

Texas High School Coastal Monitoring Program at Port Aransas High School: 2024-2025



BUREAU OF
ECONOMIC
GEOLOGY

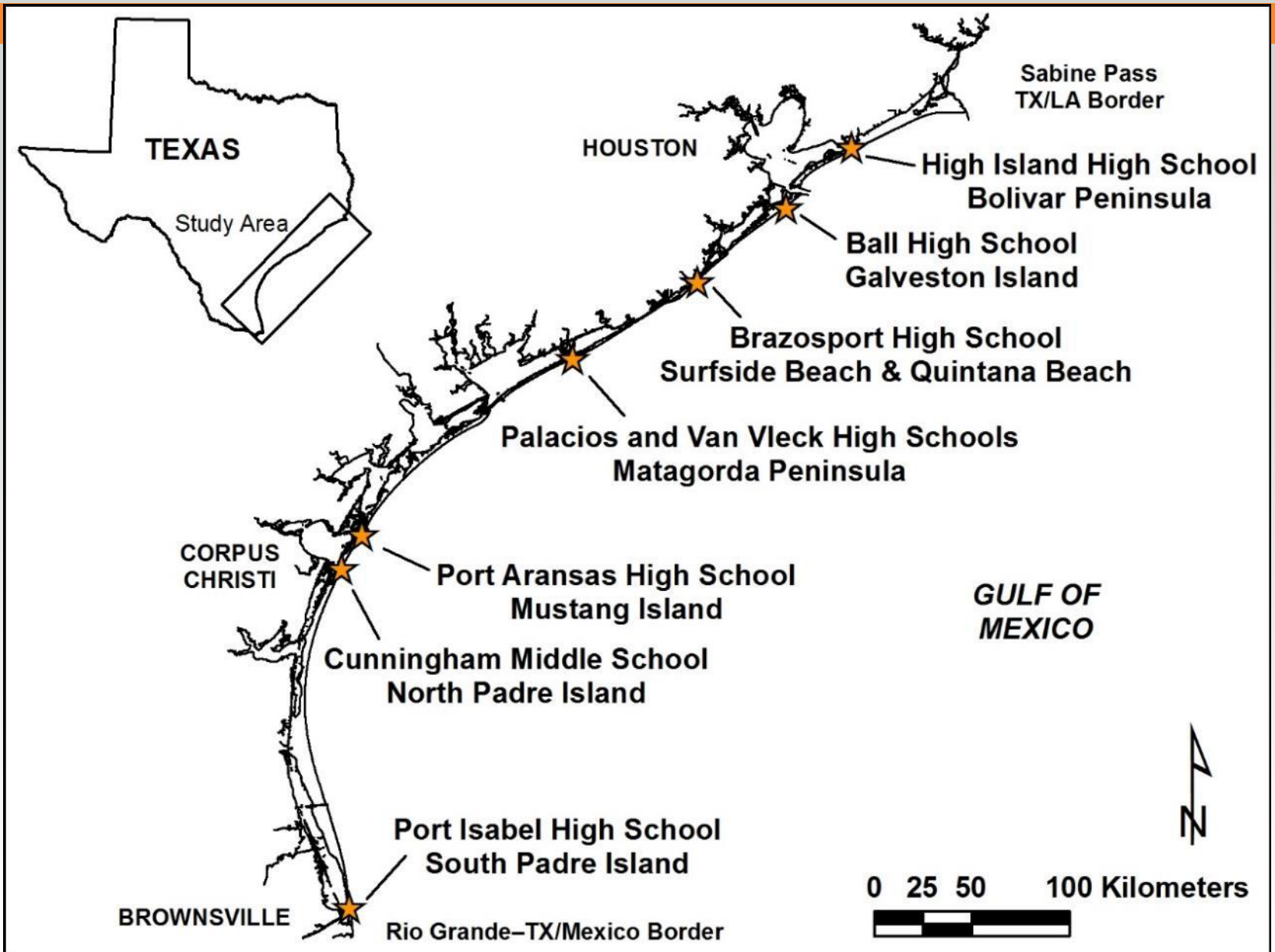
Texas High School Coastal Monitoring Program

- 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 public.



