



MINNESOTA HISTORICAL SOCIETY

Cutter SUNDEW, Duluth Case Study

Location: Duluth Harbor

Agency: U. S. Coast Guard

MOA Signed: June 2001

Signatories: United States Coast Guard
General Services Administration
Minnesota State Historic Preservation Office



"We are very happy to have acquired the SUNDEW as part of our floating maritime museum. The boat is an excellent example of Duluth's shipbuilding industry during the war years."

Bob Hom, Operations Director, Duluth Entertainment Convention Center

Cutter SUNDEW: *Built in Duluth and launched February 8, 1944
Manitowoc, Wisconsin
Milwaukee, Wisconsin 1945-1953
Sturgeon Bay Ñ 1953-1958
Charlevoix, Michigan 1958-1977
(One-year renovation in Coast Guard yard at Curtis Bay, MD)
Charlevoix, Michigan 1978-1980
Duluth Minnesota 1980-2004
Decommissioned 2004, docked in Duluth*

Background:

Between the years of 1941 and 1945 Duluth was home to seven shipyards that produced 191 steel ships and hundreds of smaller vessels such as barges and lifeboats. Among the steel-hulled boats were thirty-eight United States Coast Guard cutters, built at Marine Iron and Zenith Dredge. Known as 180s, representing their length in feet, they were the first class of modern buoy tenders and part of an unprecedented military buildup. All but one have been decommissioned, and only two have been preserved. The cutter SUNDEW, commissioned in 1944 and decommissioned in 2004, is one of these. The other, the BRAMBLE, is docked in Point Huron, Michigan. The last of the 180s still plying the waters of the Great Lakes is the ACACIA, based in Charlevoix, Michigan. She is scheduled to be decommissioned in 2006.

The SUNDEW, built by Marine Iron and Shipbuilding, served virtually her entire career on the Great Lakes of Superior and Michigan. The single exception, other than a trip to and from Curtis

Bay, Maryland for renovation, was a few months in the Caribbean during the winter of 1987-1988, where she worked as a law enforcement patrol vessel.

Although her homeport changed a number of times SUNDEW's duties varied little. She served as an Aid to Navigation tender (AtoN) during summer and fall months and broke ice to clear shipping lanes and free trapped vessels during winter and spring. In her last years of operation SUNDEW carried out scientific research tracking the spread of Zebra Mussels in Lake Superior and procuring water and bottom samples for scientists studying the Great Lakes. She helped NOAA deploy and maintain weather buoys and served as a floating weather station feeding data to the National Weather Service.

The Review Process:

When the Coast Guard announced SUNDEW's impending decommission a 106 review determined her to be of historic significance; a Memorandum of Agreement was entered into June 8, 2001. Signatories included the United States Coast Guard (USCG), General Services Administration (GSA), and Minnesota State Historic Preservation Office (MnSHPO). The agreement stipulated an extensive report on the design, technology and service of the 180-foot Seagoing Buoy Tender Class as a whole, as well as extensive documentation on the SUNDEW as a good example of the group. The agreement also established a process to encourage transfer of vessels to other organizations for preservation.

The Result:

Thanks to the early involvement of Pat Labadie, the Maritime Museum's curator at the time, and Port Director Davis Helberg who enlisted the support of Congressman Jim Oberstar, SUNDEW was transferred directly to the City of Duluth concurrent with her decommission, May 27, 2004.

SUNDEW's bookend life in Duluth continues in retirement. She joins the WILLIAM A. IRVIN ore carrier and former Corps of Engineers tug LAKE SUPERIOR in Duluth's Great Lakes Floating Maritime Museum. Since opening to the public in July 2004, approximately 7,500 people have toured SUNDEW, docked between Canal Park and the Duluth Entertainment Convention Center.

More:

How a Buoy Tender Functions, from HAER (Historical American Engineering Record) file:

"The process of tending or servicing buoys has been the basic mission of the 180s throughout their careers. It is a process that has evolved through several important technological changes but one that has not changed in any appreciable way over the years. Tending an AtoN begins with traveling to its location and making contact. Once on scene, the conning officer maneuvers the vessel alongside the buoy so the deck force can snag it with reaching poles. Approaching a buoy is often a tricky and hazardous proposition since the marker's very purpose is often to mark shallow water or other hazards to navigation. The difficult nature of the task is reflected in the records of frequent groundings by the buoy tender fleet. The 180s original design, specifically single screw propulsion, meant they were not the most maneuverable platforms and required skilled ship handler to bring them alongside an AtoN. Once alongside a buoy the deck crew snags it and attaches the hook from the cargo boom to a lifting eye on the marker. Then the boom



operator lifts the buoy out of the water and deposits it on the open well deck in front of the superstructure where it is secured using several tie downs.

Bringing the buoy on board is less than half the recovery process. A concrete block or “sinker” weighing many thousands of pounds anchors each buoy. Heavy steel chain links the anchor block to the floating buoy. In order to conduct a thorough inspection of the whole system, the chain and sinker must be brought up. The mooring chain is led through a chain stopper on the edge of the well deck. The chain stopper is a mechanical device that prevents chain from slipping back overboard, so it is essentially a one-way valve for chain. After the chain is secure in the chain stopper the boom operator reaches as far down the chain as possible and snags a length and hauls it up. In this hand over hand fashion the boom operator hauls up the entire mooring.

With buoy, chain, and sinker resting on the buoy deck, or secured in the chain stopper, the deck force can begin working. This is the opportunity to inspect the whole system and do any needed painting, repair any structural damage, and check the batteries if it is a lighted AtoN.

Once serviced, the buoy must be returned to its charted position. Similarly, new or replacement buoys must be placed exactly on station. Global Positioning Systems are currently used for this but previously it was accomplished by a minimum of three survey sextants measuring horizontal angles to known landmarks visible from the vessel.”

Women in the Workforce, from HAER (Historical American Engineering Record) file:

”Beyond its role as a transshipment center, Duluth became an important production center in its own right. Duluth’s seven commercial shipyards produced 191 steel ships with an estimated value of \$200 million during the war years. Besides the ships, Duluth produced hundreds of smaller vessels such as barges and lifeboats.

To achieve this level of production, even as much of the prewar workforce volunteered or was drafted for military service, the shipyards turned to a new source of labor. Duluth’s shipyards, like industrial operations nationwide, began to recruit women. As Duluth’s men filed off to war as soldiers, sailors, airmen, and marines, Duluth’s women filed into the shipyards to become welders, machinists, and electricians. By the end of the war Duluth’s “welderettes” numbered 3,500 of the 14,000 persons laboring through the cold Minnesota winters to turn out ships for the war effort. The total number of civilian shipyard workers employed by Marine Iron and Zenith Dredge peaked at 1,200 and 1,500 respectively. Thus, the U.S. Coast Guard 180s are historically significant not only as the first class of modern buoy tenders and as part of an unprecedented military buildup but also as milestones in labor history. American women helped build the 180s during the period when women first began to enter the industrial workforce.”