



Acquisition Directorate

IMPLEMENTATION

The ISVS program is the successor of the Mission Effectiveness Project (MEP), which replaced systems on the 110-foot Island-class patrol boats and the 210-foot and 270-foot medium endurance cutters to extend their operational lives until their replacement by fast response cutters and offshore patrol cutters. All ISVS program work is performed using the most cost-effective option to meet cost and schedule requirements. Most current ISVS work is performed at the Coast Guard Yard in Curtis Bay, Maryland. The yard demonstrated its ability to efficiently plan and execute major ship overhaul projects during MEP.

TYPES OF PROJECTS

Service life extension programs (SLEP) address specific systems and major maintenance to extend the operational capability of the vessel beyond the original design service life. While a SLEP's emphasis is on extending a cutter's service life by replacing obsolete, unsupportable or maintenance-intensive systems, there are also opportunities to improve the operator's experience onboard.

Major maintenance availabilities (MMA) are planned life cycle events for targeted work and recapitalization of obsolescent/unsupportable systems, necessary for the cutter to achieve its design service life. MMAs facilitate fleet maintenance and increased availability for missions during a cutter's later years of service. Shifts in the cutter's homeport and assigned crew are considered in the planning process.



IN-SERVICE VESSEL SUSTAINMENT PROGRAM

The In-Service Vessel Sustainment (ISVS) Program is the Coast Guard's strategic class-by-class evaluation of its vessels to determine what major maintenance and system replacements are necessary for them to reach or extend their service lives.

As vessels age, some critical systems become obsolete. The cost and time required to maintain these obsolete systems puts operational availability at risk. The Coast Guard determined that strategic major maintenance and recapitalization can improve reliability of its vessels and help control maintenance costs as well as increasing time spent underway, conducting missions. If necessary, additional work can be completed to allow vessels to operate efficiently past their service life until replacements are procured.

The ISVS Program identifies and implements cost-effective ways to ensure the service has the surface assets necessary to complete its missions.

The service life extension program (SLEP) for the **140-foot icebreaking tugs** included upgrades that were designed to extend each vessel's service life by 15 years at a total cost of approximately \$13.5 million per hull. The improvements included the complete replacement or addition of major systems such as the boat davit, HVAC, bubbler, gyro compass, Aqueous Film Forming Foam, steering and water mist systems. Additional components that were repaired or overhauled included the main motor, main propulsion generator and propulsion shaft. A redesign of the cutter's engineering spaces was also included to provide space for the new bubbler equipment that is used during icebreaking operations. This phase one SLEP extensive worklist took approximately one year to complete for each vessel. Additional HVAC work is underway.

The service life extension program for **Coast Guard Cutter Polar Star** is occurring in a five-year phased production between 2021 and 2025. Polar Star is a 399-foot cutter, the service's only active heavy polar icebreaker, which was commissioned in 1977. When completed, the SLEP effort will recapitalize a number of major systems and extend the service life of the cutter until the second polar security cutter is operational. Phases 1 and 2 are complete.

A major maintenance availability is being completed on the **225-foot seagoing buoy tenders** to ensure the 16 vessels in the class achieve the full 30-year designed service life. Work includes completion of hull and structural repairs and replacement of obsolete, unsupportable or maintenance-intensive equipment, including updates to the machinery control system, propellers and HVAC systems. The project started in July 2015. Twelve hulls are complete.

The service life extension program for the **270-foot medium endurance cutters** involves targeted system replacement to address system reliability, supportability, obsolescence and interoperability. This work will include upgrades or replacements to the electrical power generation and distribution system as well as the main propulsion engines. The mission is to facilitate continued operations during transition to the offshore patrol cutter by extending the service life of 270-foot cutters for up to 10 years. Work began on one prototype vessel at the Coast Guard Yard in July 2021 and on the second cutter in April 2022. Full production is scheduled to begin in 2023.

The **175-foot coastal buoy tenders** serve the Coast Guard in a variety of missions and are tasked with maintaining aids to navigation, search and rescue, law enforcement, migrant interdiction, marine safety inspections, environmental protection and natural resources management. Keeper-class cutters are also used for light ice breaking operations. A major maintenance availability program for coastal buoy tenders has been approved, beginning with the planned order of long lead-time material to support future production.

A service life extension program for **Coast Guard Cutter Healy** will occur in a five-year phased production between 2026 and 2030. Healy is a 420-foot cutter, the service's only active medium polar icebreaker, which was commissioned in 1999. When completed, the SLEP effort will recapitalize a number of major systems and extend the service life of the cutter until the polar security cutters are operational.

For updates on ISVS, visit the program's website at www.dcms.uscg.mil/acquisition