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





**2024-2025: 23 field trips
with ~220 students**

**1997-2025
444 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 10, 2025



February 25, 2025



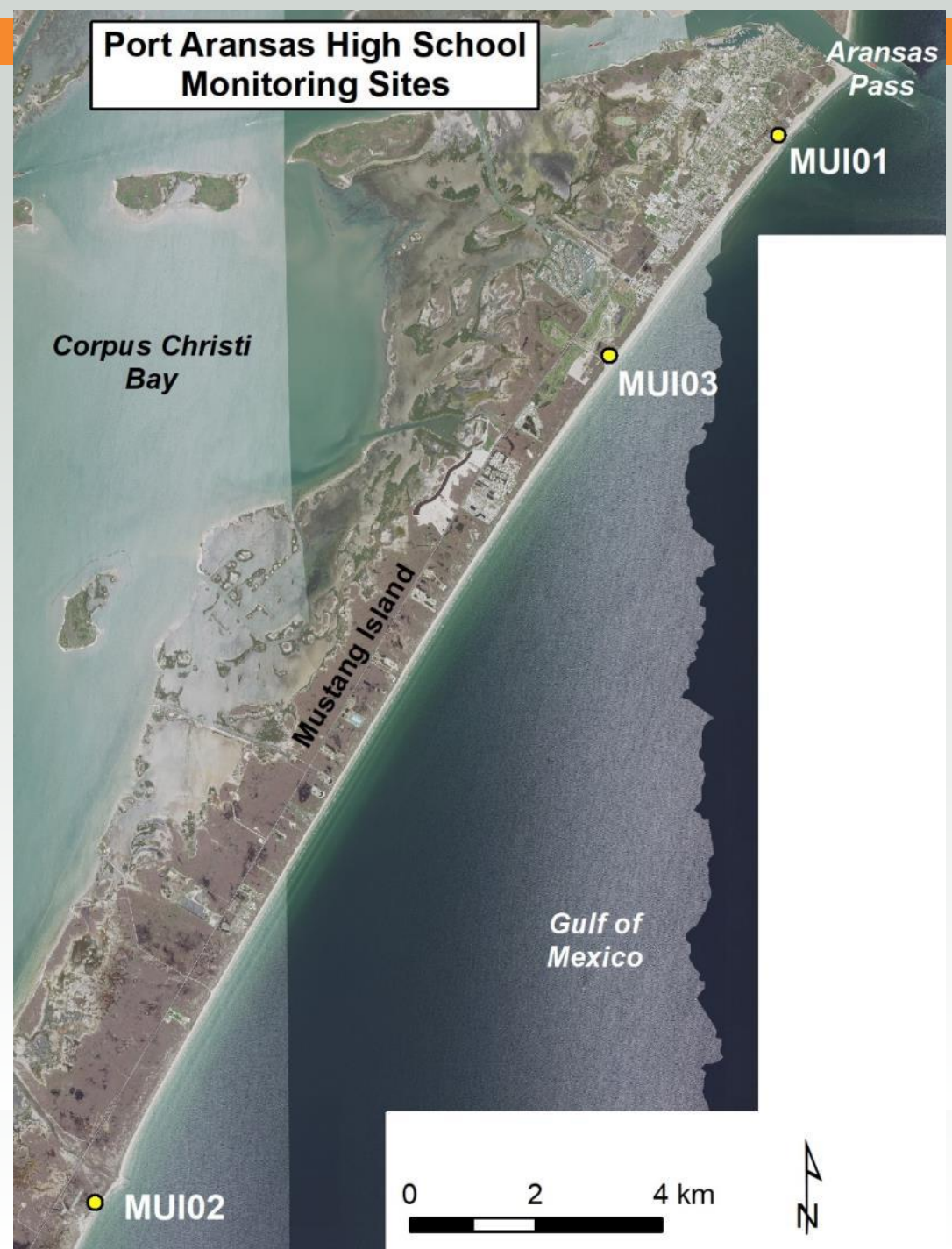
April 10, 2025



October 23, 2025



Mustang Island Study Sites



October 10, 2025
Dunes looking north



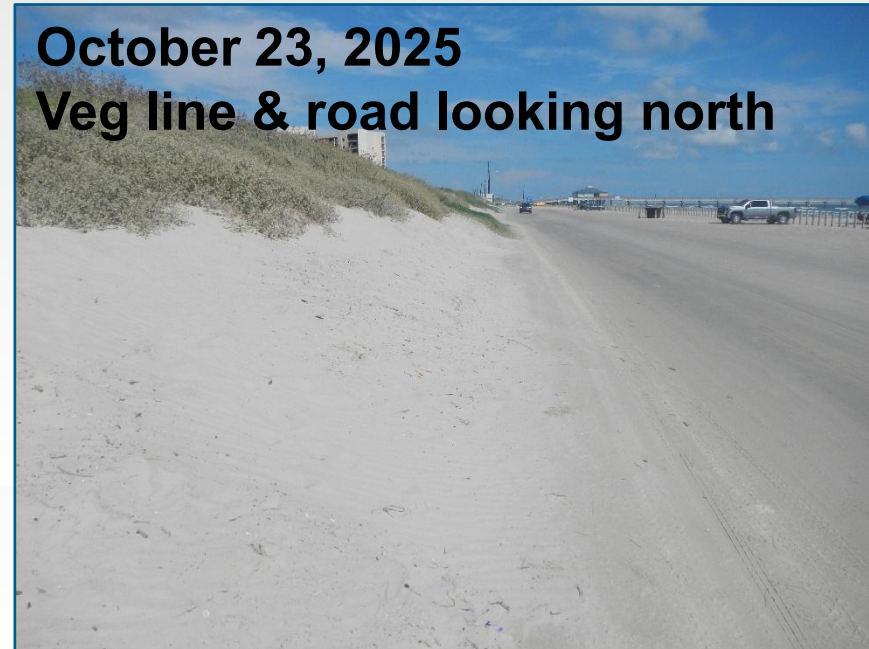
February 25, 2025
View toward Gulf



