Texas High School Coastal Monitoring Program at Palacios High School: 2023-2024

January 2025

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Texas High School Coastal Monitoring Program

- Provide high school students with a real-world learning experience by monitoring the beach and dune environment.
- Obtain a better understanding of the relationship between coastal processes, beach morphology, and shoreline change
- Increase public awareness and understanding of coastal change, processes, and hazards by making data and findings available for coastal managers and scientists, students and teacher, and the general public.

TEXAS Geosciences
Bureau of Economic Geology
Jackson School of Geosciences
The University of Texas at Austin

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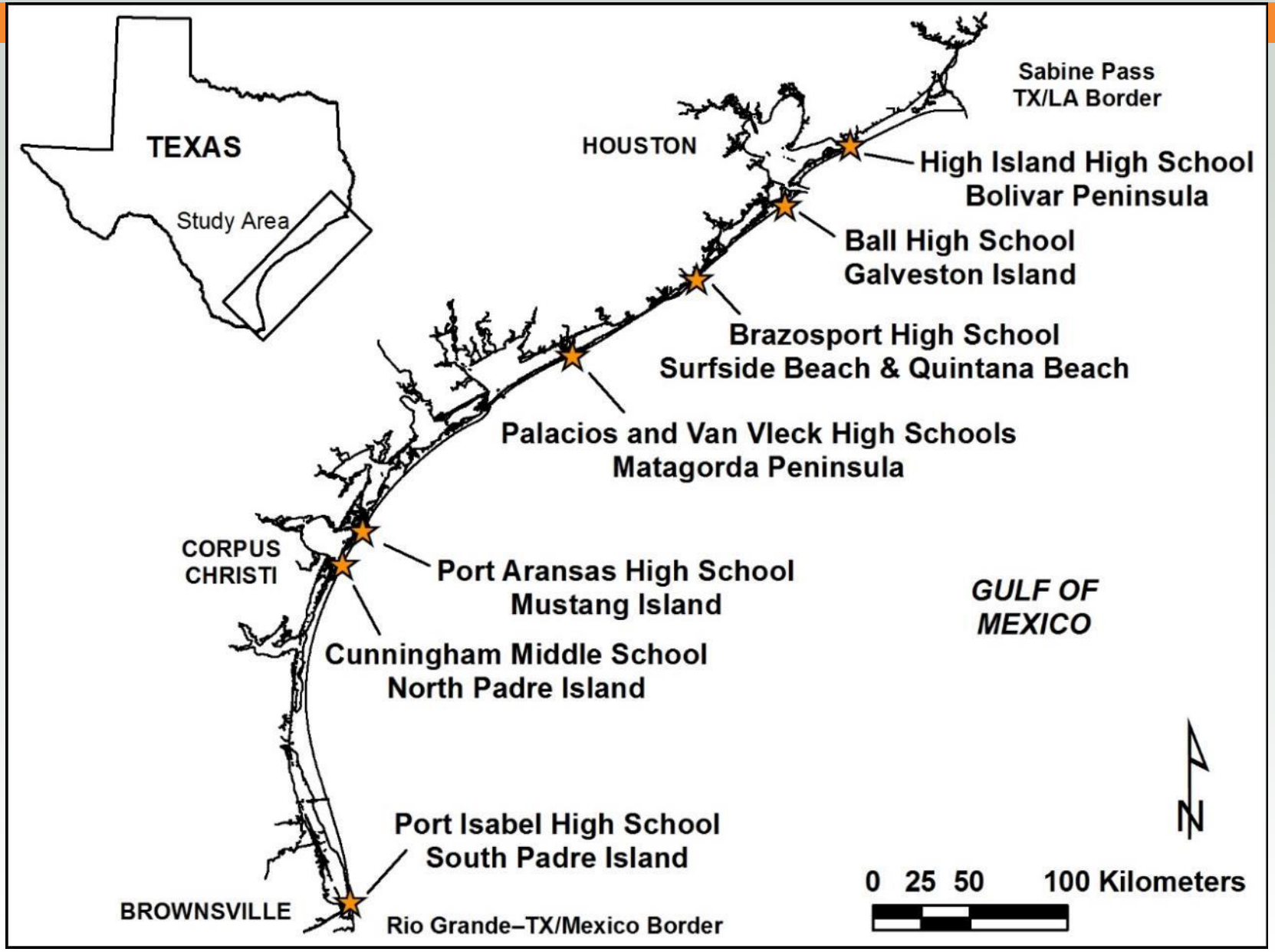

