

OLYMPIC COAST NATIONAL MARINE SANCTUARY

Navigating the Future

Management Plan Review



Nearshore Monitoring Buoys

Olympic Coast National Marine Sanctuary (OCNMS) strives to understand, maintain, and improve sanctuary waters. Nearshore oceanographic moorings (monitoring buoys) have been deployed seasonally since 2000 to measure water temperature. Additional sensors were later added to measure salinity, dissolved oxygen (DO), water currents and indicators of primary productivity. Mooring data help improve our understanding of the links among the physical, chemical and biological processes in nearshore and offshore waters.

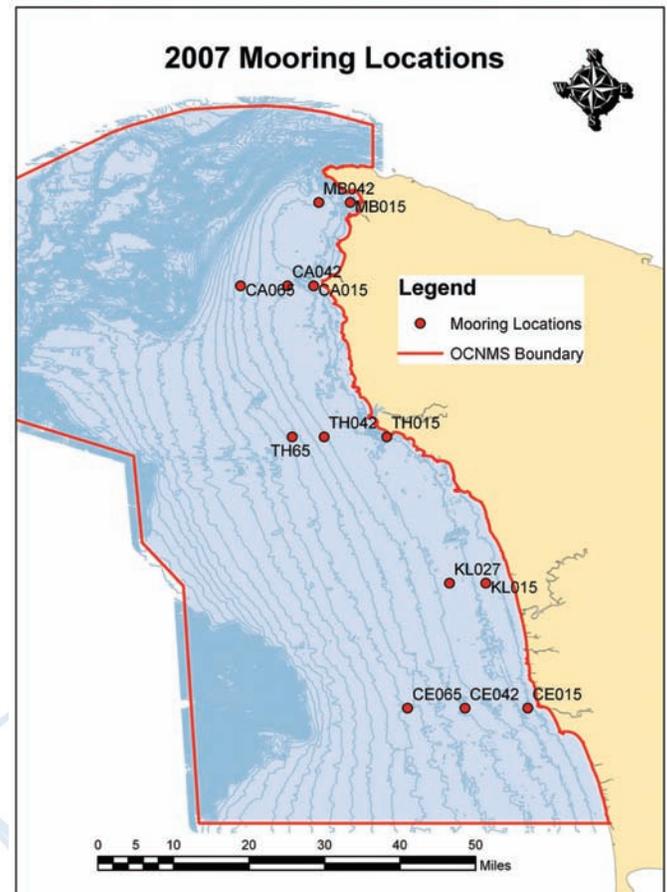
Periodic low DO levels in the nearshore waters of Oregon and Washington are thought to cause fish and invertebrate mortality. Low DO is normal in deep water, but not in nearshore water less than 200 feet. Therefore, while resident organisms of deep water habitats are adapted to low DO levels, these low levels can be lethal to nearshore organisms.

In 2004, OCNMS initiated DO monitoring to determine the timing, severity and extent of hypoxic events (defined as DO concentrations below 2 parts per million).

Several scientists have predicted changes in the oceanographic patterns in the Pacific Ocean, which include accelerated upwelling that transports cold, low DO, nutrient-rich waters to the nearshore. Such accelerated upwelling events could be responsible for the mass mortalities observed in 2006.

Nearshore mooring data are useful to federal, tribal, university and state-sponsored studies of harmful algal blooms, helping to assess potential threats to human health, shellfisheries, and to birds and marine mammals. Nearshore data are also used to correlate

with intertidal invertebrate and algae studies, and assist in oil spill response.



Sanctuary monitoring buoys are deployed between May and October at key locations along the Olympic Coast.

Nearshore Monitoring Buoys Contact:

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