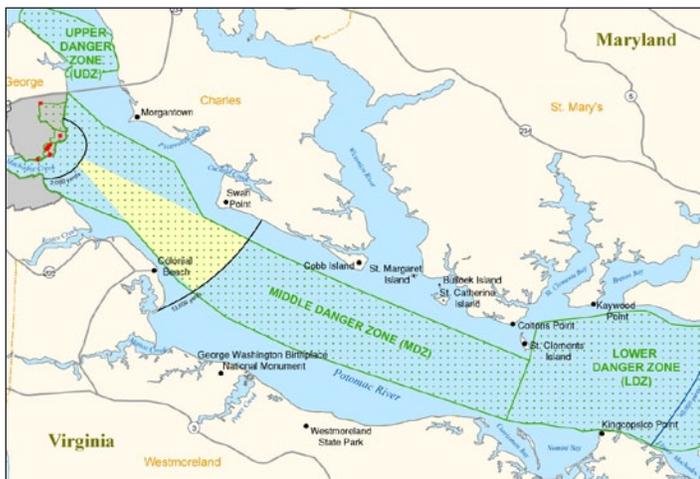
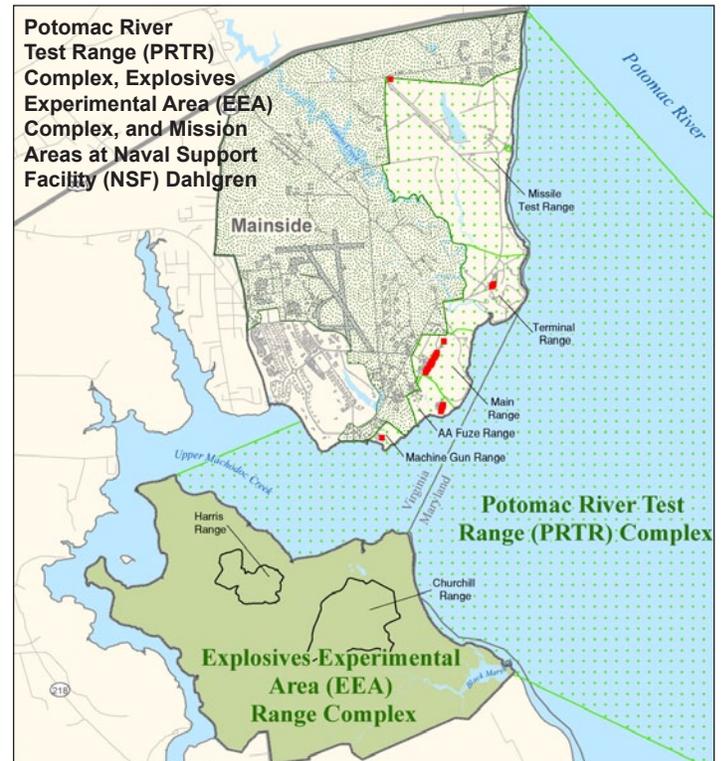


Since 1918 Naval Surface Warfare Center, Dahlgren Division (NSWCDD) has been an important national resource for the testing of naval guns and ammunition as well as for a wide variety of military testing and training efforts utilizing explosive and non-explosive ordnance. Highlights of NSWCDD's ordnance work include test-firing every type of naval gun and its ammunition, and conducting a variety of short-term programs, such as serving as a bombing range for military pilot training during World War II. NSWCDD has two range complexes where most ordnance is tested: the Potomac River Test Range (PRTR) and the Explosives Experimental Area (EEA).

Test Range Safety



Potomac River Test Range (PRTR)

The PRTR Complex consists of a 715-acre land area and a 169-square-nautical-mile water area that stretches along the lower 51 miles of the Potomac River. Three geographic zones are defined on nautical charts – the Upper, Middle, and Lower Danger Zones – so called to alert mariners that access to the areas may be restricted when test activities are taking place. The Middle Danger Zone receives the heaviest use. Restricted airspace zones extend to 60,000 feet above the river surface. Danger zones and airspace restrictions are only in effect during test operations.