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2023-2024: 23 field trips with ~230 students

1997-2024 421 field trips

Student Collected Data

- Topographic transect oriented perpendicular to the shoreline
  - measured from the same starting point landward of the foredune and oriented in the same direction.
- Estimates of processes acting on the beach
  - wind direction and speed; wave direction, height, and period; and longshore current direction and speed
- GPS survey of the vegetation line and shoreline
  - quantitative data on the position of the shoreline and vegetation line

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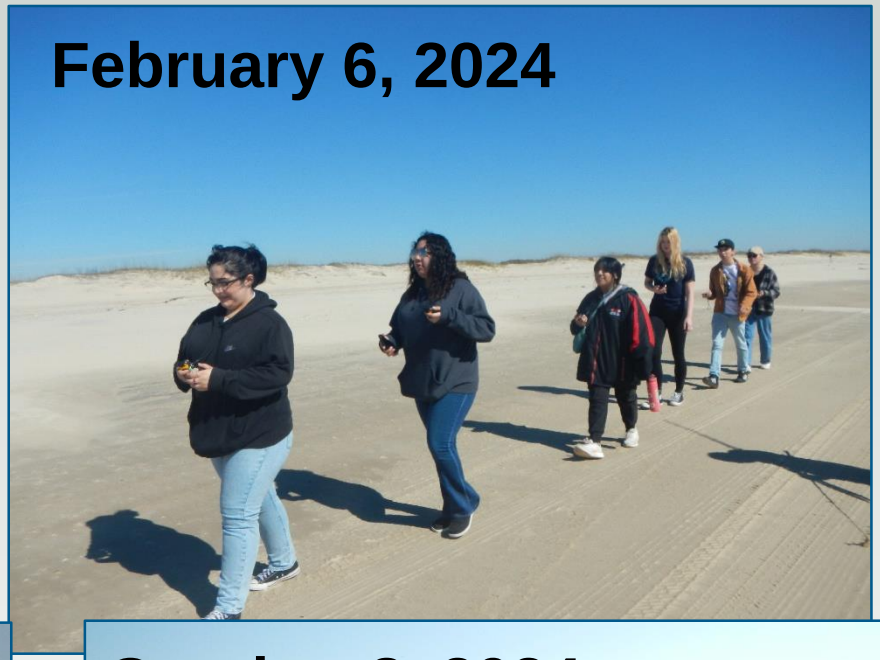
field trip dates

