Texas High School Coastal Monitoring Program at Port Aransas 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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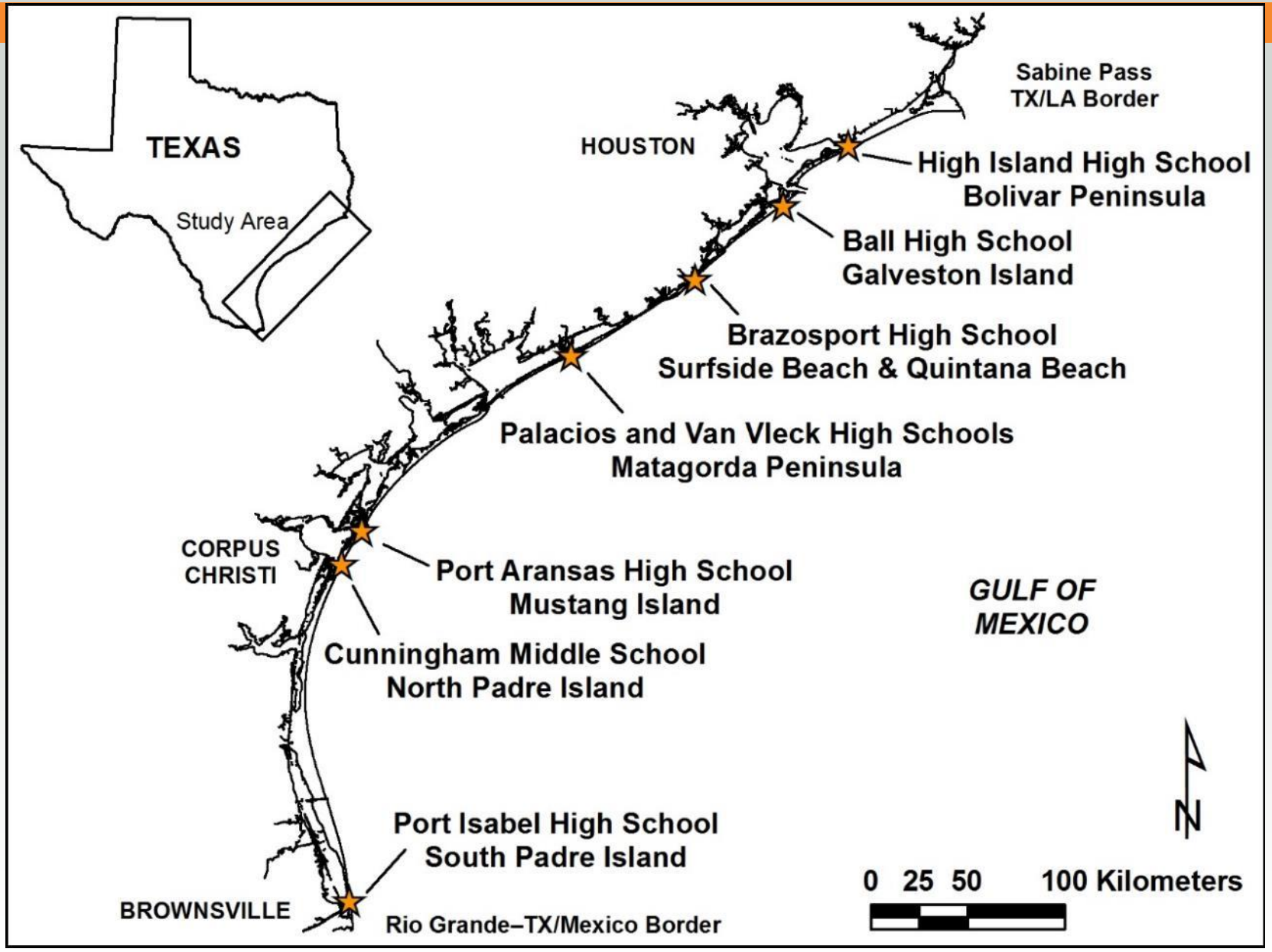

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2023-2024: 23 field trips with ~230 students

