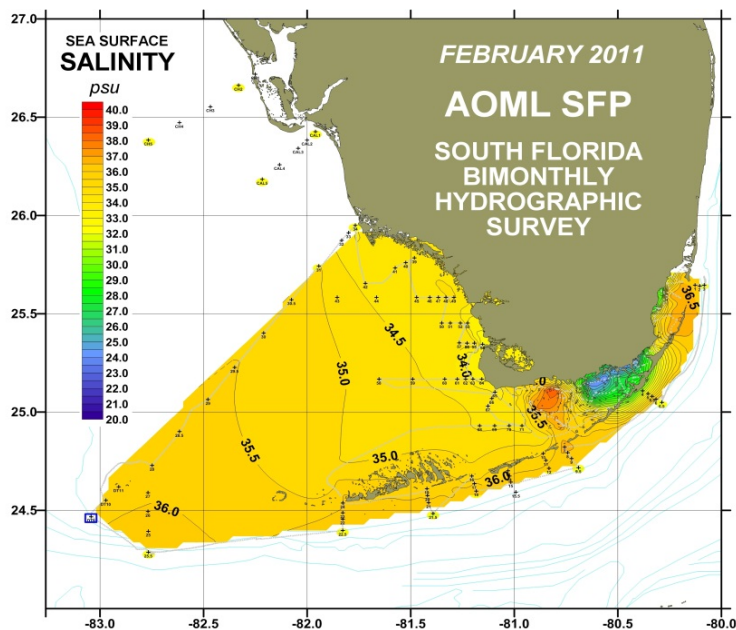


AOML South Florida Studies

Elizabeth Johns and Ryan Smith

AOML's Physical Oceanography and Ocean Chemistry and Ecosystems Divisions (PhOD and OCED) have conducted regular interdisciplinary shipboard observations of south Florida coastal waters since the early 1990's as part of the AOML South Florida Program (SFP). The collaboration has enabled scientists and resource managers to keep a watchful eye on the sensitive marine habitats found in the region and has served as a sentinel during periods when the ecosystem has been subjected to extreme events such as hurricanes, harmful algal blooms (HAB), and more recently, potential oil spill contaminants and Mississippi River intrusions. Additionally, the AOML SFP has produced a comprehensive, long-term baseline regarding regional circulation, salinity, water quality, and biology for the ecosystem. These data have been the only regular, synoptic measurements of these inter-related parameters throughout the southwest Florida shelf, Biscayne and Florida Bays, and the Florida Keys reef tract. The AOML SFP integrates data from environmentally and economically important areas, including three national parks (Biscayne, Everglades, and the Dry Tortugas) as well as the Florida Keys National Marine Sanctuary (FKNMS).

The SFP field program has provided NOAA the ability to quickly sample extreme events, which have originated both locally (e.g. "black-water", HABs) and remotely (e.g. tropical cyclones, oil spills), by adapting/modifying routine sampling via ships and small boats. Originally designed to fulfill NOAA's responsibility to South Florida Ecosystem Restoration and the ongoing Comprehensive Everglades Restoration Plan (CERP), the AOML SFP remains a key component of NOAA's contribution to CERP and more recently has served as an important element in NOAA's response to the Deepwater Horizon oil spill.



Continuous shipboard measurements of sea surface salinity gathered over the SFP domain for a representative cruise conducted in February 2011.

As NOAA develops a new coordinated long-term science plan for the Gulf of Mexico, it will be important to incorporate regional coastal components such as the AOML SFP into the larger mosaic. The development of baseline metrics for the larger region will have to rely heavily on existing data assembled from the few observational programs already operating throughout the Gulf. Management and maintenance of long-term environmental records such as the AOML SFP data time-series is critical. These data are required to determine the natural system spatial and temporal variability, and are a precursor to quantifying and assessing the impacts of the more intermittent, extreme events which can affect the region.