October 10, 2023

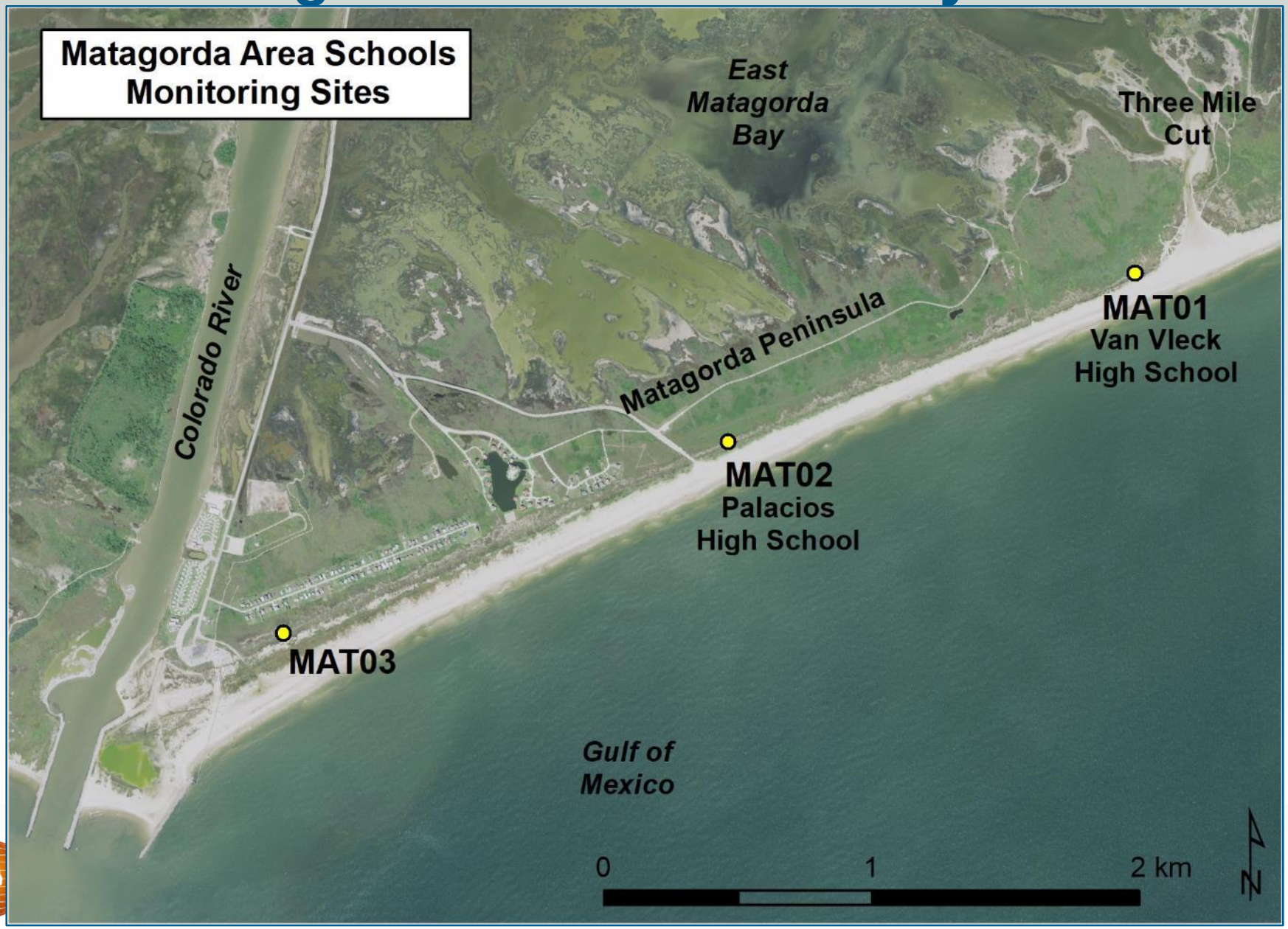
February 6, 2024



May 2, 2024

October 8, 2024

Matagorda Peninsula Study Sites



MAT02

