



## New Great Lakes Weather Station Gives Forecasters and Mariners Crucial Data

By David Gilhousen  
National Data Buoy Center

In November 2001, the National Data Buoy Center (NDBC) installed a new automatic weather station atop the Lake St. Clair Lighthouse near Detroit. The station, identified as LSCM4, is the 57<sup>th</sup> station in NDBC's Coastal-Marine Automated Network (C-MAN). On April 11, 2002, a buoy (station 45012) was deployed in the middle of Lake Ontario, expanding its present network to approximately 70 moored buoy stations. Station 45012 is located near Rochester, NY at approximately 43° 37' N., 77° 24' W.

The C-MAN station at Lake St. Clair Lighthouse is funded through Michigan's Department of Environmental Quality (DEQ) with support from the U.S. Geological Survey (USGS.) and the Detroit Water and Sewerage Department. Lake St. Clair is a large source of drinking water for the Detroit area, and the USGS is conducting modeling of lake currents in order to better assess the effect of pollutants on the lake. The USGS needed a high quality, year-round wind measurement for its computer model and worked with the DEQ to fund the C-MAN station. In addition to the winds, the C-MAN station also measures air temperature, water temperature, dew point, and sea level pressure.

"Though there are weather-reporting data buoys in the lake, they are retrieved by the middle of November and not re-deployed until April," said Greg Mann of the National Weather Service Office in Detroit. "We produce marine



(Photo used by permission of Don Carter)

forecasts year-round for Lake St. Clair, and the worst storms usually occur in late fall or early spring." Lake St. Clair is a popular location for recreational boaters and ice fishermen. The weather reporting buoys are operated by the University of Michigan and the Meteorological Service of Canada.

The buoy in Lake Ontario will serve as a replacement for our C-MAN station at Galloo Island, NY (GLLN6). The Canadian Coast Guard will be used to deploy and retrieve the buoy, since the U.S. Coast Guard has no buoy tenders in Lake Ontario and maintains Aids-to-Navigation buoys via an agreement with the Canadians.

The C-MAN equipment will be removed from GLLN6 because the lighthouse (where the equipment is located), is in disrepair, and the Coast Guard facility has been sold to a private party. A Canadian weather buoy station, 45135, located about 20 miles southwest of GLLN6, provides representative observations for Eastern Lake Ontario, and the National Weather Service's Eastern Region has determined a greater need for observations in central Lake Ontario. The Meteorological Service of Canada is also aiding in this effort by providing buoy winter storage and dock space at their facilities in Hamilton, Ontario.

In addition to wave height and period, the buoy will measure winds, air temperature, water temperature, and sea level pressure. In a 2000 survey conducted by WFO Buffalo of NOAA Weather Radio users, the lack of wave measurements was identified as the single most important deficiency in weather information. The observations provided by 45012 should help fill this void.

Observations from both stations can be obtained through NOAA Weather Radio, the Dial-A-Buoy line (228-688-1948), or by accessing NDBC's Web site, [www.ndbc.noaa.gov](http://www.ndbc.noaa.gov). ↴