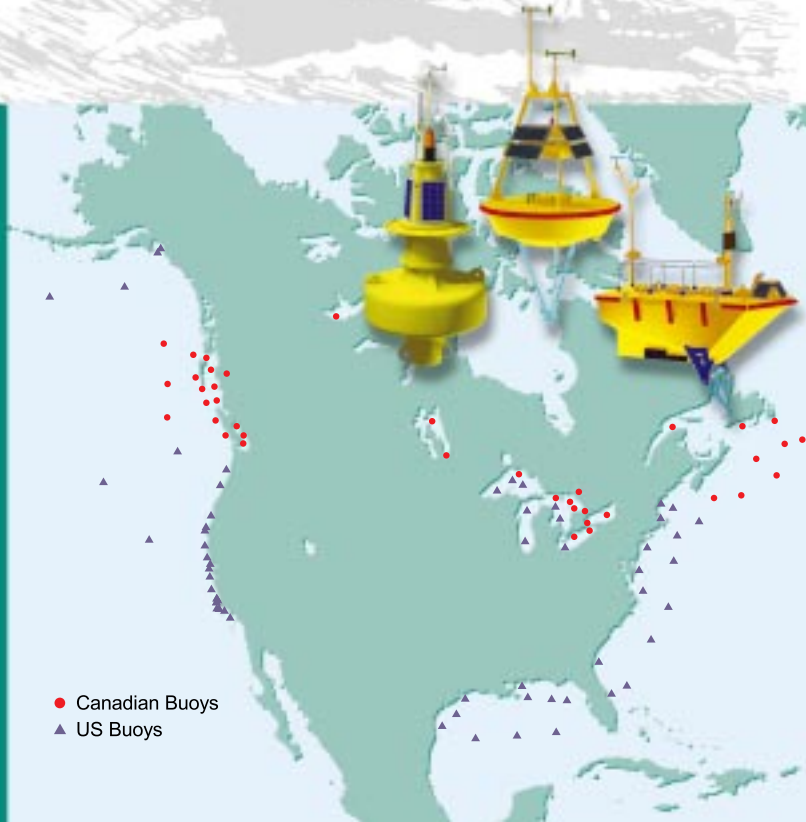


Canada's Weather Buoys

The World's
Second Largest
Weather Buoy Network!



Offshore Buoys

Following discussions with the National Data Buoy Centre (NDBC) in the United States, the Atmospheric Environment Service chose the American 6 metre long NOMAD (Navy Oceanographic Meteorological Automated Device) buoy hull design for the deep offshore stations.

The payload systems, built by Axys Environmental Systems, include sensors that measure wind speed and direction, barometric pressure, air and water temperature, and waves.

Data are processed on board, then transmitted to shore once per hour via GOES geostationary satellite. A back-up system transmits data via polarorbiting satellites which also provide the buoy position.

The data are used to produce regular marine weather and sea state forecasts as well as being shared with other nations through the World Meteorological Organization.

North American Buoy Network

On the night of October 11, 1984 a rapidly deepening low pressure system (known to local meteorologists as a 'bomb') moved out of the North Pacific and struck Vancouver Island. Seven vessels sank and five seamen drowned. An inquiry was immediately launched to investigate the adequacy of marine weather forecasting on the West Coast of Canada.

It was determined that the Canadian Atmospheric Environment Service (AES) was unable to detect the severe storm early enough to provide

adequate warning to the fishing fleet. This led to the establishment of a network of permanently moored buoys in the coastal zone and in the deep offshore on the West Coast. This network was later expanded to include the East Coast, the Great Lakes, and several other very large lakes in Canada.

The Canadian weather buoy network is now the second largest in the world (after the United States). Axys has been supplying buoy systems and field services to our government since 1986.

Inshore Buoys

3 m diameter discus buoys and 1.7 m diameter WatchKeeper™ buoys, equipped with a similar suite of sensors, are deployed closer to shore. They are also used during ice-free periods in Great Slave Lake, Lake Winnipeg, the Great Lakes and in the Gulf of St. Lawrence. 12 m discus buoys are deployed throughout the year in the Great Lakes.

3 m Discus Buoy



1.7 m WatchKeeper™ Buoy



Buoy Servicing and Systems Enhancement

The company's technologists take part in routine annual and bi-annual servicing (and occasional emergency servicing) of buoys at sea. Axys has also worked with AES on several special projects to test new concepts such as enhanced solar power and power management systems, buoy position tracking, wave measurement experiments, and new sensor

Buoy Locations on Canada's West Coast

testing. This long-standing relationship with the Atmospheric Environment Service has led to the deployment and maintenance of a buoy network that consistently has a successful data return rate greater than 93%.



6 m NOMAD Buoy



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