April 8, 2022

October 8, 2024

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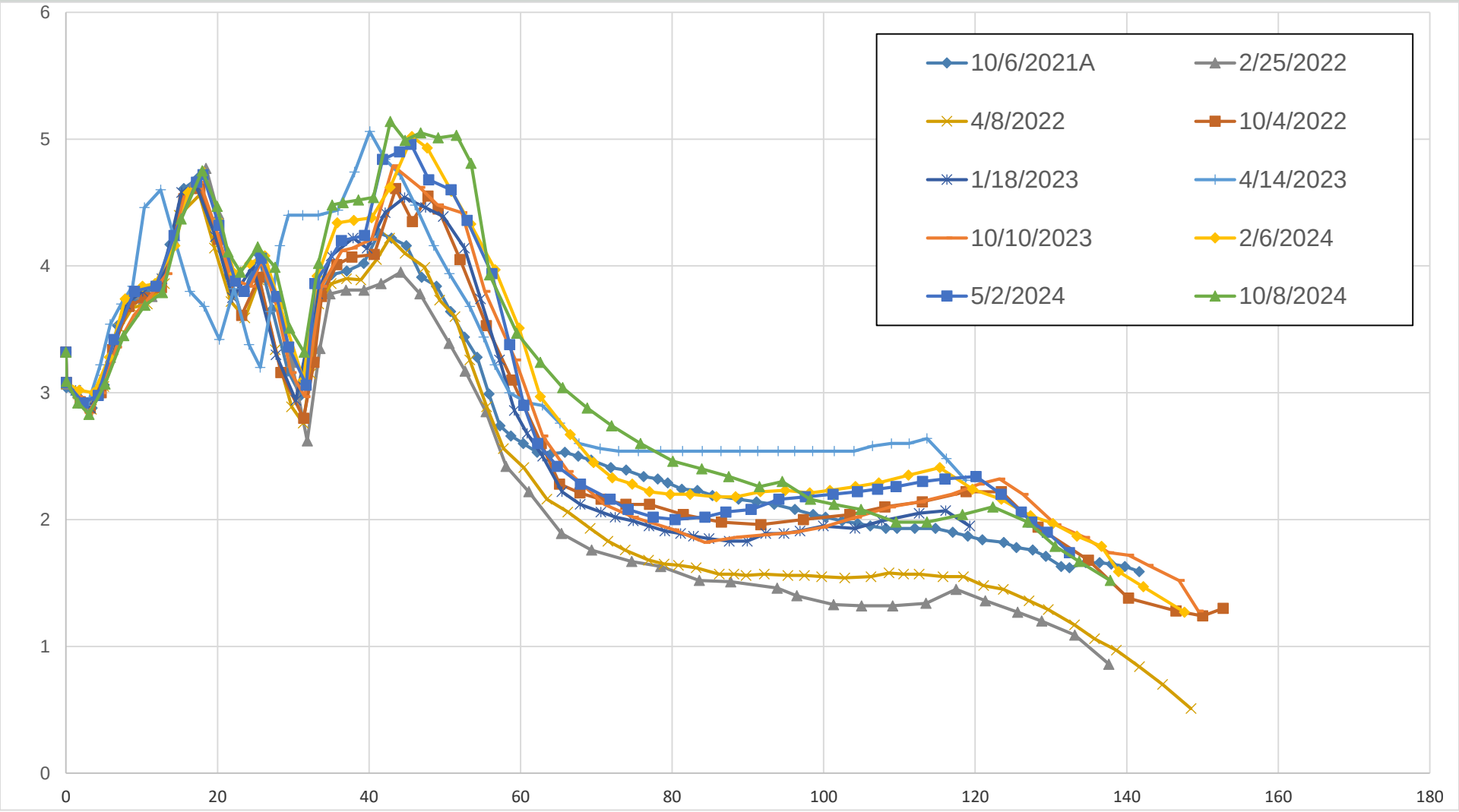
MAT02: fall 2021-fall 2024