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

field trip dates

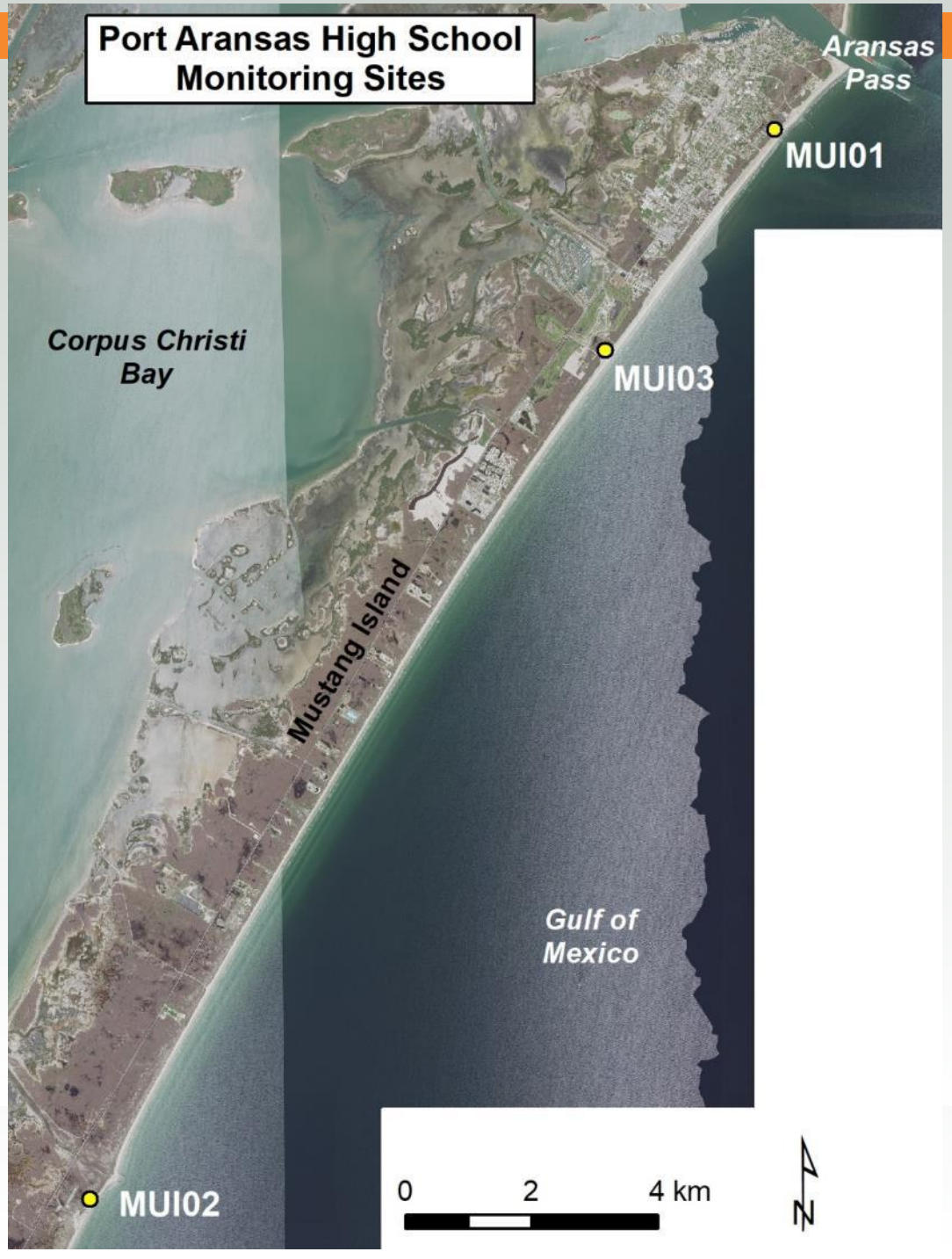
October 4, 2023

February 22, 2024

April 25, 2024

October 10, 2024

Mustang Island Study Sites



