

Contract 40

Micro-plastics water column and sediment residence times: quantifying the cycling and flux between bay waters and sediment, and the burial history of micro-plastics within the Matagorda and San Antonio Bay Systems

First Interim Performance Report

August 31, 2023

Submitted To:

Matagorda Bay Mitigation Trust

Performing Laboratory:

Texas A&M University on behalf of Texas A&M University at Galveston

Authors:

Dr. Timothy M. Dellapenna, Ph.D.
Dr. Karl Kaiser, Ph.D.

Personnel

Principal Investigator(s):

Drs. Timothy Dellapenna, Karl Kaiser, Peng Lin

Consulting MBMT Project Coordinator:

Mr. Steven J. Raabe

Location(s):

Texas A&M University at Galveston

Project Duration:

01 June 2023 – 31 August 2026

TAMU did not sign the contract until the end of Sept. 2023 so no progress has been made on this project during this reporting period.

Scope of work:

Sampling and research approaches designed for task:

Task 1: Sampling of suspended sediments and sediment cores:

Nothing to report this quarter, TAMU did not sign the contract until the end of Sept. 2023 so no progress has been made on this project during this reporting period

Task 2: Estimation of the water column residence times of micro-plastics-bearing suspended sediments:

Nothing to report this quarter, TAMU did not sign the contract until the end of Sept. 2023 so no progress has been made on this project during this reporting period

Task 3: Characterization and quantification of micro-plastics in sediments:

Nothing to report this quarter, TAMU did not sign the contract until the end of Sept. 2023 so no progress has been made on this project during this reporting period

Task 4: Reconstruct the historical accumulation and record of micro-plastics in the Matagorda Bay systems:

Nothing to report this quarter, TAMU did not sign the contract until the end of Sept. 2023 so no progress has been made on this project during this reporting period

Task 5A: Acquisition of the seabed mixing depth associated with micro-plastics mobilization:

Nothing to report this quarter, TAMU did not sign the contract until the end of Sept. 2023 so no progress has been made on this project during this reporting period

Task 5B: Develop a quantified conceptual model of processes controlling occurrences of MPs within the bay sediment, fluxes of MPs between bay sediment and the water column and the residence times of MPs in the water column:

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Task 6: Report and Manuscript Writing and Presentations:

Nothing to report this quarter, TAMU did not sign the contract until the end of Sept. 2023 so no progress has been made on this project during this reporting period

Reviewed by:



Dr. Timothy Dellapenna, TAMUG, P.I.

9/15/2023

Date: _____

Approved by:



Mr. Steven J. Raabe, Trustee

Date: 5/5/2024