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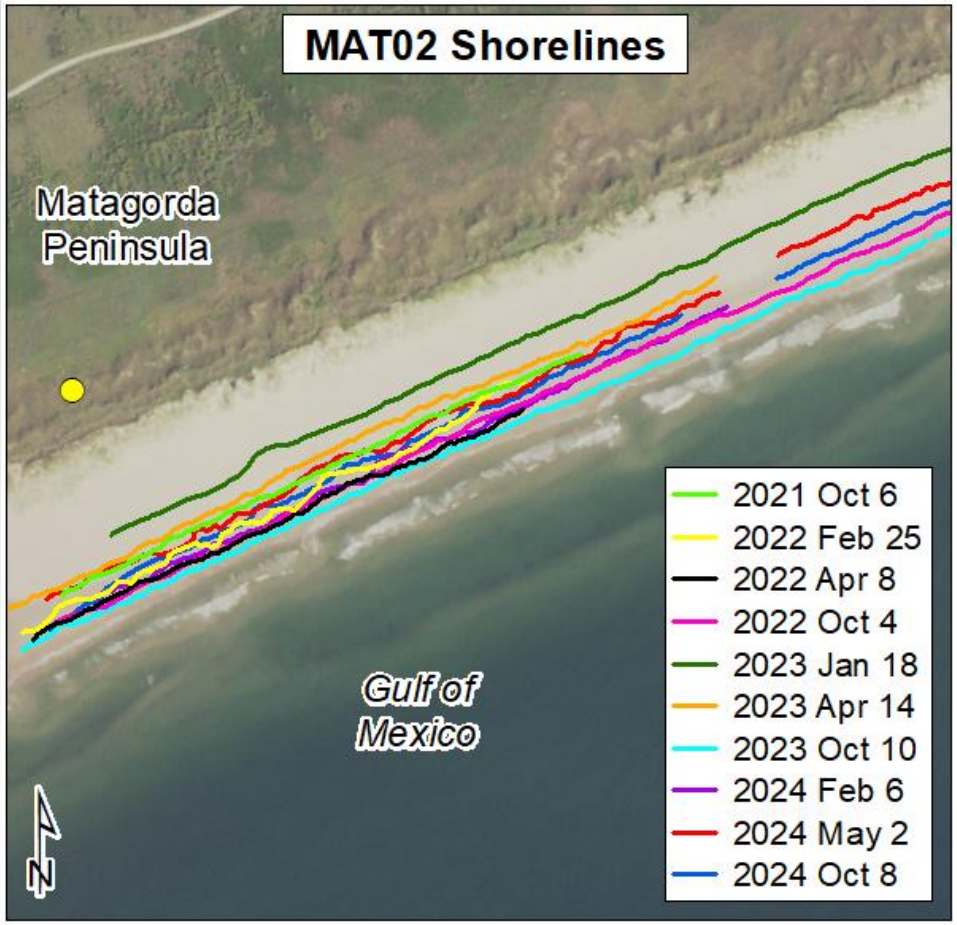
