Navy is Pushing Advances in Offensive Mine Warfare

ARLINGTON, Va. – While mine countermeasures dominate the Navy's efforts in mine warfare, the service has accelerated improvements over the last two years in its weaponry in offensive mine warfare, the ability to lay anti-ship and anti-submarine mines.

The service now is developing the Clandestine Delivered Mine (CDM), Capt. Danielle George, the Navy's mine warfare program manager, said Jan. 17 at the Surface Navy Association convention in Arlington. The Navy is conducting testing of the new cylindrical-shaped mine and is scheduled to conduct end-to-end testing during the second quarter of fiscal 2019. Initial deliveries are scheduled for 2020. George said she was not at liberty to reveal the delivery platform(s) for the CDM.

Another new mine program, started in 2018, is the Hammerhead, an encapsulated torpedo designed to lie in wait for submarines. The capsule for the torpedo would be anchored to the ocean floor, much like the Mk60 CAPTOR mine of Cold War vintage that housed a Mk46 anti-submarine torpedo. (The CAPTOR was withdrawn from the Navy's inventory in 2001.) The Hammerhead will be designed to have modular architecture to allow for technology insertion. The Navy expects to issue a classified request for information for the Hammerhead this year.

Until recently, the Navy's mine inventory was limited to the Mk62, 63 and 65 Quickstrike air-delivered mines and the Submarine-Launched Mobile Mine. The Mk62 and Mk63 Quickstrike mines are blast/fragmentation 500-pound Mk82 and 1,000-pound Mk83 bombs, respectively, equipped with influence target-detection devices for use in shallow water. The Mk65 is a thin-walled casing with a 2,000-pound warhead and equipped

with a target-detection device for magnetic, seismic and pressure detonation.

For these air-delivered mines, the Navy has ordered new target-detection devices and adapters from Sechan Electronics Inc. during the last quarter of fiscal 2018. The Navy also has adapted the Joint Direct-Attack Munition (JDAM) guidance kit for the Quickstrike weapons, allowing for more precise seeding of the mines. This capability was demonstrated in Exercise Valiant Shield in 2018. In addition, an extended-range version of the JDAM Quickstrike – through installation of a wing kit – will be tested during the third quarter of fiscal 2019.

The Navy has not laid aerial mines in a conflict since Operation Desert Storm in 1991, when A-6E aircraft seeded mines in Iraqi waters. The capability remained intact, though low-key, in subsequent years.