

Monitoring and Event Response of Harmful Algal Blooms (MERHAB)

The NCCOS Monitoring and Event Response of Harmful Algal Blooms (MERHAB) Program builds capacity along our coasts for enhanced HAB monitoring and response. This helps NOAA and state partners identify when beaches, shellfisheries, and marine animals are at risk from harmful algae, and make informed decisions that protect public health and safeguard our coastal economies.

Contact:
Marc Suddleson,
MERHAB Program Manager
Marc.Suddleson@noaa.gov

Priorities

- Adopting faster, less expensive, and more reliable detection methods for HAB cells and toxins in routine monitoring programs;
- Adopting instrumentation for low-cost, long-term observations of conditions that influence HAB dynamics;
- Improving monitoring strategies and forecast models to enhance early warning capability, foster improved response to HAB events, and demonstrate operational capabilities;
- Enhancing response capabilities to ensure trained and equipped personnel are able to mobilize quickly, conduct appropriate sampling and testing, and communicate effectively during HAB events.



Funding Details

Type of Work Supported: Research

Award Format:
Cooperative Agreement

Frequency of Availability:
Periodic, typically every 2-3 years

Award Size: \$500K - \$1M/year

Duration of Award: 2-5 years

Eligible Groups:
State, Local, Tribal, Private,
Non-profit, Academic, Federal

Is match required? No

Is the funding competitive? Yes

Program Details

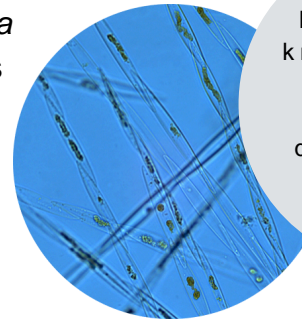
MERHAB is a national, peer-reviewed, competitive research funding program authorized by Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA). As a result of the MERHAB Program, managers are better armed to mitigate HAB problems in their communities. The program help states, tribes, and other monitoring agencies keep pace with the growing national HAB problem by providing them with access to proven detection technologies, helping to validate these technologies, and assess benefits of incorporating existing methods. MERHAB also supports ongoing efforts to develop predictive models and operational HAB observing networks and forecasting systems.

EXAMPLE MERHAB PROJECTS

Employing a Novel Molecular Toolbox for Rapid, Sensitive Detection of Toxic *Pseudo-nitzschia* Species

A diverse molecular toolbox is needed to enhance existing monitoring efforts for toxic *Pseudo-nitzschia* in multiple regions. *Pseudo-nitzschia* produces the neurotoxin domoic acid, which can impact both humans and marine wildlife when consumed.

The project is rigorously testing several developed molecular diagnostic techniques and will focus on field-deployable methods appropriate for diverse end users, including New England state managers.



About half of the 60 known *Pseudo-nitzschia* can produce domoic acid, a potent neurotoxin.

Developing an Operational *Sargassum* HAB Monitoring and Forecasting System for the Southeastern U.S. and U.S. Caribbean



Large amounts of *Sargassum* beaching can have devastating impacts on coastal ecosystems and economies.

Improved monitoring and forecasting systems are critical to the management of *Sargassum* Inundation Events. This project is improving the effectiveness of existing NOAA and partner *Sargassum* detection and forecasting capabilities, facilitating a better understanding of biochemical impacts associated with inundation or beaching events, and fostering the autonomous and routine delivery of timely and accurate *Sargassum* nowcasts, forecasts, and warnings.

Advancing an Integrated HAB Detection and Monitoring System Across the San Francisco Estuary

This project is improving monitoring and response to harmful blooms of cyanobacteria and marine algae and a suite of algal toxins they produce that have been documented across the freshwater to marine continuum throughout the San Francisco estuary. The effort is providing the technical foundation, program design, and strategic plan for an estuary-wide harmful algal bloom (HAB) monitoring program. Key stakeholders are engaged and helping to identify support needed to sustain the program.



Scan the QR codes



Current and past project details

New funding announcements