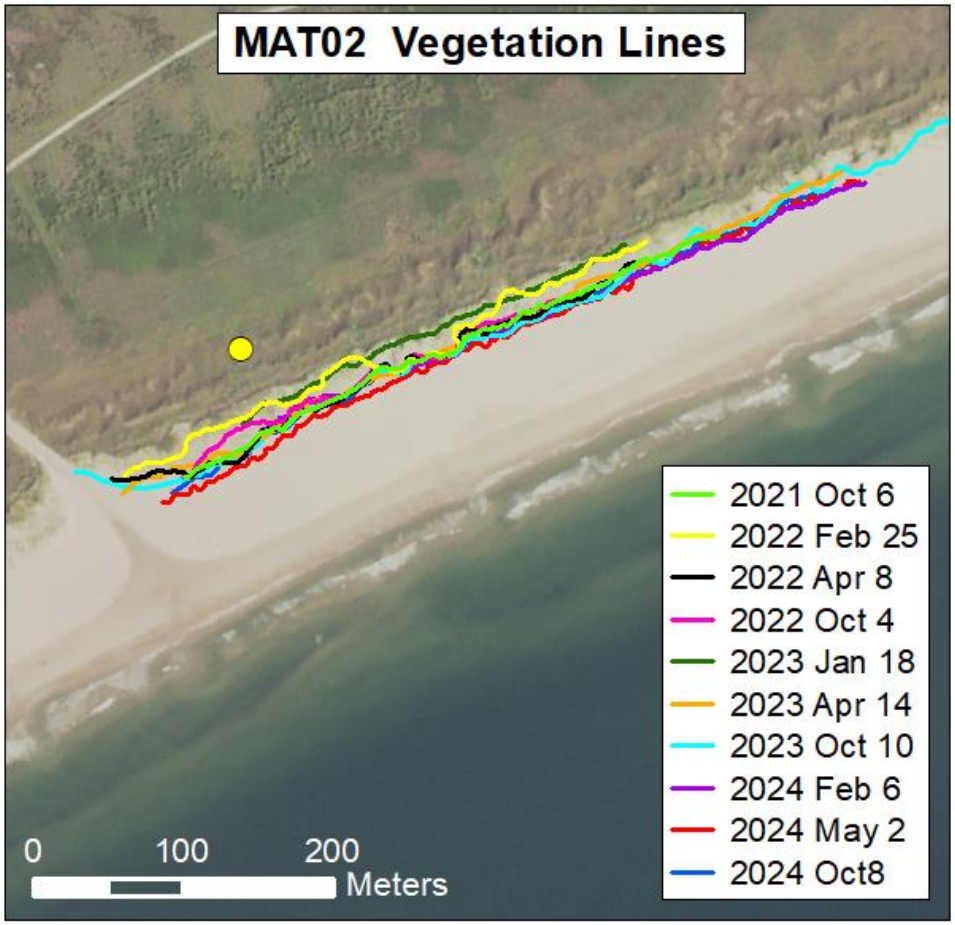
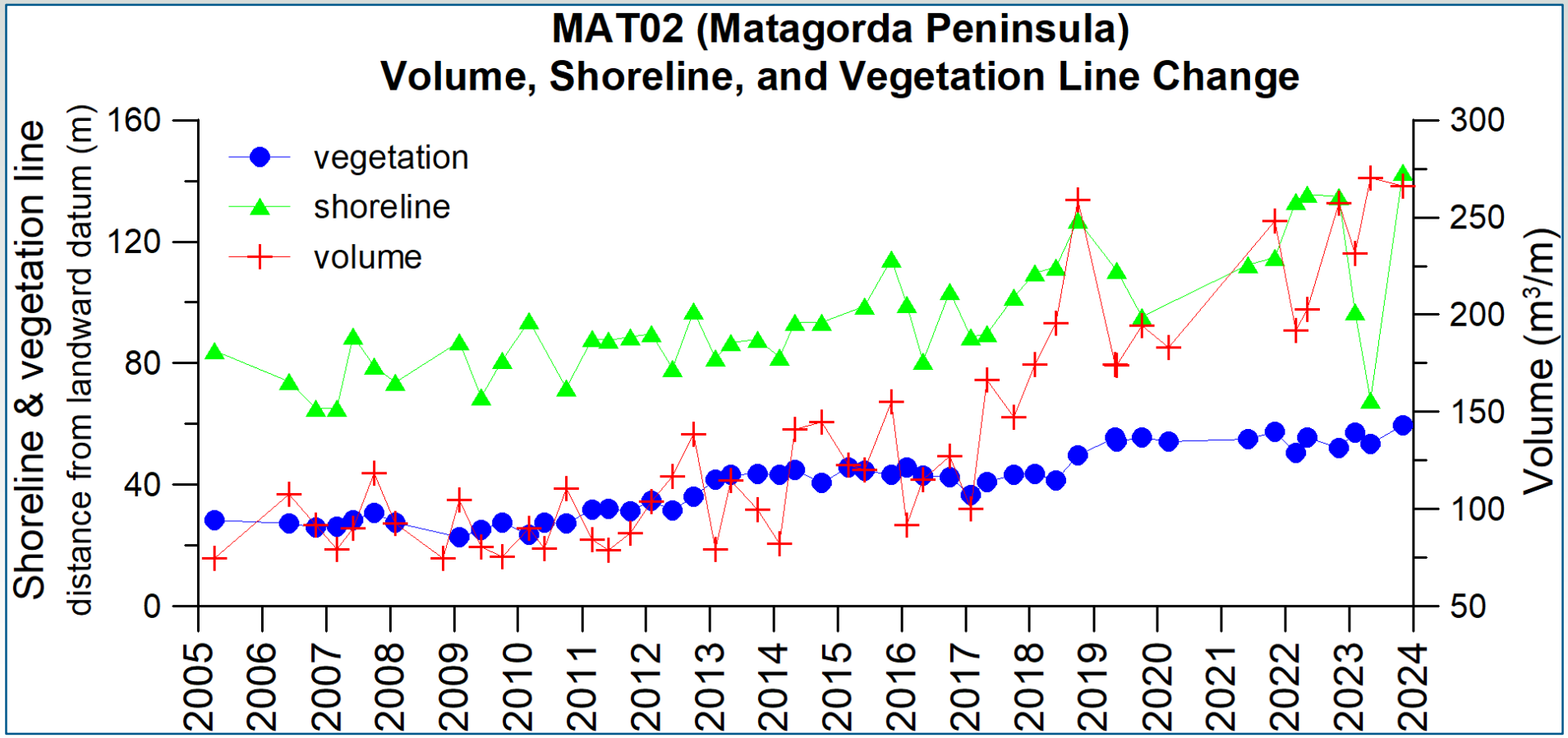
MAT02 shore and vegetation line positions