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MUI01

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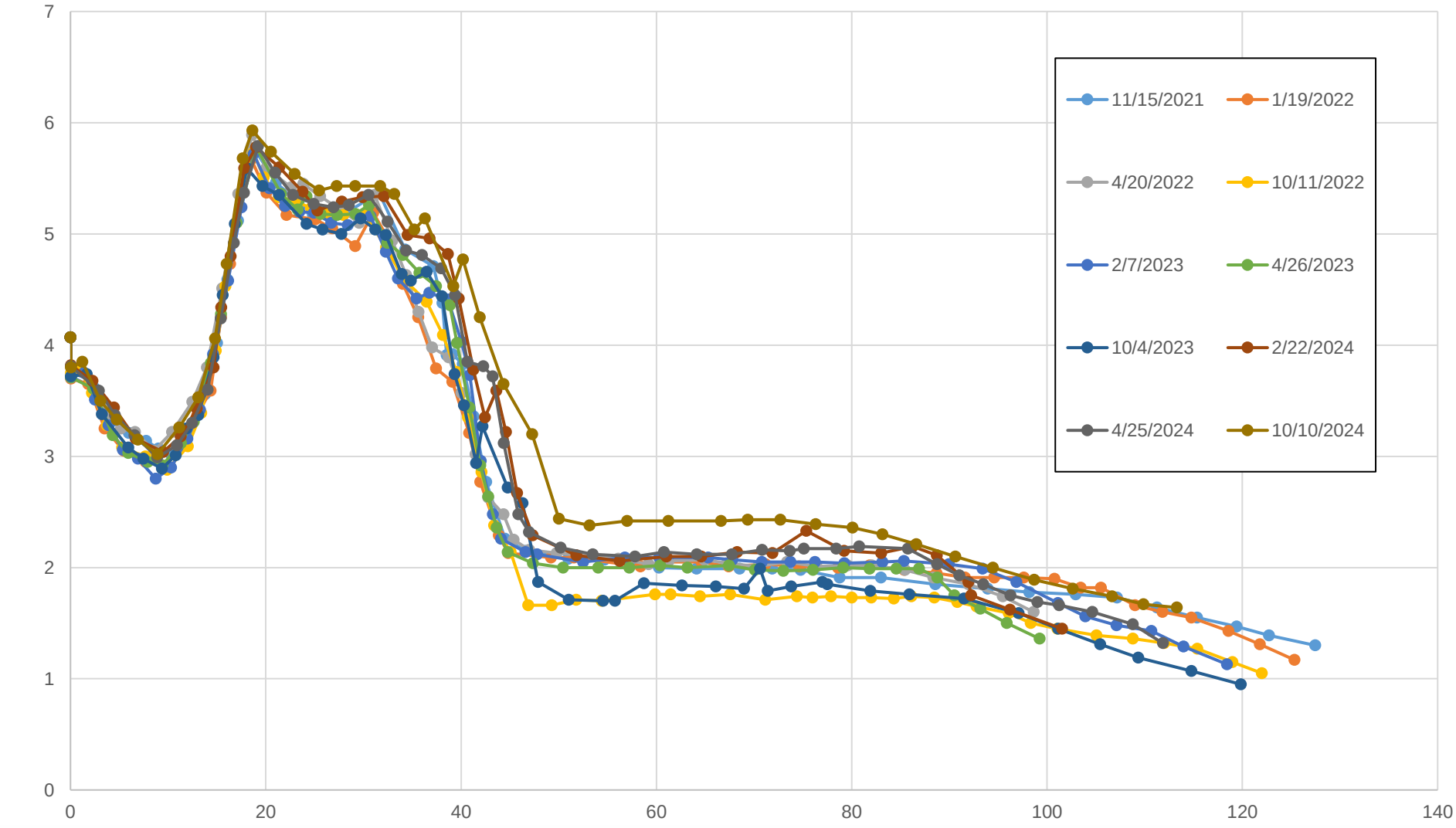
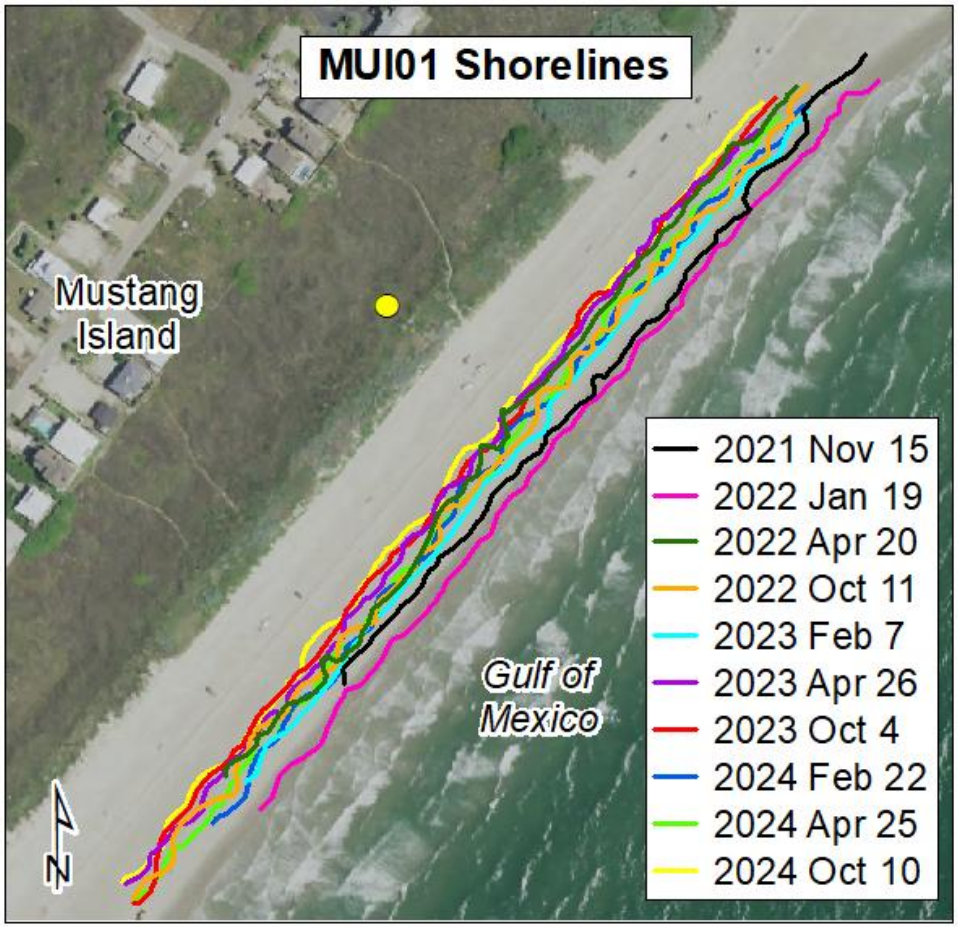
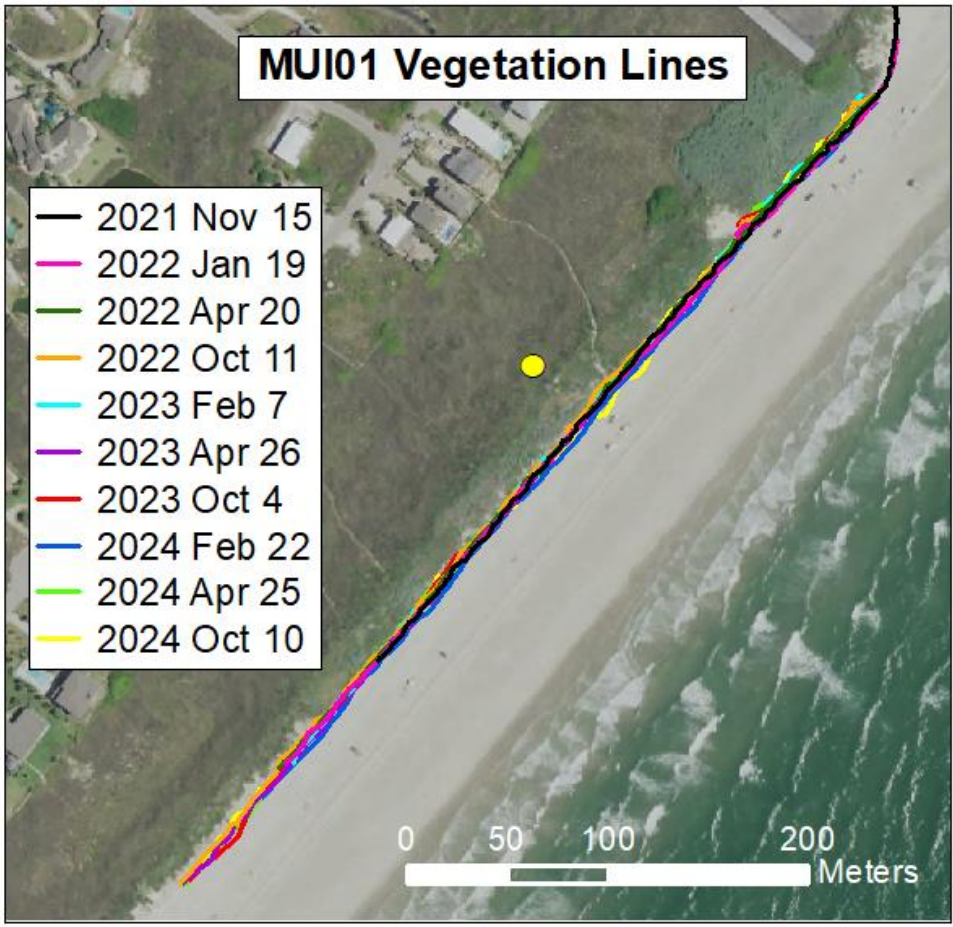
MUI01: fall 2021-fall 2024