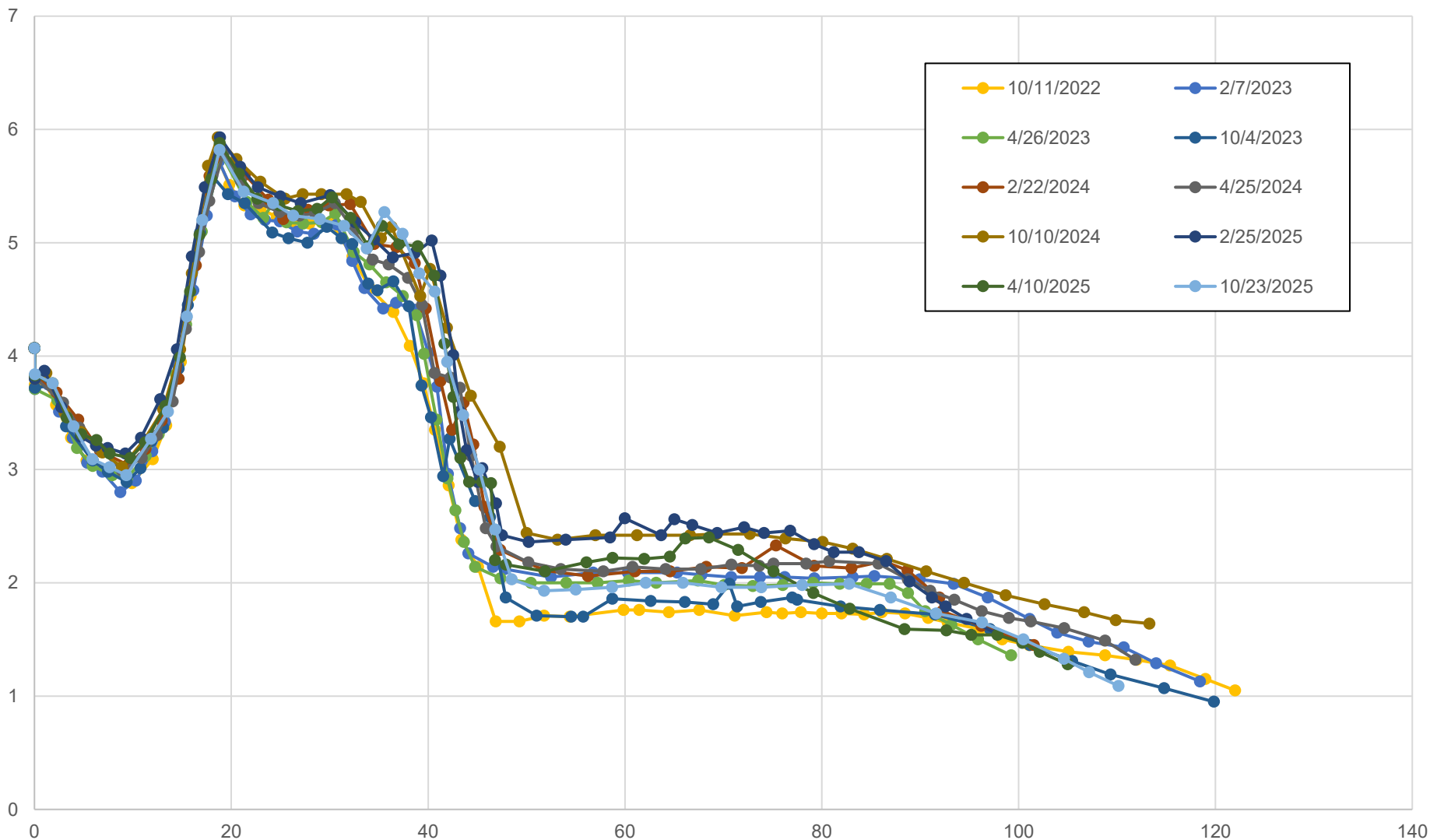
April 10, 2025
Wet/dry line view north



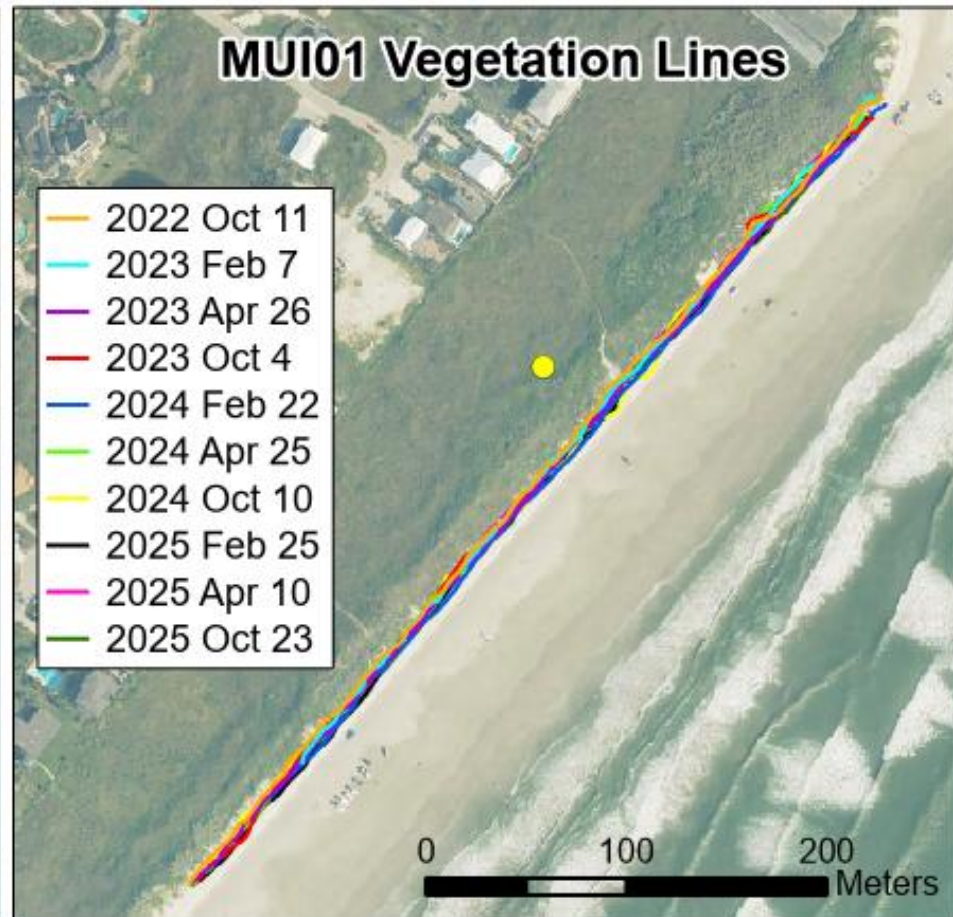
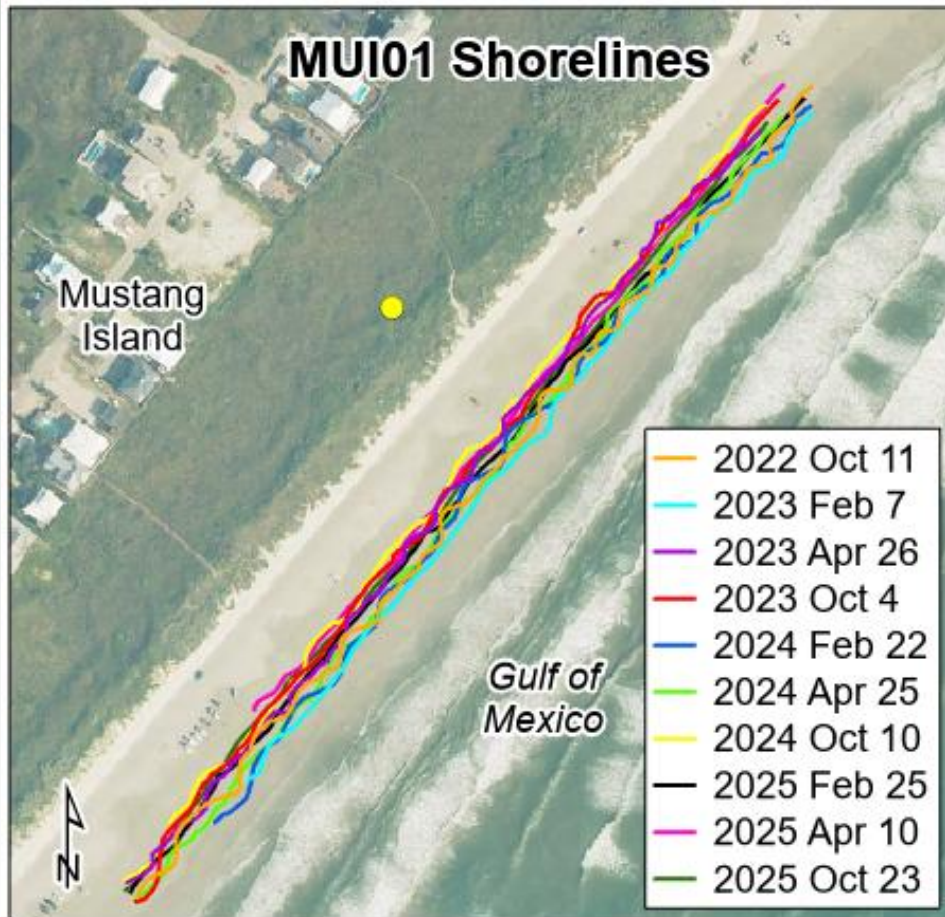
October 23, 2025
Veg line & road looking north



