

## Appendix 2. Recommended Improvements to the HABSOS

Harmful Algal Blooms Observing System (HABSOS) is a regional, web-based data and information dissemination tool developed by EPA and NOAA and hosted at NOAA's National Coastal Data Development Center (NCDDC). Enhancements to HABSOS are recommended as part of this HABIOS Plan. Details are given in Appendix 2.

In FY07, upgrades to HABSOS began under EPA funding and direction. During FY08 the following enhancements are programmed and will be implemented:

- Implementation of a Common Data Model for HAB observations that will greatly enhance automated metadata generation, tailored data export, as well as National archive
- Automated archive of HAB observations through the NOAA National Data Centers
- Enhancement of the HABSOS data base to include multiple species (capability only)
- Bulk ingest of HABS observations vice single station entry in the Data Entry Tool

Future enhancements to HABSOS should be driven by user input and recommendations in accordance with the HABIOS Plan. Planned enhancements should be flexible to allow for additional user input during HABIOS implementation. However, based on initial (and limited in terms of comprehensiveness) customer input (Workshop on Harmful Algal Blooms Observing System in 2000, Workshop on Integrating Harmful Algal Bloom Observations into the Gulf of Mexico Coastal Ocean Observing System in 2004, the Ocean.US workshop on Public Health Risks in 2006, and CO-OPS requirements transmitted via the CSC which are still under development), the most useful and feasible improvements are:

- Extend the time period for which observations are available thru HABSOS (Extend the availability of the cell count data to the previous 120 days.)
- For the purposes of data integration (from state, volunteer, and private/research efforts), agreeing on and using standard definitions of abundance classes and common standards and protocols for data collection, discovery, exchange and dissemination.)
- Improving capability to discover archived data at the NOAA Data Centers (Work with NODC to get all data archived in such a way as to be easily discoverable through HABSOS—ideally co-discoverable, meaning that if you discover one data set such as that provided by PMN you will be directed to related ones such as those provided by CO-OPS.)

Other recommended enhancements and related questions that have been informally proposed but are yet to be validated include:

- Should HABSOS provide more capable analysis (e.g., data layering)?
- Should HABSOS focus on purely data management services?
- Should mapping occur under HABIOS?
- Should HABIOS improve the analysis tools of HABSOS?
- HABSOS should immediately serve the data needed by CO-OPS and the HABS Forecasting System in the required formats. What are these default data sets? (e.g., surface currents, chlorophyll anomaly, backscatter anomaly etc.). What are the formats? How should the data be delivered to the HABS Forecasting?