MUI01 shore and vegetation line positions





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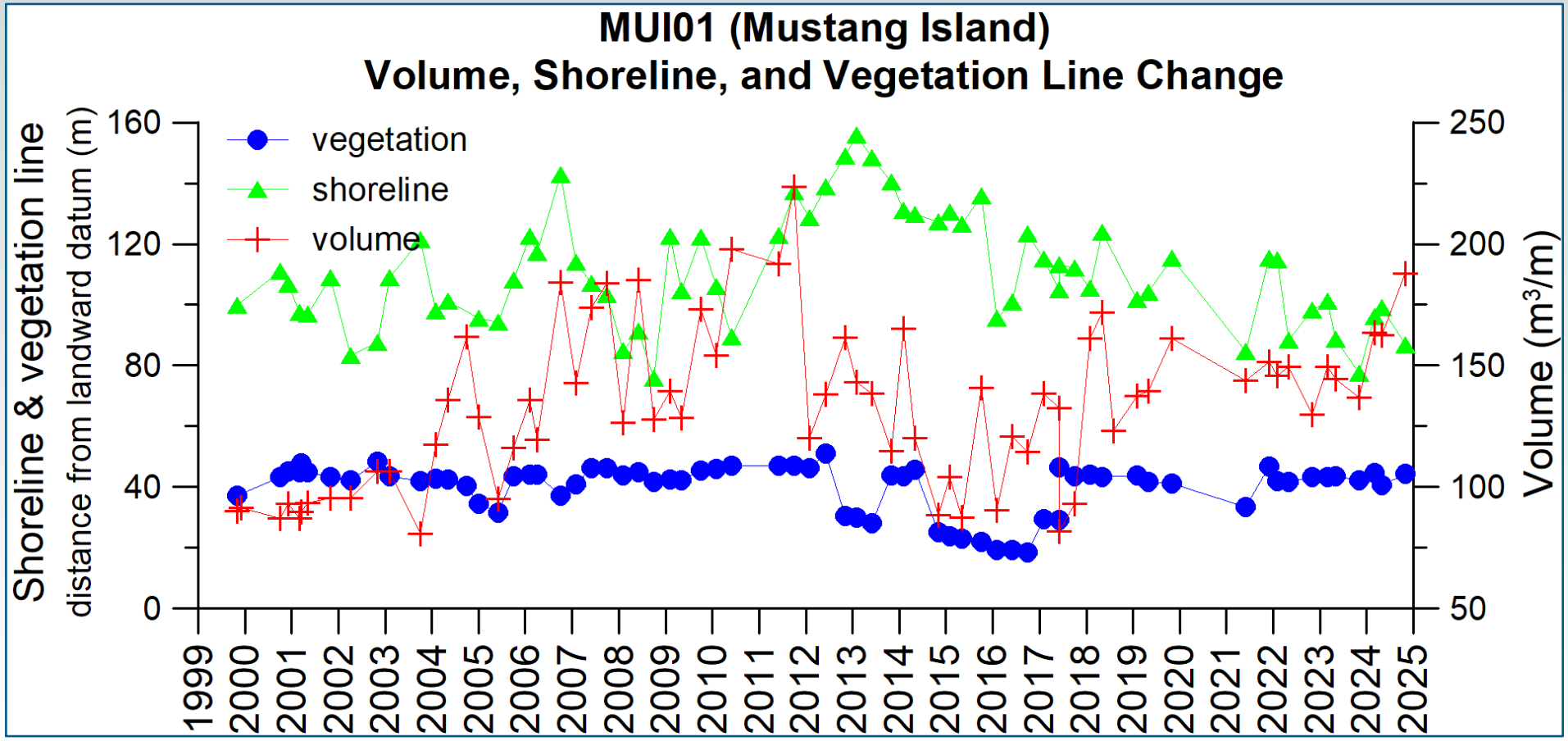
MUI01: shoreline, vegetation line, and volume changes



Sediment volume was calculated above 1.5 meter NAVD88.

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MUI02

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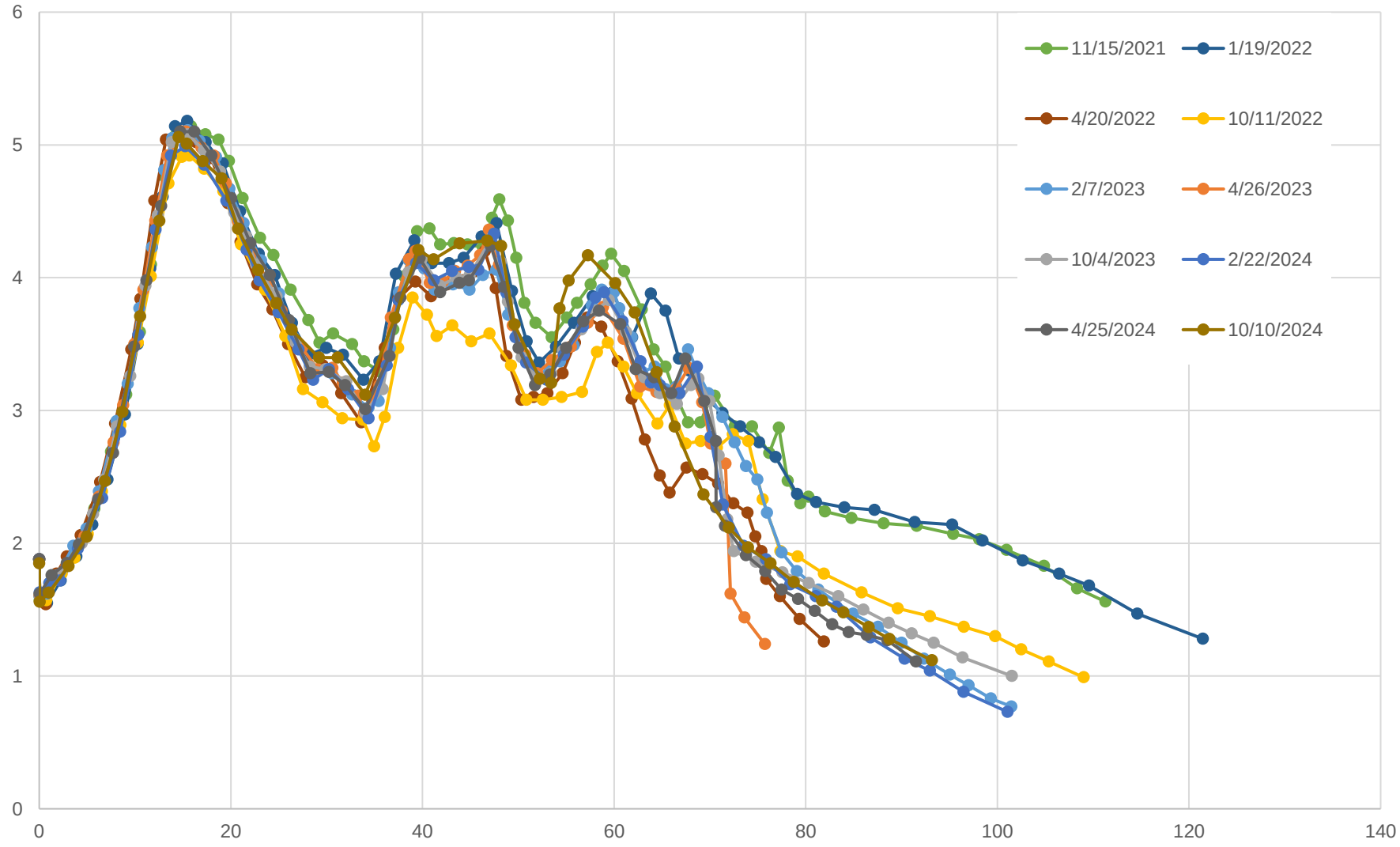
MUI02: fall 2021-fall 2024