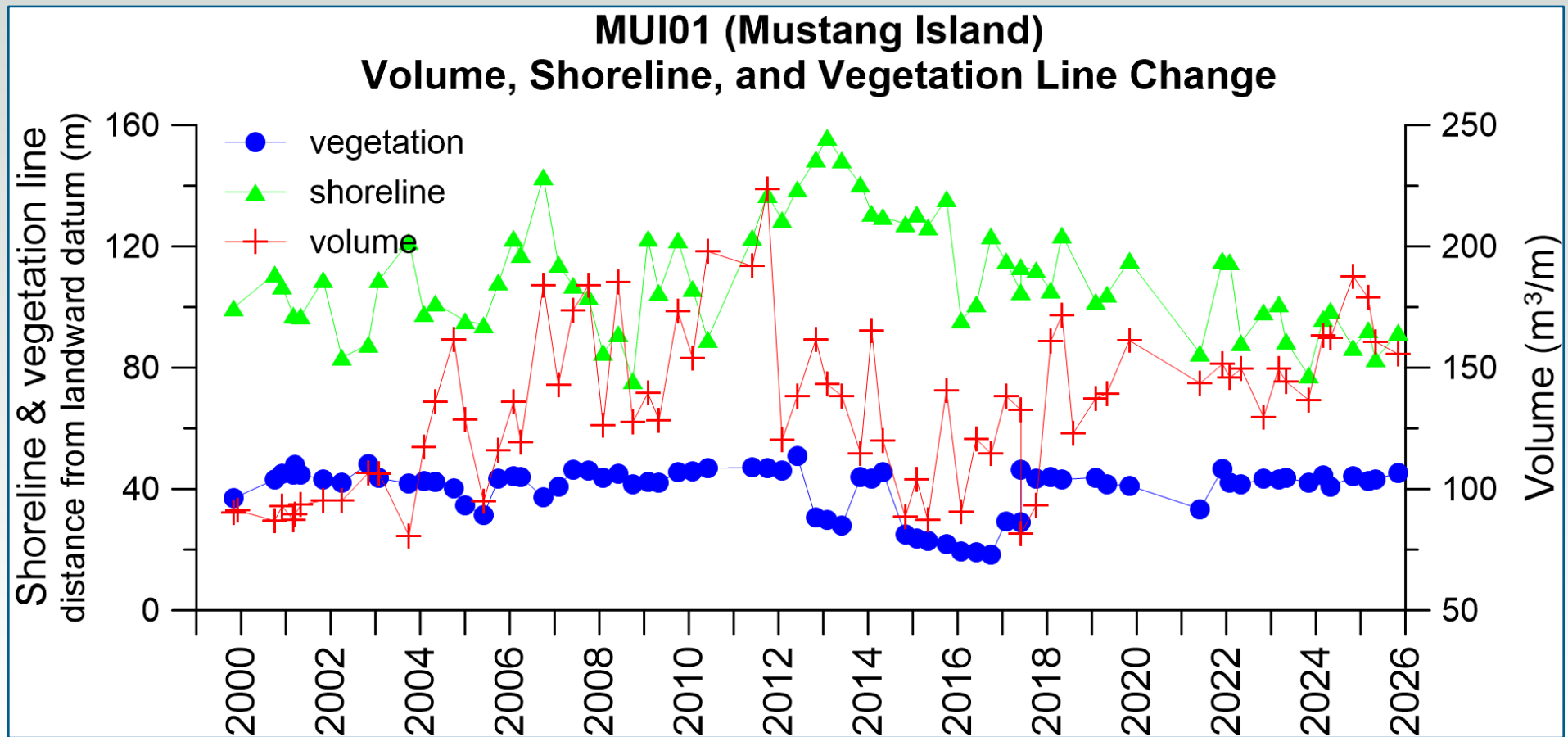
MUI01: fall 2022-fall 2025



MUI01 shore and vegetation line positions



MUI01: shoreline, vegetation line, and volume changes



Sediment volume was calculated above 1.5 meter NAVD88.