MAT02: shoreline, vegetation line, and volume changes



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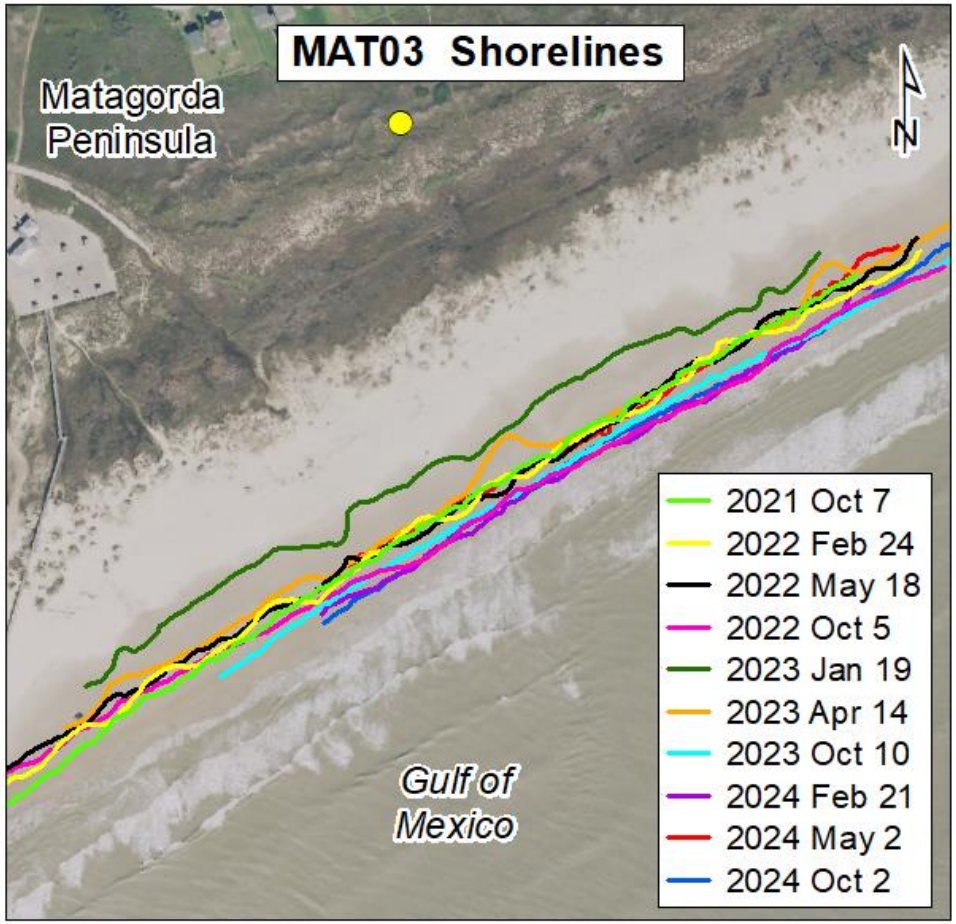
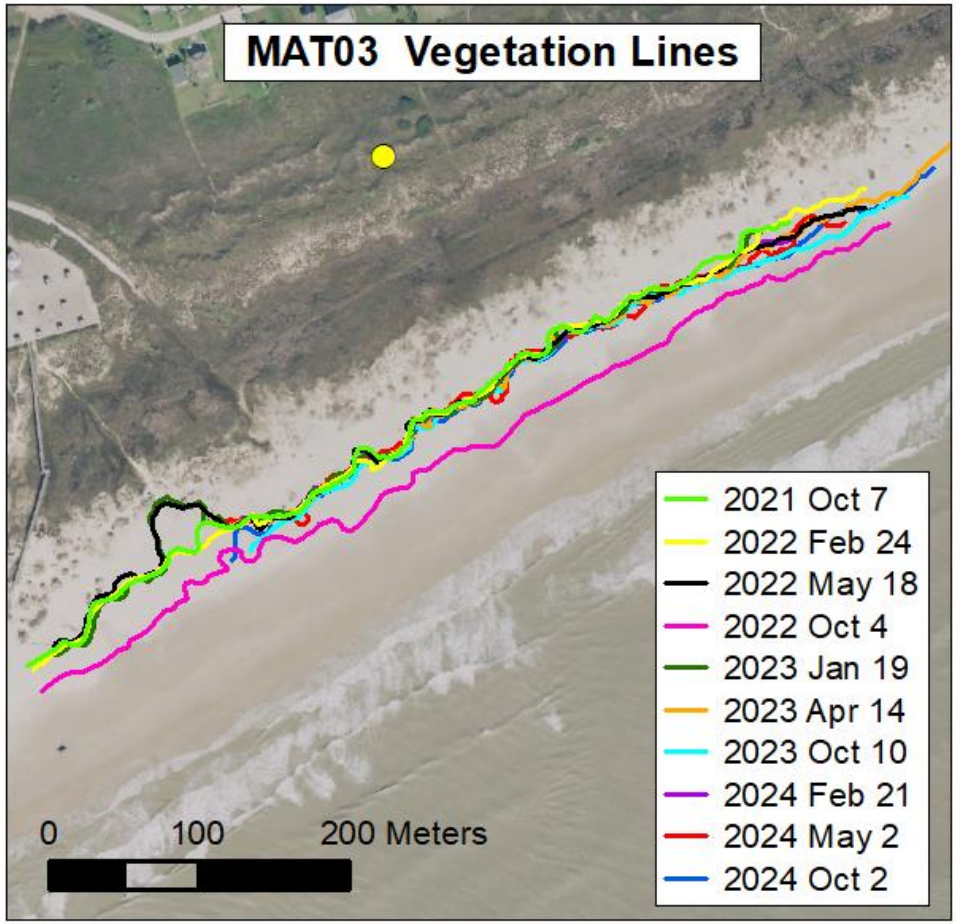
Sediment volume was calculated above 1 meter NAVD88.