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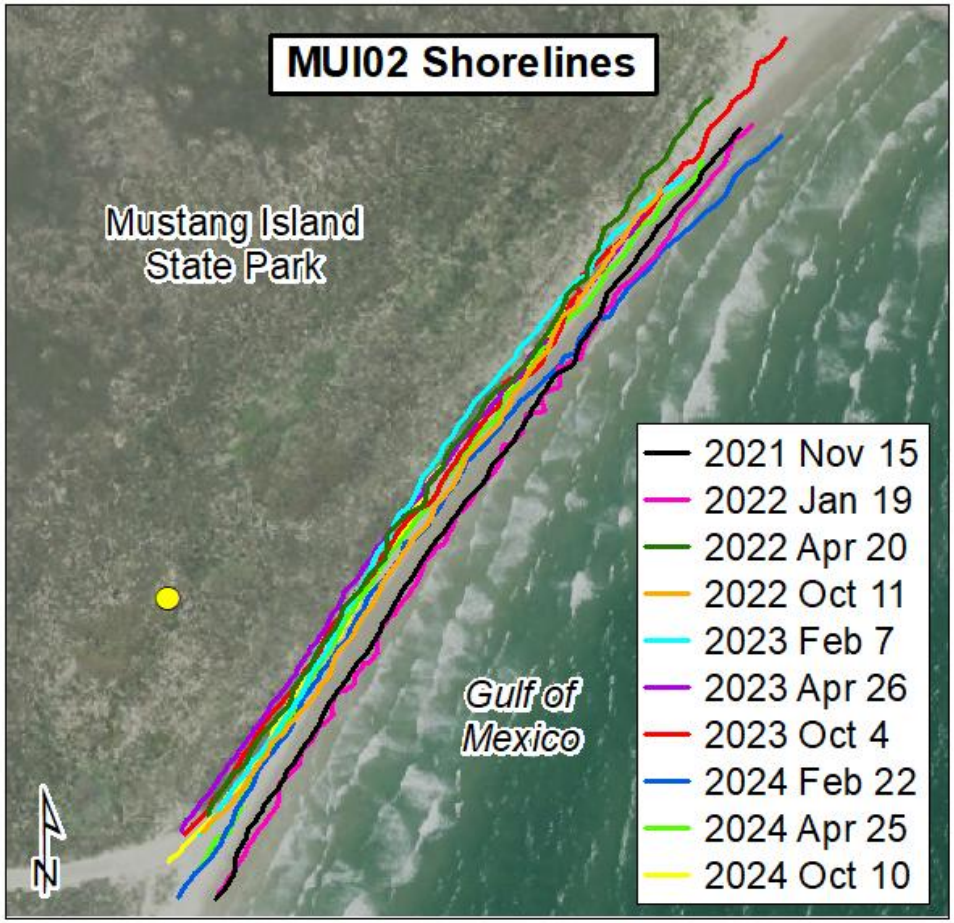
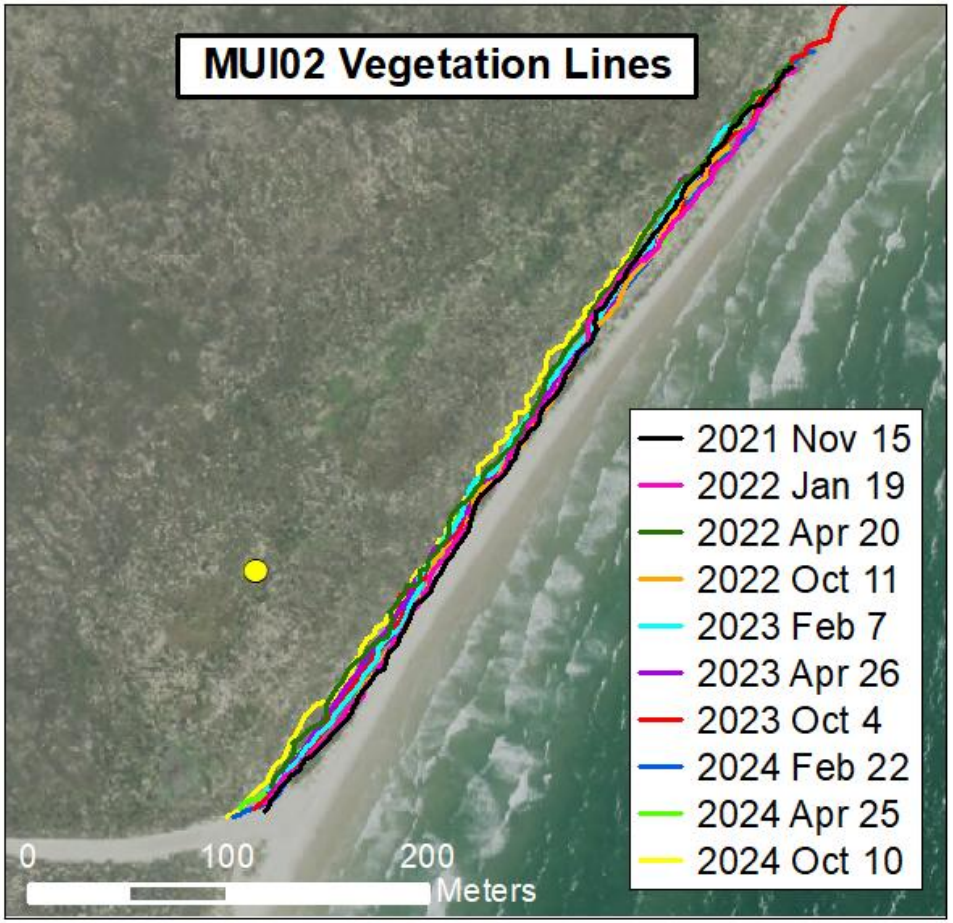
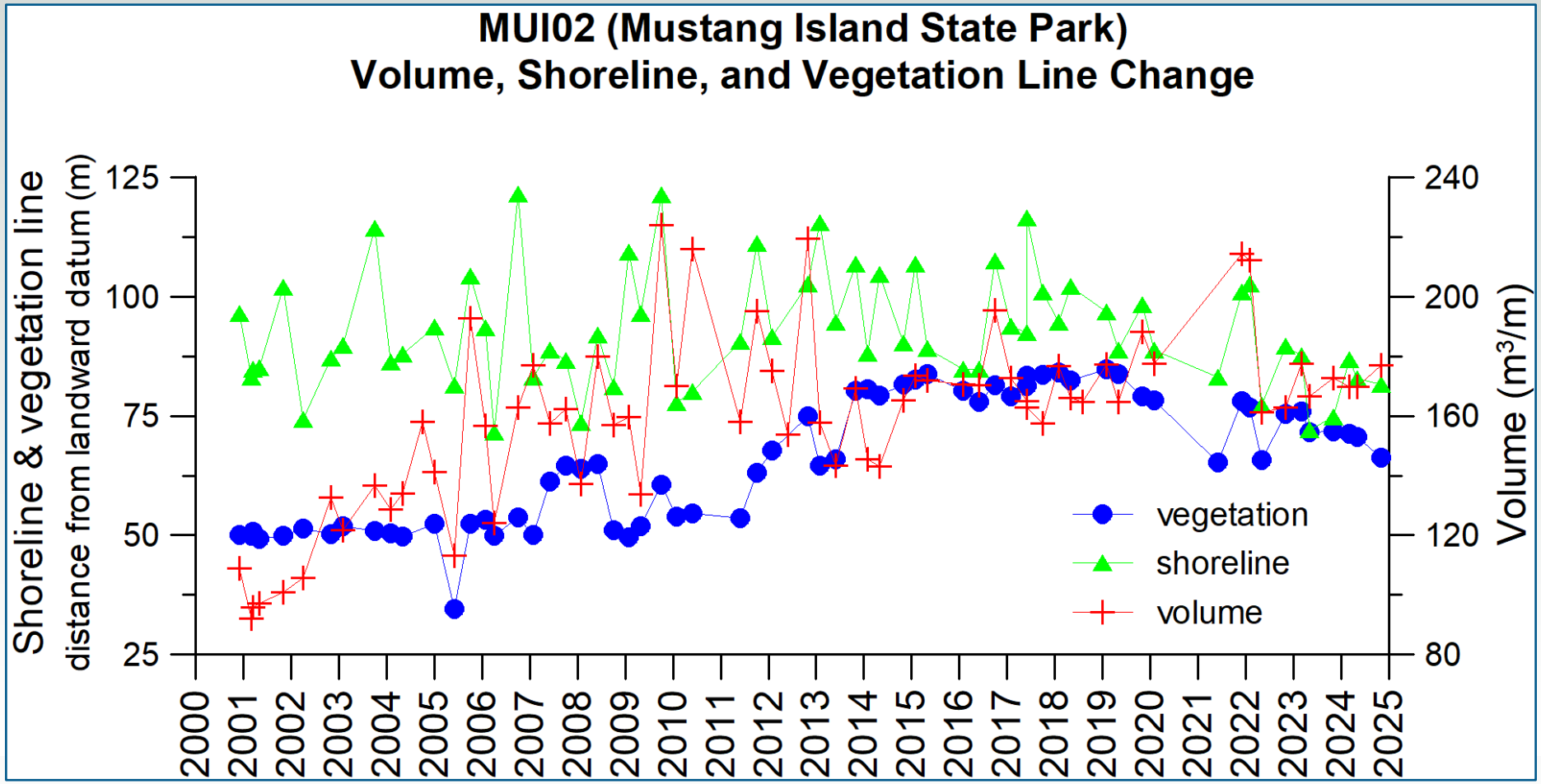
MUI02 shore and vegetation line positions





