acquisition and Sourcing Management  
Government Accountability Office

Mr. John Acton  
Chairman  
Coast Guard Affairs Committee  
Navy League of the United States

## APPENDIX

**Figure 1. 2009 Coast Guard Fleet Mix Analysis Capability and Performance**



**Figure ES-1 Current Level of System Performance**

**Figure 2. Fleet Mix Analysis, Force Mixes and Mission Performance Gaps**

**Table A-3. Force Mixes and Mission Performance Gaps**

From Fleet Mix Analysis Phase I (2009)—an X mark indicates a mission performance gap

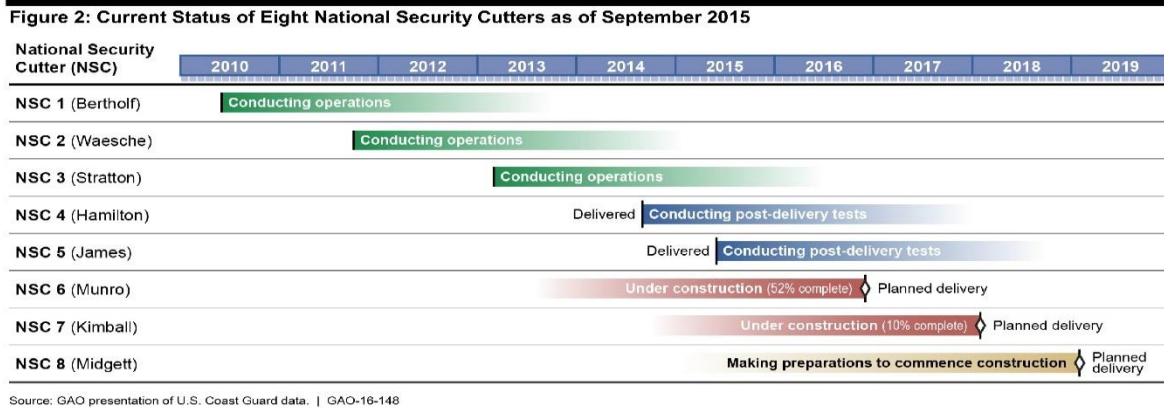
Missions with performance gaps	Risk levels of these performance gaps	Program of Record (POR)	FMA-1	FMA-2	FMA-3	FMA-4 (Objective Fleet Mix)
Search and Rescue (SAR) capability	Very high	X				
Defense Readiness capacity	Very high	X				
Counter Drug capacity	Very high	X				
Ports, Waterways, and Coastal Security (PWCS) capacity <sup>a</sup>	High	X	X			
Living Marine Resources (LMR) capability and capacity <sup>a</sup>	High	X	X			[all gaps addressed]
PWCS capacity <sup>b</sup>	Medium	X	X	X		
LMR capacity <sup>c</sup>	Medium	X	X	X		
Alien Migrant Interdiction Operations (AMIO) capacity <sup>d</sup>	Low/very low	X	X	X	X	
PWCS capacity <sup>e</sup>	Low/very low	X	X	X	X	

**Source:** Fleet Mix Analysis Phase I, Executive Summary, page ES-11 through ES-13.

**Notes:** In the first column, The Coast Guard uses *capability* as a qualitative term, to refer to the kinds of missions that can be performed, and *capacity* as a quantitative term, to refer to how much (i.e., to what scale or volume) a mission can be performed.

