Long Bay Hypoxia Study

In July 2004, the Myrtle Beach area of the Grand Strand (Long Bay), SC experienced a phenomenon known as a "coastal hypoxia" event. Hypoxia occurs when oxygen levels in nearshore waters become very low, and can impact marine organisms and habitats in the affected area. Initial evidence of the 2004 event included unusually high flounder catches along the Long Bay shoreline, as the fish likely attempted to "escape" oxygen-poor bottom waters by surfacing or swimming toward the beach. Water samples collected from nearshore waters were then observed to have extremely low dissolved oxygen levels.

In September 2004, concerned managers and researchers held a meeting to discuss the hypoxia event and agreed to: 1) develop cooperative research efforts to better understand the factors that may have contributed to coastal hypoxia in Long Bay; and 2) coordinate a sampling response plan for any future hypoxia events.

We would like to ask for your help in this effort. Initial evidence of the 2004 event came from citizens in the Long Bay area who reported the unusual landings of fish, as well as large numbers of invertebrates (e.g. crabs, starfish) that washed onto the beach, to local management agencies. If you observe any of the characteristics of hypoxia outlined below, please notify the South Carolina Department of Natural Resources' toll free hotline:

(800) 922-5431

Things to watch for:

- Unusually high catches of bottom fish (e.g. flounder)
- The disappearance of skates, rays and sharks.
- Unusual behaviors exhibited by bottom fish (lethargic, gulping, floating)
- Intense algal blooms as indicated by discolored water (red, brown, green, or other unusual water color)

For those conducting research in the Long Bay area, please report any observations of:

- Rapid declines in dissolved oxygen
- Unusually low bottom water temperatures
- Persistent stratification of the water column
- Gulf Stream intrusions

For additional information about this study, please contact info@carocoops.org.