

Quarterly Progress Report

September 2024

Project Title

Mercury Exposure through Seafood Consumption in the Matagorda Bay System: Human Health Study and Public Education

Contract # 065

Submitted to

Matagorda Bay Mitigation Trust

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Project Summary

Humans are primarily exposed to mercury (Hg) through seafood consumption. This study will investigate people's exposure to Hg through seafood consumption in the Matagorda Bay system using hair Hg analysis and surveys focusing on demographic factors, seafood consumption patterns, and health issues associated with Hg toxicity. In addition, social media accounts will be created and a website constructed to educate the public on the toxicology research occurring in the Matagorda Bay system, with the focus on the Alcoa (Point Comfort)/Lavaca Bay Hg Superfund site. Social media posts and the website will be written in English, Spanish, and Vietnamese.

Project Goals and Objectives

The proposed project has two goals: 1) investigate people's exposure to Hg through seafood consumption in the Matagorda Bay system, and 2) develop online resources to educate the public about the toxicology research occurring in the Matagorda Bay system, with the focus on the Alcoa (Point Comfort)/Lavaca Bay Hg Superfund site. This can be broken down into five objectives:

Objective 1: Calculate how much of each fish and shellfish species can be consumed by an adult or child per week before exceeding the FAO/WHO MeHg PTWI and how that varies spatially throughout the Matagorda Bay system.

Objective 2: Investigate why people are fishing in the Alcoa Hg Superfund site even though the area is closed to fishing.

Objective 3: Investigate seafood consumption patterns in recreational anglers throughout Lavaca Bay and Matagorda Bay.

Objective 4: Measure hair Hg concentrations in English, Spanish, and Vietnamese speaking communities bordering Lavaca Bay and Matagorda Bay and interpret the results based on demographic factors, seafood consumption habits, and health histories.

Objective 5: Create social media accounts and construct a website to educate the public on the toxicology research occurring in the Matagorda Bay system. The information will be available in English, Spanish, and Vietnamese.

Project Update

The following was completed this quarter:

Objective 2

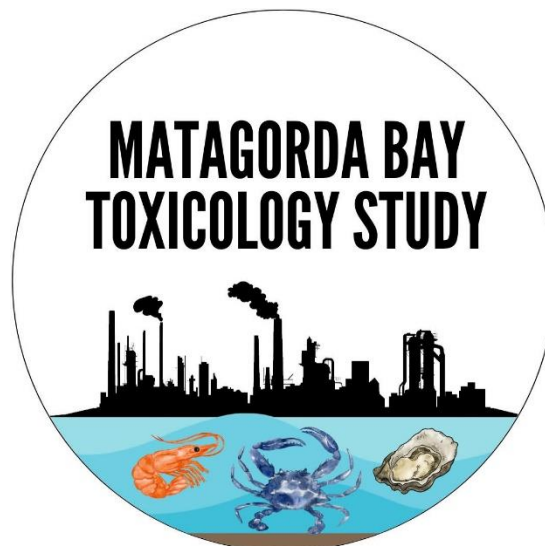
Survey collection started in July to investigate why people are fishing next to the Causeway even though the retention of fish and blue crab is not allowed from the Closed Area. The goal is to collect 100 surveys. To date, 31 surveys have been collected.

Objective 3

Survey collection started in July to investigate fishing activity and seafood consumption patterns in recreational anglers in the Matagorda Bay system. The goal is to collect 150 surveys in Port Lavaca, Palacios, Matagorda, and Port O'Connor. To date, 49 surveys have been collected from Port Lavaca, 52 from Matagorda, and 126 from Port O'Connor.

Objective 5

- The Instagram account has been created (@matagordabaytoxicologystudy)
- Forms have been submitted to the IT department at Texas State University so we can receive approval to purchase the URL and start building the website
- The logo for the project has been created



Presentations

PI Dutton gave a public presentation in Port Lavaca on August 22nd titled “Mercury concentrations in sediment and biota in the Alcoa (Point Comfort) Superfund site”. This meeting was hosted by the San Antonio Bay Estuarine Waterkeeper. It was attended by ~200 people (federal and state agencies, city council, industry, environmental groups, community members), livestreamed (~1000 views to date), and translated into Spanish and Vietnamese. Objectives 3, 4, and 5 were mentioned during the presentation and the audience was asked to fill out a survey for Objective 3 if they fished recreationally within the bay.

Goals for the Next Quarter

- Organize the Hg data for bay fish and shellfish to calculate how much of each fish and shellfish species can be consumed by an adult or child per week before exceeding the FAO/WHO MeHg PTWI (Objective 1)
- Continue to survey people on why they are fishing next to the Causeway even though the retention of fish and blue crab is not allowed from the Closed Area (Objective 2)
- Continue to survey recreational anglers about their seafood consumption patterns (Objective 3)
- Create the Facebook accounts (Objective 5)
- Purchase the URL for the website (Objective 5)