

The Commonwealth of Massachusetts Division of Marine Fisheries

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Seasonally Recurring Low Oxygen Zones Detected in Cape Cod Bay

Environmental sensors deployed by the Cape Cod Bay Study Fleet, who are working cooperatively with DMF, have once again detected low oxygen zones in Cape Cod Bay. Data indicate that dissolved oxygen (DO) levels are low (< 4 mg/L) at several locations in the southern portion of Cape Cod Bay (<u>Dissolved Oxygen Public Data Viewer</u>) between Sandwich and Barnstable (see map below). Values less than 4.0 mg/L are considered mildly hypoxic, while values less than 2 mg/L are considered severely hypoxic.

These low values of DO that we've observed are concerning and are related to an extremely stratified water column (surface temperatures in Cape Cod Bay are currently in the upper 60's while bottom temperatures are around 50° F). Lobster fishers working in or near the affected areas should be aware of signs of hypoxia, which include blackened mud or scum on groundlines or traps and unusual amounts of lethargic or dead lobsters, crabs, or finfish in the traps.

Many mobile bottom dwelling animals like lobsters and fish will move to avoid hypoxic conditions when they can, however they can die if captured in traps and exposed to severe hypoxia (DO levels <2 mg/L) for more than a few hours. DMF recommends fishers check traps frequently, and possibly consider moving gear out of the affected region to prevent trapping lobsters or crabs in hypoxic conditions. DO conditions can change rapidly based on weather conditions (wind and waves) and it is difficult to predict exactly where or when hypoxic conditions will occur. The NE winds forecast for the next several days may cause shifts in the location of the hypoxic water mass. We will continue to monitor the data provided by the members of the Cape Cod Bay Study Fleet. For more information on hypoxia and to see recent conditions as recorded by the Study Fleet, please visit www.mass.gov/capecodbaydo.

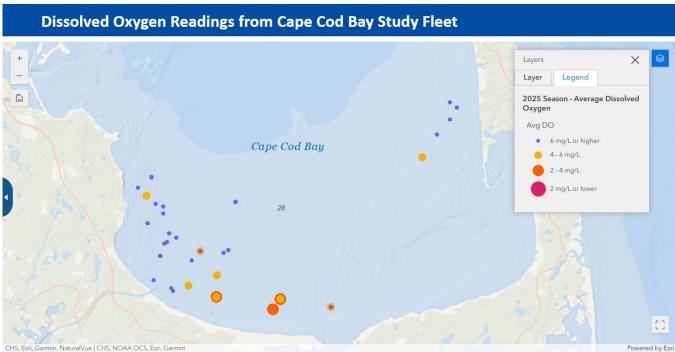


Figure 1. Dissolved oxygen levels recorded by Cape Cod Bay Study Fleet participants over the past 7 days. Values between 2.0 and 4.0 mg/L (orange) are considered mildly hypoxic.

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