Explosives Experimental Area (EEA)

The 1,641-acre EEA Complex is a land range used to test ordnance performance, lethality, and safety. One of NSWCDD's missions is to perform testing and evaluation to certify that ordnance items and weapons systems are safe for fleet use. This testing occurs on the EEA. A restricted airspace zone 7,000 feet in altitude is in effect over the EEA during testing.

During test operations on the PRTR or the EEA, range safety considerations may require restrictions on river traffic. In order to ensure that such testing does not endanger watercraft, range boats (painted international orange with a white hull) patrol areas rendered hazardous by the test operations. It is the responsibility of these boats to ensure that no watercraft are endangered by the test operation. Normally, these boats are stationed near Lower Cedar Point, Maryland; near Swan Point, Maryland; offshore at Colonial Beach, Virginia; and at the mouth of Upper Machodoc Creek, Virginia.

During test operations, range boats fly red flags, warning watercraft not to enter an area without having obtained permission from the nearest range patrol boat. Depending on the type of operation, traffic can frequently be safely



rerouted around the test area. Range Operations personnel carefully minimize delays to both commercial and recreational boat traffic.

Daily updates on the range operation and test schedule are available at 877-845-5656 (toll free). Range Operations monitors marine ship-to-shore channels 14 and 16 and will respond to requests for information. Information on the danger zone and on tests scheduled for a particular day can be found on the Web at <http://www.navsea.navy.mil/nswc/dahlgren/RANGE/rangeschedule.aspx>.



Range patrol boat

Frequency of Testing

NSWCDD typically conducts operations Monday through Friday between 8 am and 5 pm. Operations not involving ordnance may be conducted in the evening. In recent years, an average of about 4,700 rounds have been fired annually from large-caliber guns on the PRTR. Guns shoot multiple bursts or intermittent single rounds. An average of 190 detonations take place every year, primarily on the EEA. Detonations usually are heard as booms or rumbles. Because NSWCDD is able to model test firings on computers, the number of rounds fired annually has dropped by 80 percent since the 1960s.

Ammunition in the Potomac River

Over NSWCDD's more than nine decades of operations, millions of rounds of ammunition have been fired or launched within the bounds of the PRTR. Most of the ammunition fired has been inert, composed of a steel case surrounding an inert filler material, such as cement. The cement replicates the weight of a live projectile. Spent projectiles typically become embedded in river sediments.

When there is a requirement to test-fire explosive ammunition, the filler in the projectile is composed of explosive materials designed to detonate just above the water or upon impact with the water. As the very nature of NSWCDD's mission is to develop and test weapons and ammunition in order to develop more effective systems, some tests fail. A small percentage of live ammunition fired over the years has failed to detonate. Such ammunition is called unexploded ordnance or UXO.

Unexploded Ordnance (UXO)

UXO still contains explosives, chemicals, or propellants after firing or use because the ordnance did not explode. On the PRTR, unexploded projectiles penetrate the bottom of the river and are covered with sediment and silt.



5"54 Gun firing downriver from gun line

The broad variety of research, development, testing, evaluation, and training activities conducted on NSWCDD's ranges have resulted in four different types of UXO: naval gun ammunition; small explosives such as grenades; aircraft bombs; and small rockets.



UXO

If disturbed, UXO can explode and injure people handling it. In the event that UXO or potential UXO is located by the public in shallow water, or is found washed ashore following a storm, NSWCDD responds immediately to secure the item and safely remove it.

If you find a projectile:

1. DO NOT TOUCH OR ATTEMPT TO MOVE THE ITEM.
2. Treat any suspected UXO as if it IS UXO – NSWCDD will provide experts who will identify and if necessary remove and properly treat the item.
3. Phone the NSWCDD base operator – (540) 653-8291 – and give your name, address, phone number, and location of the suspect item.
4. Mark the area (avoid direct contact with the suspect item).
5. If possible, take a digital picture of the suspect item to email to the Explosives Ordnance Disposal (EOD) response team after they contact you.

The base operator will contact the EOD response team – on call 24 hours a day – who will follow up with you.



UXO



UXO