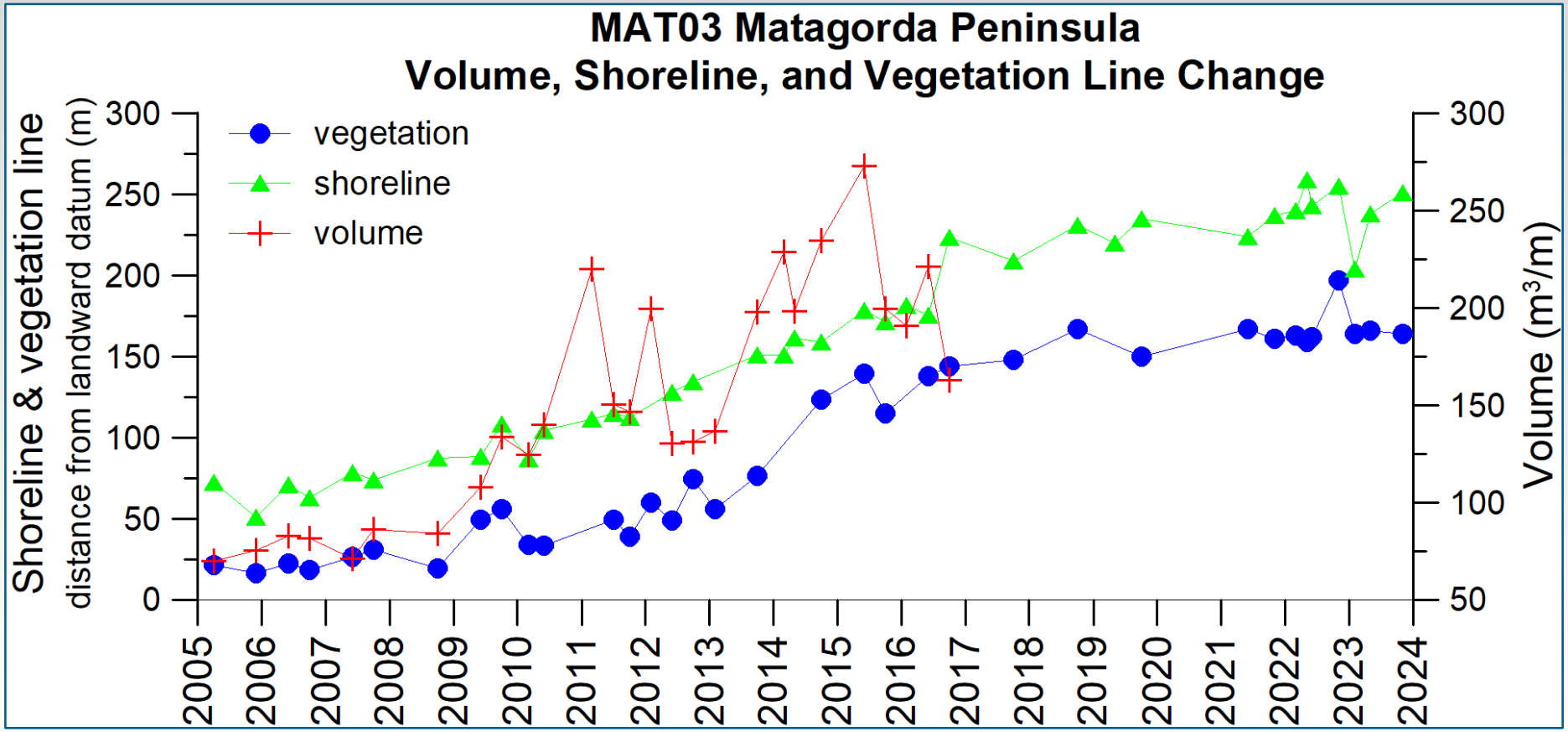
MAT03

MAT03 shore and vegetation line positions





MAT03: shoreline, vegetation line, and volume changes



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