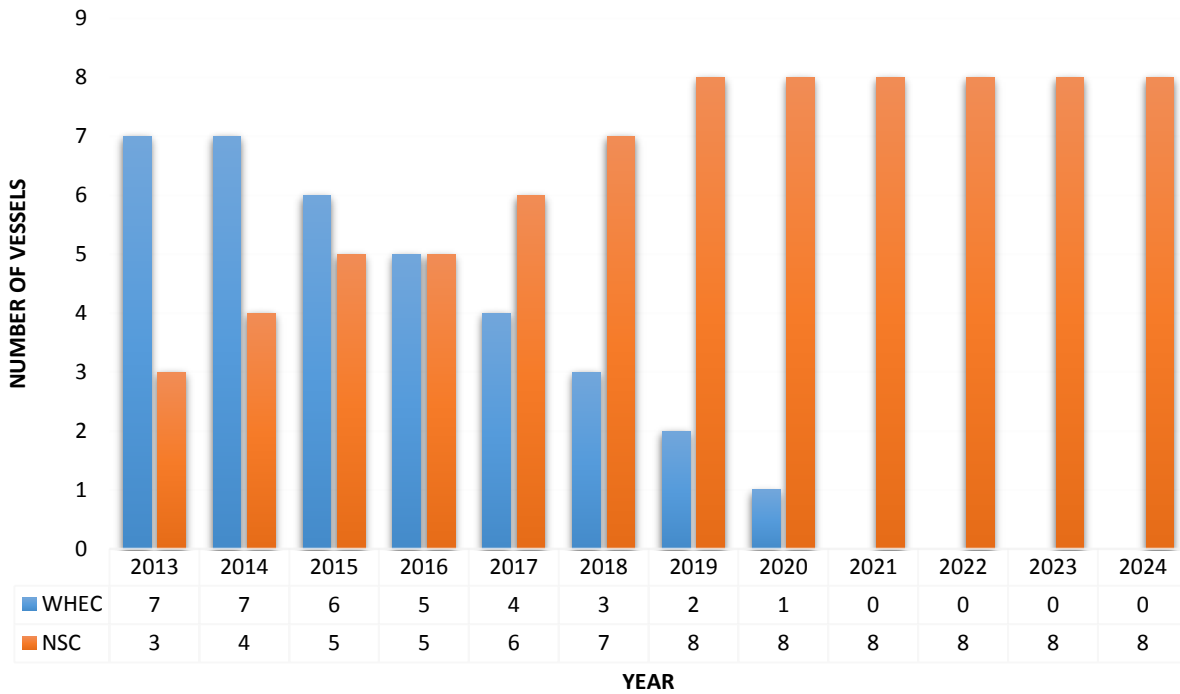
- a. Gap occurs in Southeast operating area (Coast Guard Districts 7 and 8) and Western operating area (Districts 11, 13, and 14)
- b. Gap occurs in Alaska
- c. Gap occurs in Alaska and in Northeast operating area (Districts 1 and 5)
- d. Gap occurs in Southeast Western operating areas.
- e. Gap occurs in the Northeast operating area.

**Figure 3. National Security Cutter Operations and Delivery Dates**



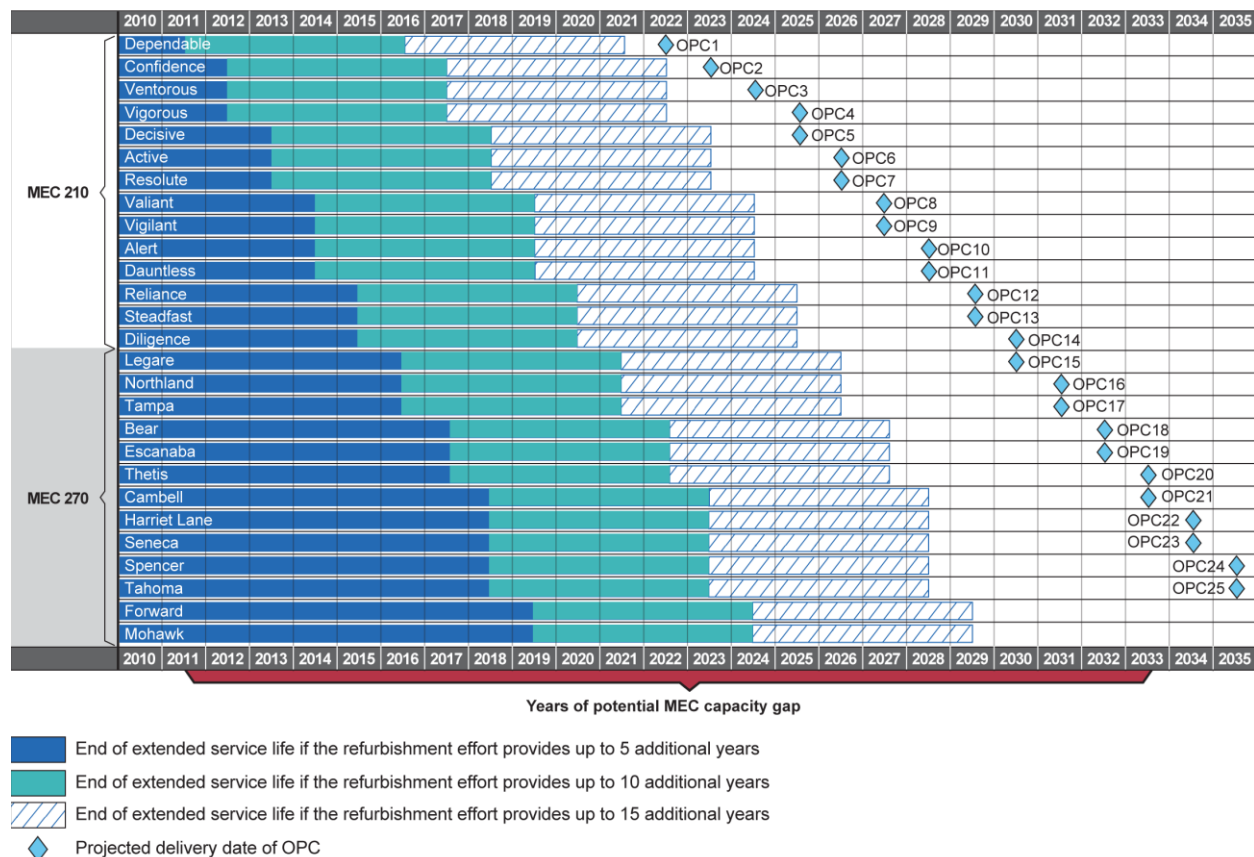
NSC 1 underwent Structural Enhancement Dry Dock Activities in 2016 and NSC 2 will do the same in August 2017.