MUI02: shoreline, vegetation line, and volume changes



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Sediment volume was calculated above 1.25 meter NAVD88.

MUI03

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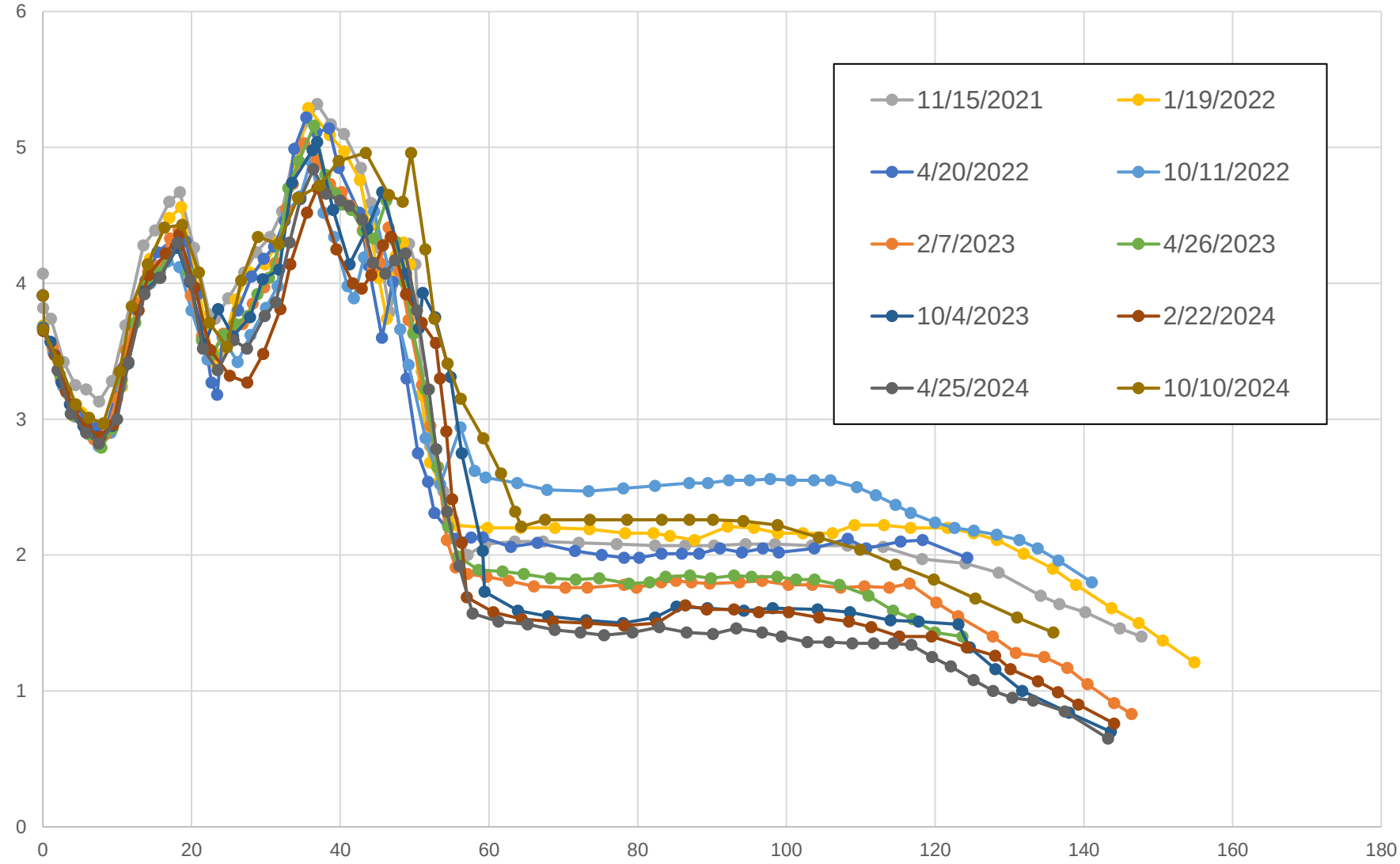
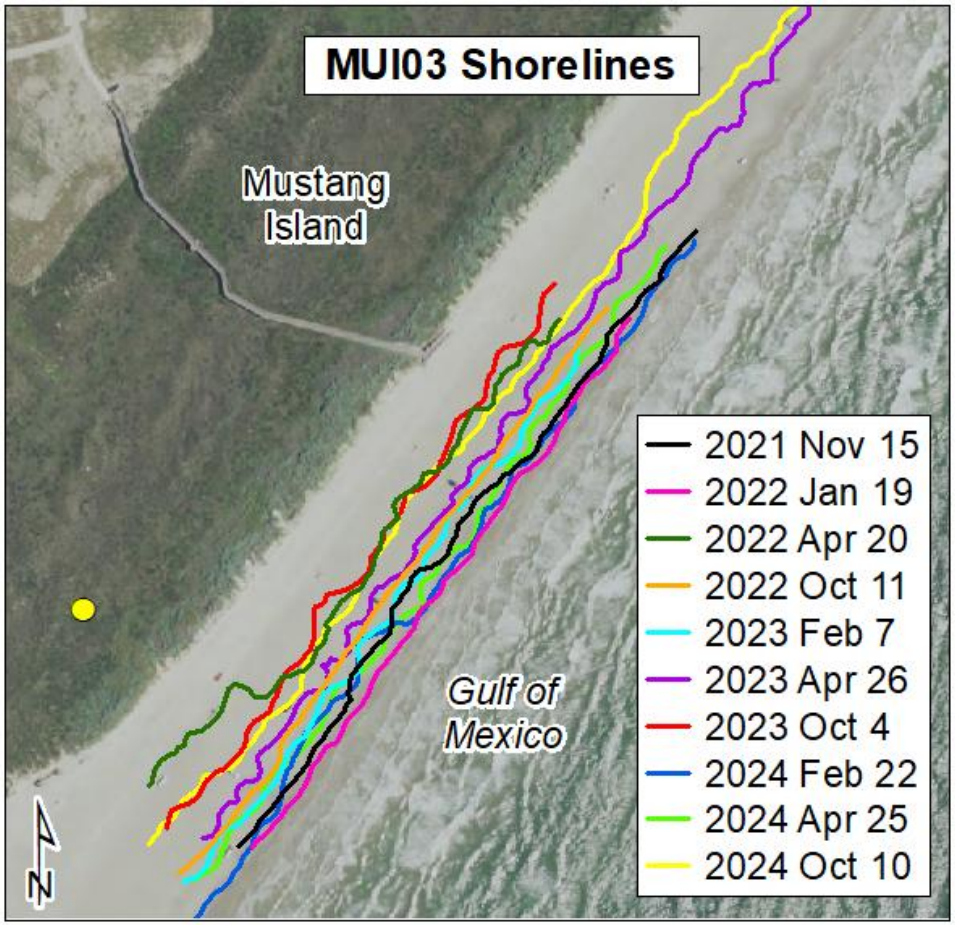
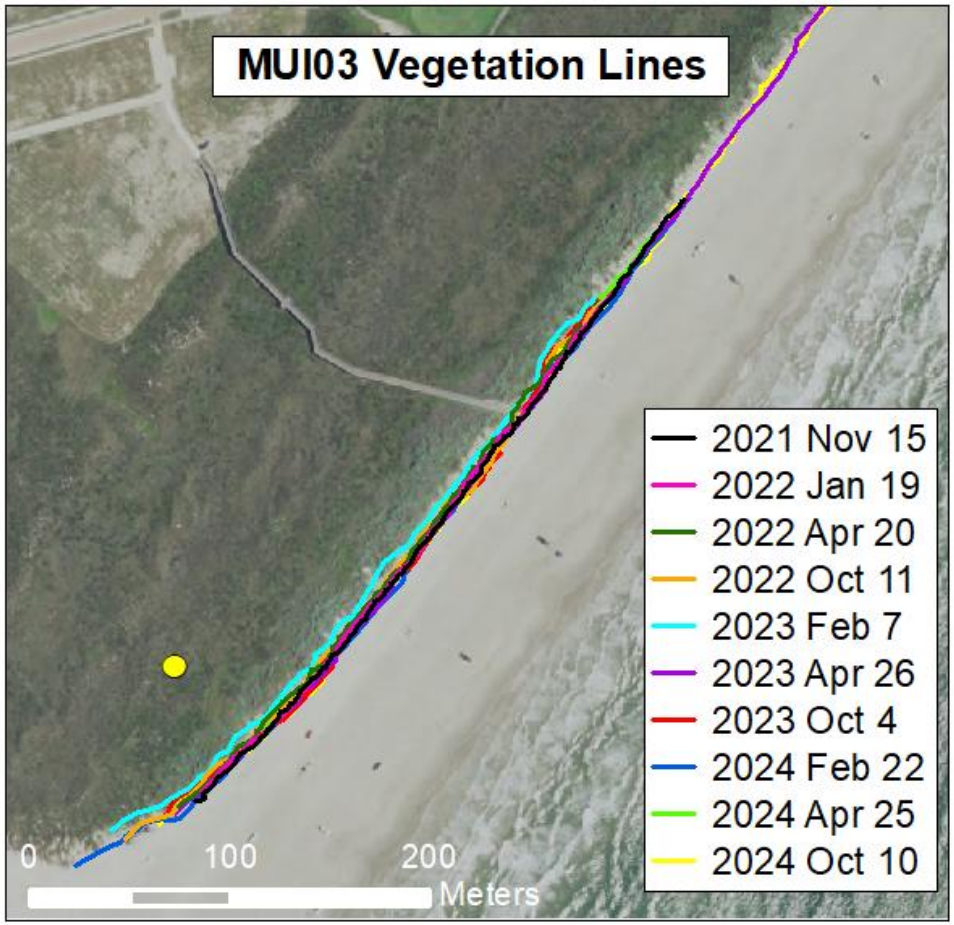
MUI03: fall 2021-spring 2024