October 10, 2025
Washover on foredune



February 25, 2025
Foredune looking north



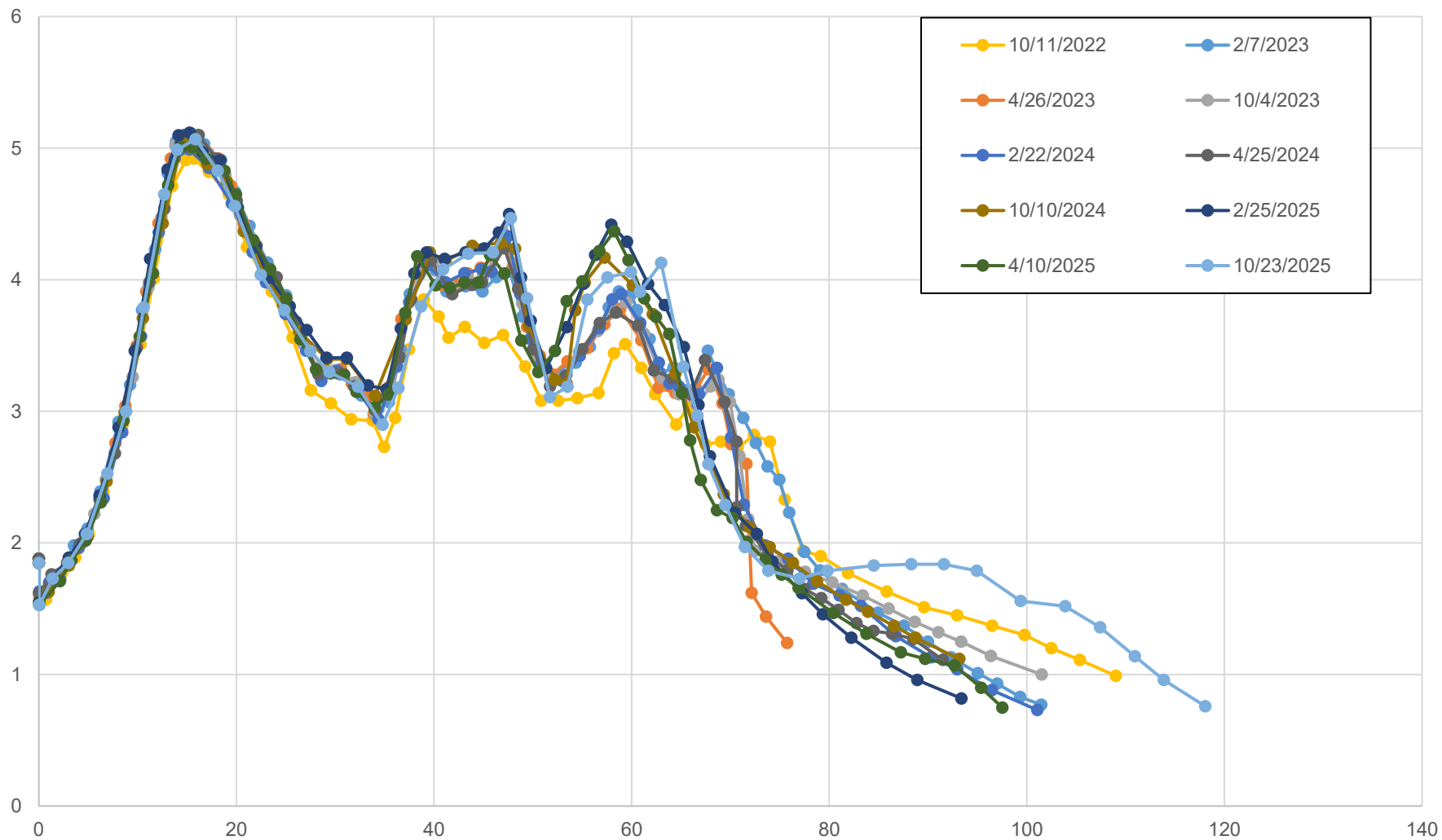
April 10, 2025
Wet/dry line view north



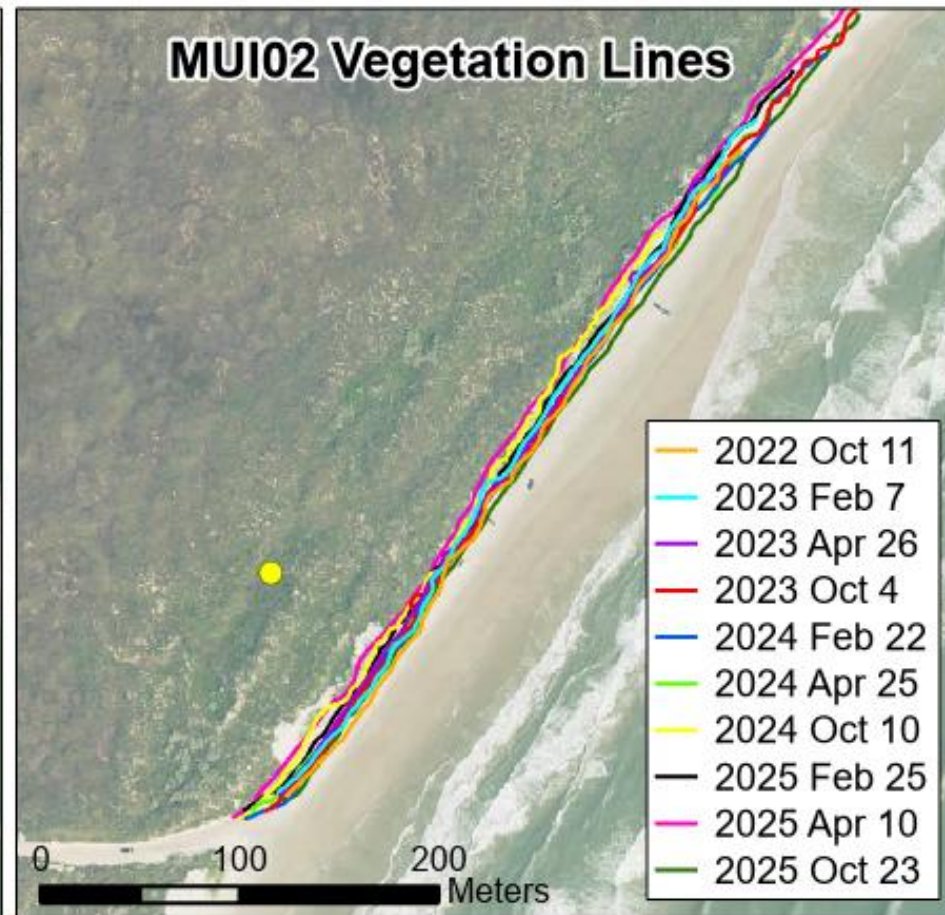
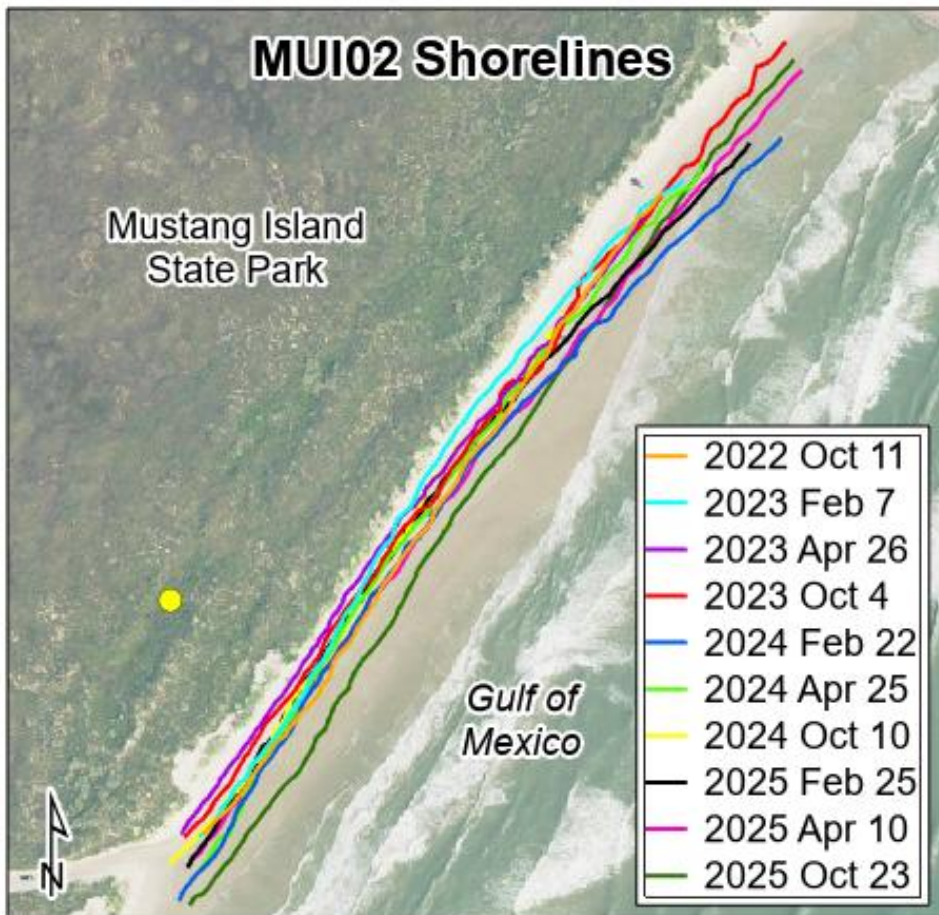
October 23, 2025
Veg line looking north