**Figure 4. WHEC Decommissioning and NSC Commissioning Schedule**



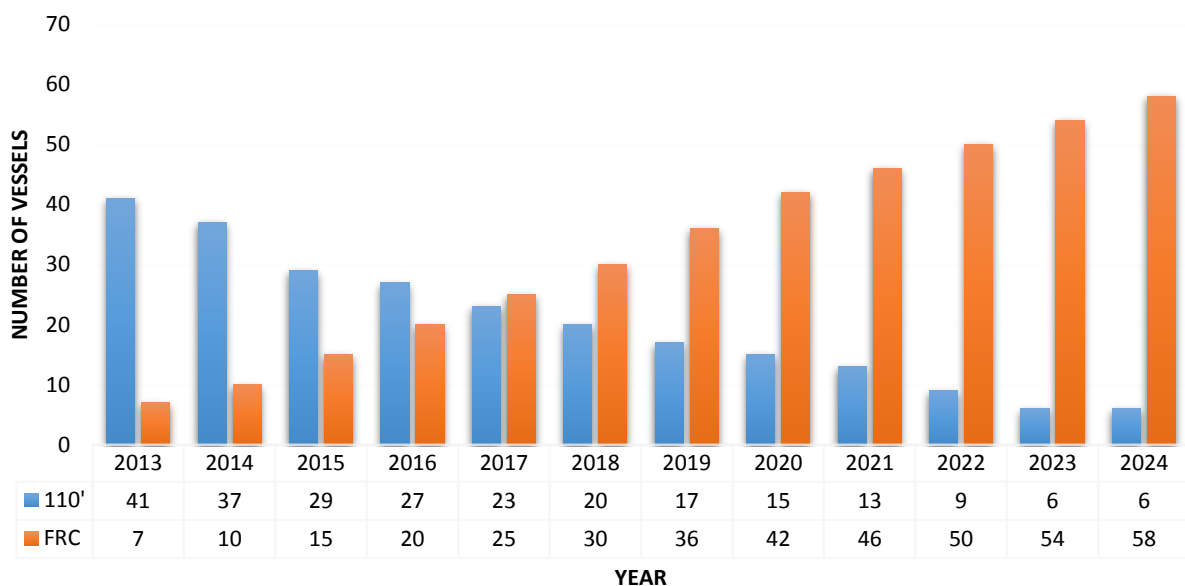


**Figure 5. End of Service Lives for the Legacy Medium Endurance Cutter Fleet with the Planned Offshore Patrol Cutter Delivery Dates**



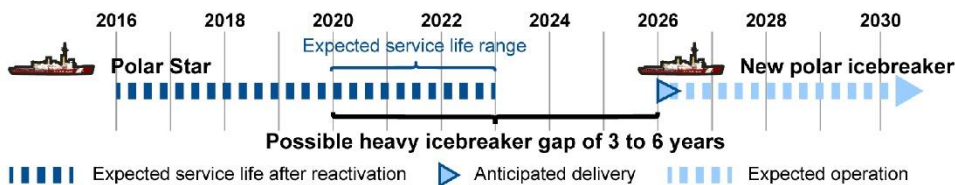
Source: GAO analysis of Coast Guard documents. | GAO-15-620T

**Figure 6. 110 Decommissioning and Fast Response Cutter Commissioning Schedule**



**Figure 7. Icebreaker Availability and Expected Capability Gap**

**Figure 2: Coast Guard's Heavy Icebreaker Availability and Expected Capability Gap, Present until 2030**



Source: GAO analysis of U.S. Coast Guard documents. | GAO-16-738T

Note: This graphic does not incorporate additional acquisition or other proposed activities, such as reactivating the *Polar Sea*.

**Figure 8. Summary of Coast Guard Properties with GSA for Divestiture**

Property type	Quantity	Estimated Value (Millions)	Estimate Source	Owned or Withdrawn	Status/Plan
Land Parcels	3	\$6.2	Appraisal	Owned	With GSA
Land Parcels	9	\$0.1	CG Accounting Value	Owned	With GSA
Housing Units	77	\$16.0	Appraisal	Owned	With GSA
Housing Units	480	\$196.0	Plant Replacement Value	Owned	With GSA
Tower Sites	3	\$1.9	Plant Replacement Value	Owned	With GSA

**Figure 9. HC-130H5 Decommissioning and HC-130J Commissioning Schedule**