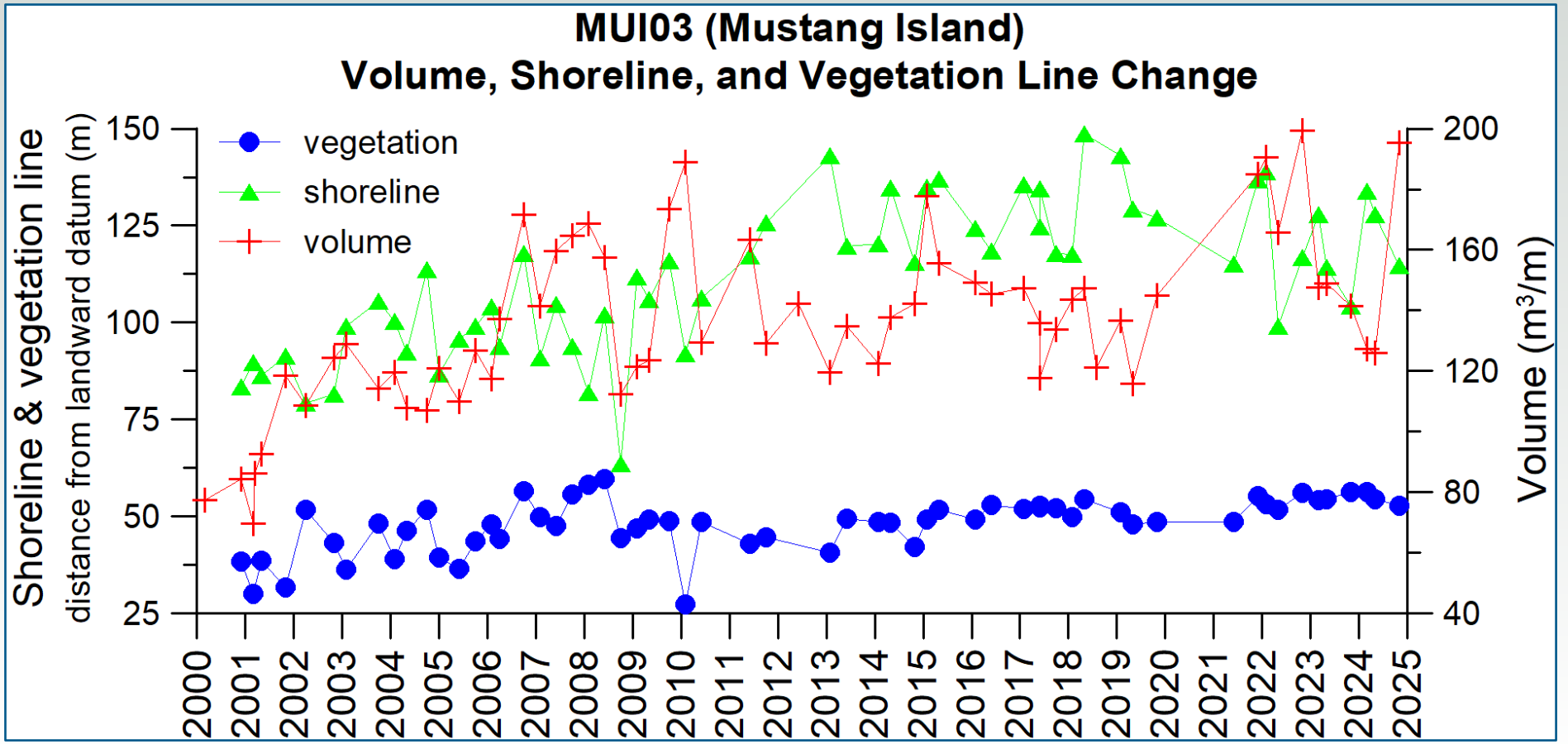


MUI03 shore and vegetation line positions





MUI03: shoreline, vegetation line, and volume changes



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Sediment volume was calculated above 1.5 meter NAVD88.