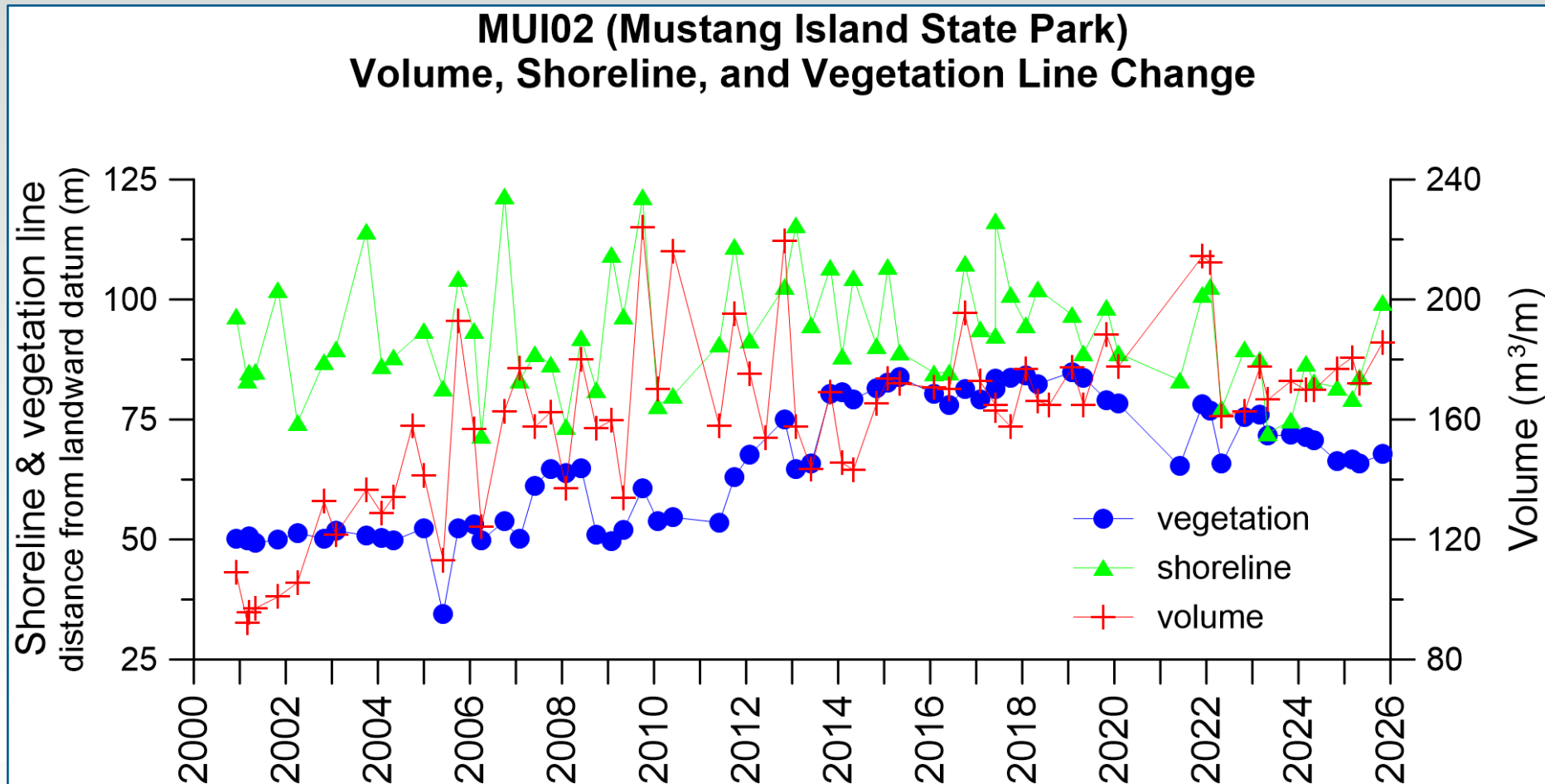
MUI02: fall 2022-fall 2025



MUI02 shore and vegetation line positions



MUI02: shoreline, vegetation line, and volume changes



Sediment volume was calculated above 1.25 meter NAVD88.

