

Education activities are conducted in cooperation with The Mariners' Museum, Newport News, Virginia, where the *Monitor* National Marine Sanctuary office is located. All artifacts recovered from the *Monitor* are taken to the Museum, where conservators conduct the complex and time-consuming treatments that will prevent the artifacts from deteriorating.



Two apothecary bottles, with contents still intact, were recovered by NOAA divers during Monitor Expedition 2002.

The Mariners' Museum is currently developing plans for the USS *Monitor* Center, a major expansion that will tell the *Monitor's* story and exhibit the artifacts.

Future plans for the *Monitor* National Marine Sanctuary include additional expeditions by NOAA and the Navy, issuance of a special use permit for non research (sport) dives on the *Monitor*, and close cooperation with The Mariners' Museum on the development of the USS *Monitor* Center.



The National Oceanic and Atmospheric Administration's (NOAA) National Marine Sanctuary Program serves as the trustee for a system of 13 underwater protected areas, encompassing over 18,000 square miles of waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. NOAA's National Ocean Service has managed National Marine Sanctuaries since passage of the Marine Protection, Research, and Sanctuaries Act in 1972.



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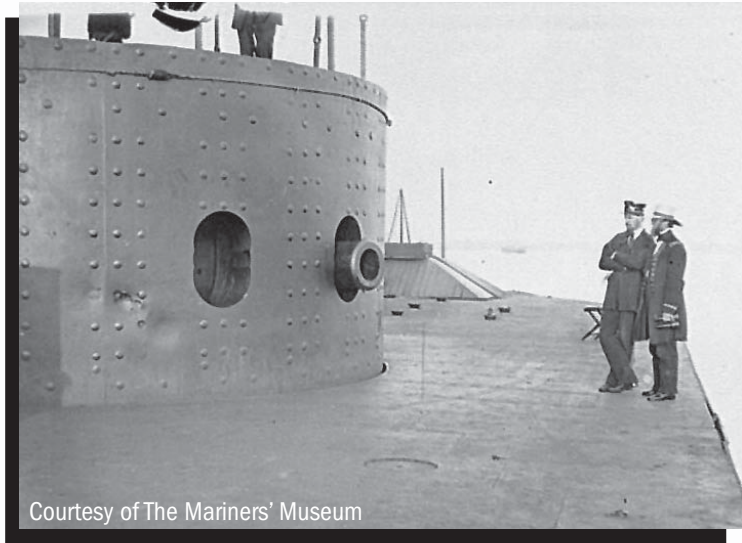
MONITOR

National Marine Sanctuary

National Ocean Service
National Oceanic and Atmospheric Administration



The *Monitor* National Marine Sanctuary was designated America's first national marine sanctuary on January 30, 1975. It protects the wreck of the USS *Monitor*, the famous Civil War ironclad warship whose battle with the confederate ironclad CSS *Virginia* (formerly the



Courtesy of The Mariners' Museum

Two officers stand near the *Monitor's* turret. Dents received during the Battle of Hampton Roads are clearly visible in the side of the turret.

USS *Merrimack*) revolutionized war at sea. That battle on March 9, 1862, at Hampton Roads, Virginia, marked the end of a long era of wooden-hulled, sail-powered warships and the dawn of a new age of ironclad, steam-powered naval vessels.

The *Monitor* survived the battle but later that year, on New Year's Eve, sank in a gale off the coast of North Carolina. It was not discovered until August 1973, lying upside down on a sand-covered seafloor approximately 16 miles SSE of Cape Hatteras in 235 feet of water.

The *Monitor's* hull lies on a relatively flat, sandy bottom. When found, the port stern was supported above the bottom by the displaced, inverted turret. The starboard side armor belt is almost completely buried in the sand. A portion

of the hull, originally 172 feet long, is broken away at the stern.

In recent years, NOAA has documented significant deterioration of the *Monitor's* hull due to human and natural causes. Its iron components are being damaged by corrosion and electrochemical action, while the wooden structures are suffering deterioration and destruction by shipworms. The majority of changes have occurred from the midships bulkhead aft. The lower hull has deteriorated to a considerable degree. Virtually none of the lower hull forward of the midships bulkhead remains. The lower hull aft of the midships bulkhead, over the galley and engineering spaces, is partially intact. This portion of the hull may be partially supported by the boilers.

The environment at the sanctuary can be very hostile. The Gulf Stream's dynamic interaction with the southerly flowing Labrador Current creates unpredictable, changing



Monitor Collection, NOAA

The *Monitor's* guns, shown here, currently are being conserved at The Mariners' Museum in Newport News, Va.

conditions and eddies. As a result, weather, sea surface conditions, currents, water temperature and visibility often change rapidly and without warning. Vessel anchoring, stopping, or drifting through the Sanctuary is not allowed, except by permit, nor is diving nor any type of salvage.



Monitor Collection, NOAA

During its sinking, the *Monitor's* turret landed upside down on the ocean floor where it remained until NOAA and the U.S. Navy recovered it in 2002.

Managing the Sanctuary consists primarily of limiting further deterioration of the wreck, recovering important artifacts, protecting the wreck from damage caused by human activities, and developing educational programs and materials related to the *Monitor* and the Sanctuary.

In 1998, NOAA submitted to Congress a Long-Range Preservation Plan for the wreck of the *Monitor*. In that plan, NOAA recommended that the *Monitor's* hull be stabilized and that significant hull components and artifacts be recovered before they completely disintegrated.

Operations to recover sections of the *Monitor* began in 1998 with the recovery of the propeller by NOAA and the U.S. Navy's Mobile Diving and Salvage Unit Two. Following stabilization and preparation activities in 1999 and 2000, NOAA and the Navy recovered the *Monitor's* engine in 2001 and, in 2002, the ironclad's famous revolving gun turret. The turret, still containing its two Dahlgren guns, hundreds of artifacts and tons of silt and coal, was recovered on August 5, 2002. The total lift weight was 236 tons.