

# Environmental Monitoring and Assessment

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## Hypoxia Watch

### Description

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This map provides a near real-time geospatially referenced view of dissolved oxygen measurements made during the annual summer Gulf of Mexico Southeast Area Monitoring and Assessment Program (SEAMAP) cruise in the Northern Gulf of Mexico. Near real-time data are received from the NOAA ship Oregon II and assimilated into a geospatially enabled database. Data measurements from previous years are also available through the site.

### Layers

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**Station Locations** - Sampling stations during the annual SEAMAP summer groundfish survey conducted by National Marine Fisheries Service (NMFS) in the Northern Gulf of Mexico aboard the NOAA Ship OREGON II. Personnel acquire environmental data with conductivity-temperature-depth (CTD) hydrocasts at stations located in the general area between the 10 and 200 m isobaths from Brownsville, Texas eastward to the Mississippi River and into Florida waters. The CTD is equipped with sensors to measure water temperature, salinity, dissolved oxygen, fluorescence, and transmittance continuously from the surface to the sea bottom. Approximately 200 stations are sampled during three legs during June and July depending on the uncertainties posed by adverse weather conditions and equipment malfunction. Data collected for the current season is broken out by a set of collection dates and displayed in separate layers, then combined at the end of the cruise.

**Dissolved Oxygen Contours** - The contours were created by interpolating the dissolved oxygen data from the SEAMAP sampling locations. The contour shapefile was then clipped to the spatial area covered during the SEAMAP cruise. The survey data was collected by NMFS and NOAA National Centers for Environmental Information (NCEI) created the shapefiles. Data collected for the current season is broken out by a set of collection dates and displayed in separate layers, then combined at the end of the cruise.

**Depth 10 meters** - Bathymetric contour that follows the NOAA National Oceanographic Data Center standard depths (Boyer and Levitus 1994). The contours were generated by vectorizing the integer version of a raster bathymetry file (Herring 1993 -- bathymetric map produced for the Minerals Management Service from hydrographic survey data acquired by the U.S. Naval Oceanographic Office's (DBDB5), National Ocean Service (NOS), and Texas A&M University).

**Depth 200 meters** - Continental Shelf Break produced from NODC standard depths (Boyer and Levitus 1994) bathymetric files. The contours were converted into shapefiles (polyline) by vectorizing the integer version of the bathymetry GRID file (Herring 1993 -- bathymetric map produced for the Minerals Management Service from hydrographic survey data acquired by the U.S. Naval Oceanographic Office's (DBDB5), National Ocean Service (NOS), and Texas A&M University).

**National Marine Fisheries Service Climatology 1985-2001**- This dataset is derived from Sea Surface Temperature Climatologies based on AVHRR Pathfinder data.