Naval Academy Extending Service Life for Yard Patrol Craft

One of the U.S. Naval Academy's yard patrol craft, which are getting a service life extension. *U.S. NAVAL ACADEMY*

The Coast Guard Yard at Curtis Bay in Baltimore, Maryland, is one of two shipyards executing a service life extension program (SLEP) for the U.S. Naval Academy's (USNA) fleet of yard patrol craft (YPs) used to train midshipmen in navigation and seamanship. Lyon ship yard in Norfolk is also conducting the SLEP.

The USNA has a fleet of 21 YPs, which are used to support pierside familiarization, basic damage control and basic to advanced seamanship and navigation underway. There are two variants. The YP 676 class boats are 108 feet long, while the newer YP 703 class are 119 feet long.

YP 676-class boats have wooden hulls and entered service in the mid-1980s. By comparison, the seven YP 703 boats have steel hulls and entered service at the academy in 2010.

The USNA Waterfront Operations Department provides a crew of four, including a craft master (normally a senior Boatswains Mate or Quartermaster), an Engineman and two deck seamen, augmented by the midshipmen who come aboard for training. The Seamanship and Navigation Department provides an officer to train the midshipmen.

YPs are also used to cruise along the eastern seaboard and can be used as platforms for research. The YPs have been used for summer cruises as far as the Great Lakes, but that hasn't happened for about 20 years. They have a range of 1,800 nautical miles at 12 knots, and can travel for about five days

without refueling. YPs spend about 150 days underway conducting training per crew per year.

“The bridges of the YPs are also being upgraded to bring them up to date with electronic navigation standards and newer radar and charting systems. They’ll now have the same version of VMS [vessel management system] that the fleet has,” said Capt. John Tobin of the Seamanship & Navigation department.

The SLEP affects the YP 676 class boats and will include hull and deck repair, as well as habitability upgrades and overhaul and modernization of the engines and electric generating equipment. The SLEP is being managed by the Support Ships, Boats, and Craft Program Office (PMS 325) within Program Executive Office Ships. Additional YP availabilities are scheduled to continue through March 2022.

“We have completed five SLEPs of the 676 wooden hulled class,” said Cmdr. David Kowalczyk, the CG Yard’s chief of project management. “Two YP’s – YP-683 and YP-684 – are currently undergoing SLEP, and two more are pending.”

The program will be complete with all 12 YPs by 2022. The program will overhaul only two YPs at a time so that there will be enough craft to perform training.

The Navy specified that the repair facility be within 150-mile radius of the Naval Academy, and the Coast Guard Yard – less than 30 miles by car and easy to reach by water – meets that criterion by a wide margin.

The repairs require the YPs to be drydocked or removed from the water to inspect, evaluate, and perform repairs to wooden hull, as well as removal and overhaul of main engines and generators, replacement of galley equipment and inspection and repair of auxiliary systems.

“YP SLEP gives the CG YARD an opportunity to exercise our strengths in vessel renovations and waterfront industrial

trade work, and the Navy benefits from our efficient work practices and experience. Ultimately, these strengths combine to give our customers a quality product, minimal down-time for the vessel, and excellent value for their money," said Kowalczyk.

Kowalczyk said some of the wood work is done by the CG Yard's Structural Group's wood crafters, with portions subcontracted. "YP SLEP is a great opportunity for our wood crafters to employ their skills, and diversify their workload and experience."

He said there are some challenges inherent in wooden ship overhauls.

"When you undock a wooden vessel after several months of being on land, the wood dries out and shrinks, which can lead to leaks upon undocking. Teaming with the Navy, we've cooperatively developed to slowly refloat the vessel on our electric shiplift, to allow the wood to swell back up in a controlled environment. Our electric shiplift is basically an elevator that allows us to lift ships out of the water. This process minimizes leaks, and if it proved necessary, we could lift the vessel back up expeditiously and complete repairs."

Upon completing the SLEP program, each of the YPs will be able to remain in service for another 10 years.