

Matagorda Bay Mitigation Trust – Progress Report

Project Name: A research and monitoring program to mitigate the impact of harmful algal blooms on the Matagorda Bay and San Antonio Bay ecosystems

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Contract No.: 0014

Reporting Period: 9/1/23-11/30/23

Task 1: Real-time, high frequency detection of HABs and other phytoplankton.

Status of the task during this reporting period: not started in progress completed

- Describe major accomplishments for this reporting period.
 - Completed construction of IFCB housing.
 - Initial deployment of the IFCB at TPWD facility in Port O'Connor (Sept 14th-Sept 29th). Instrument collected water samples, transmitted data briefly.
 - Internal IFCB pump replaced followed by continuing testing of IFCB system functions (month of November).
- List the deliverable(s)/milestone(s) completed during this reporting period.
 - Deployment of IFCB at Port O'Connor site beginning 9/14/23.
 - Shared findings on harmful algae abundance detected by IFCB with TPWD (Alex Nunez) and DSHS (Kirk Wiles) via email on 9/15/23.
- Were there any problems or obstacles encountered during this reporting period (e.g., delays, remedial action taken, schedule revision). Yes No If yes, please explain:
 - Cellular signal from the location presented challenges to reliable instrument communication – actions taken to boost cell signal by reconfiguring antenna location.
 - Repeated instrument shut down while deployed at TPWD facility – most likely due to overheating. Currently working with manufacturer to find a solution.
 - A leaking internal IFCB pump was returned to the manufacturer for parts replacement, as well as replacement of a reagent bag leaking inside the IFCB housing.
- Briefly describe plans for the next reporting period.
 - Next scheduled deployment begins on December 14th, 2023.

Task 2: Water sampling program for HABs and relevant environmental conditions.

Status of the task during this reporting period: not started in progress completed

- Describe major accomplishments for this reporting period.
 - Continued analysis of samples collected during previous periods.
- List the deliverable(s)/milestone(s) completed during this reporting period.

- Shared findings on harmful algae abundance with TPWD (Alex Nunez) and DSHS (Kirk Wiles) via email on 9/22/23.
- Were there any problems or obstacles encountered during this reporting period (e.g., delays, remedial action taken, schedule revision). Yes No If yes, please explain:
- Briefly describe plans for the next reporting period.
 - Complete analysis of previously collected nutrient samples.
 - Continue to synthesize water quality data collected during the two years of sampling.

Task 3: Stakeholder meetings.

Status of the task during this reporting period: not started in progress completed

- Describe major accomplishments for this reporting period.
 - Presentation of water quality data from weekly sampling program at the 27th Biennial Coastal and Estuarine Research Federation Conference, November 12-17th 2023 in Portland, OR. Title: High-resolution sampling of water quality & phytoplankton dynamics in two shallow Texas estuaries by Laura Beecraft, Dominic Burch, Kenneth C. Hayes, Michael S. Wetz.
- List the deliverable(s)/milestone(s) completed during this reporting period.
 - A copy of the abovementioned presentation will be submitted with the final report.
- Were there any problems or obstacles encountered during this reporting period (e.g., delays, remedial action taken, schedule revision). Yes No If yes, please explain:
- Briefly describe plans for the next reporting period.
 - Meet with stakeholders as opportunities arise.