October 10, 2025
Veg line looking south



February 25, 2025
Wet/dry line looking north



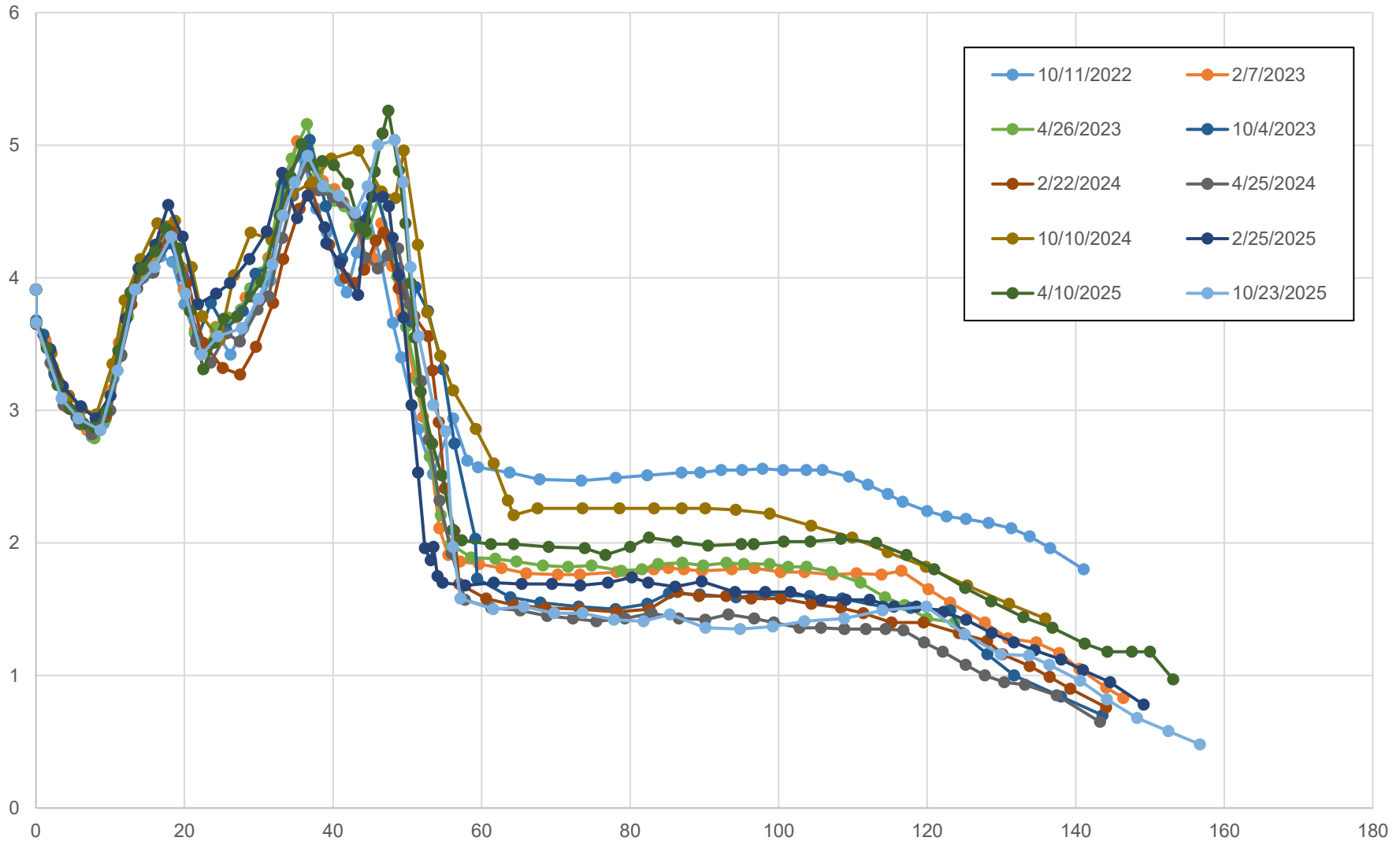
April 10, 2025
Beach road view north



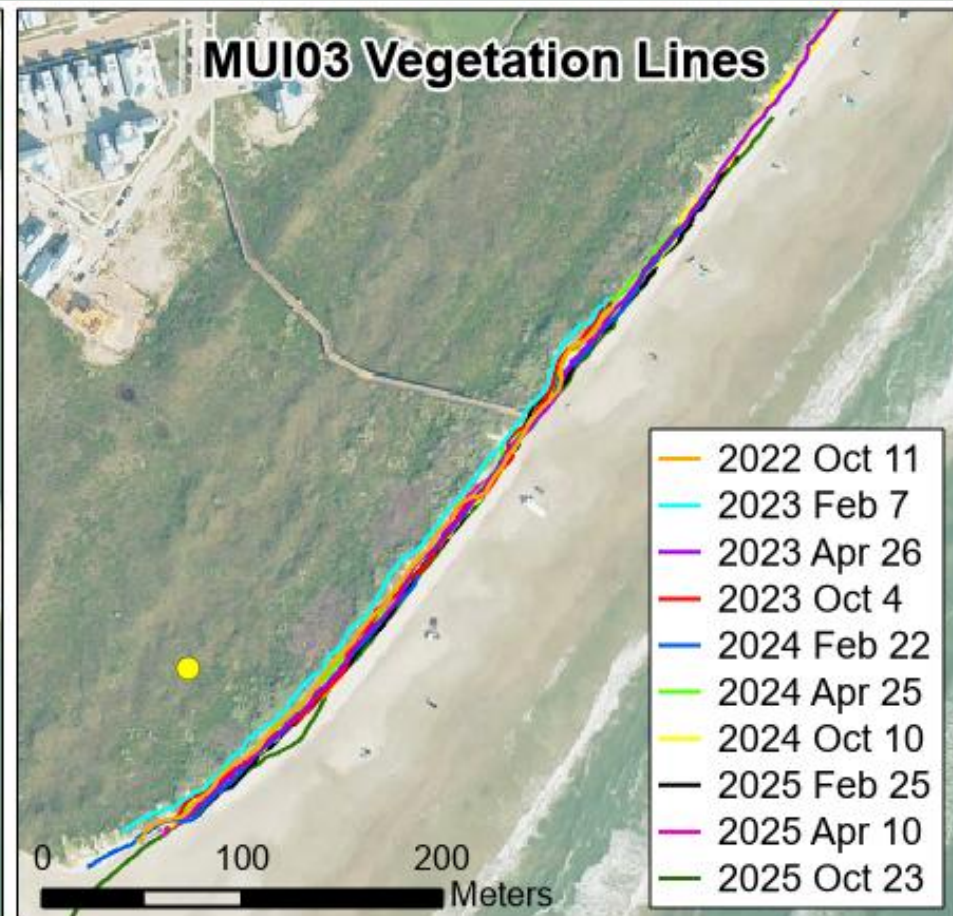
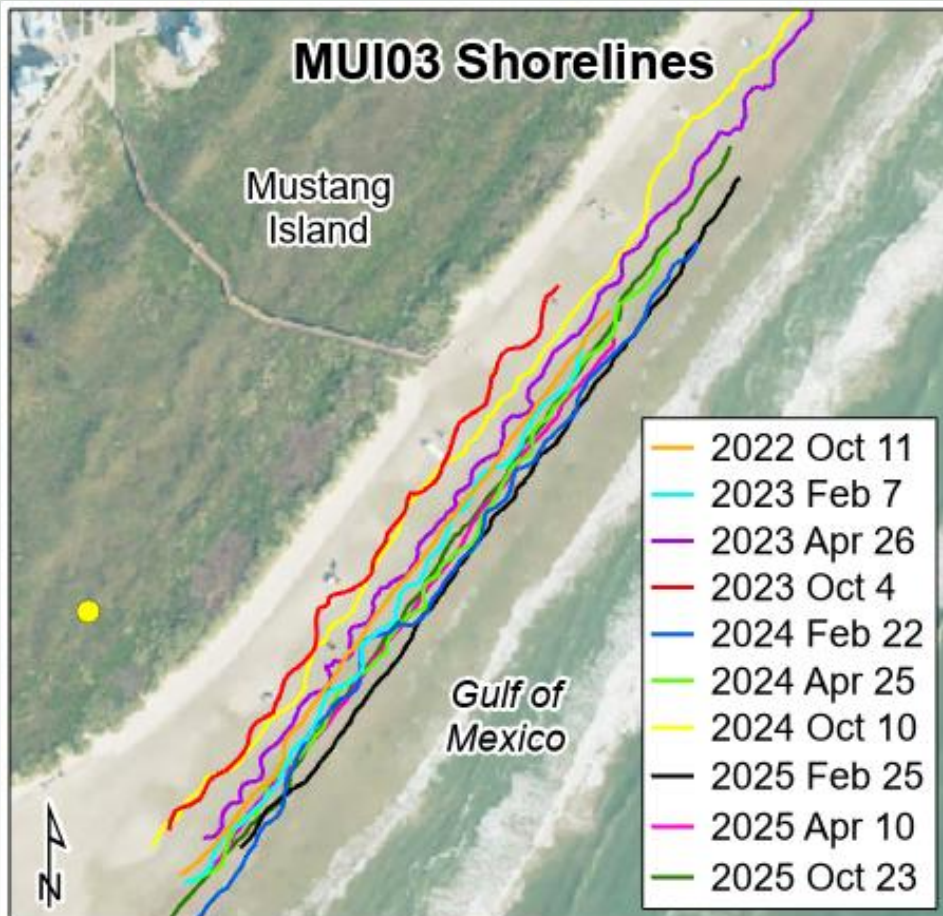
October 23, 2025
View from waterline



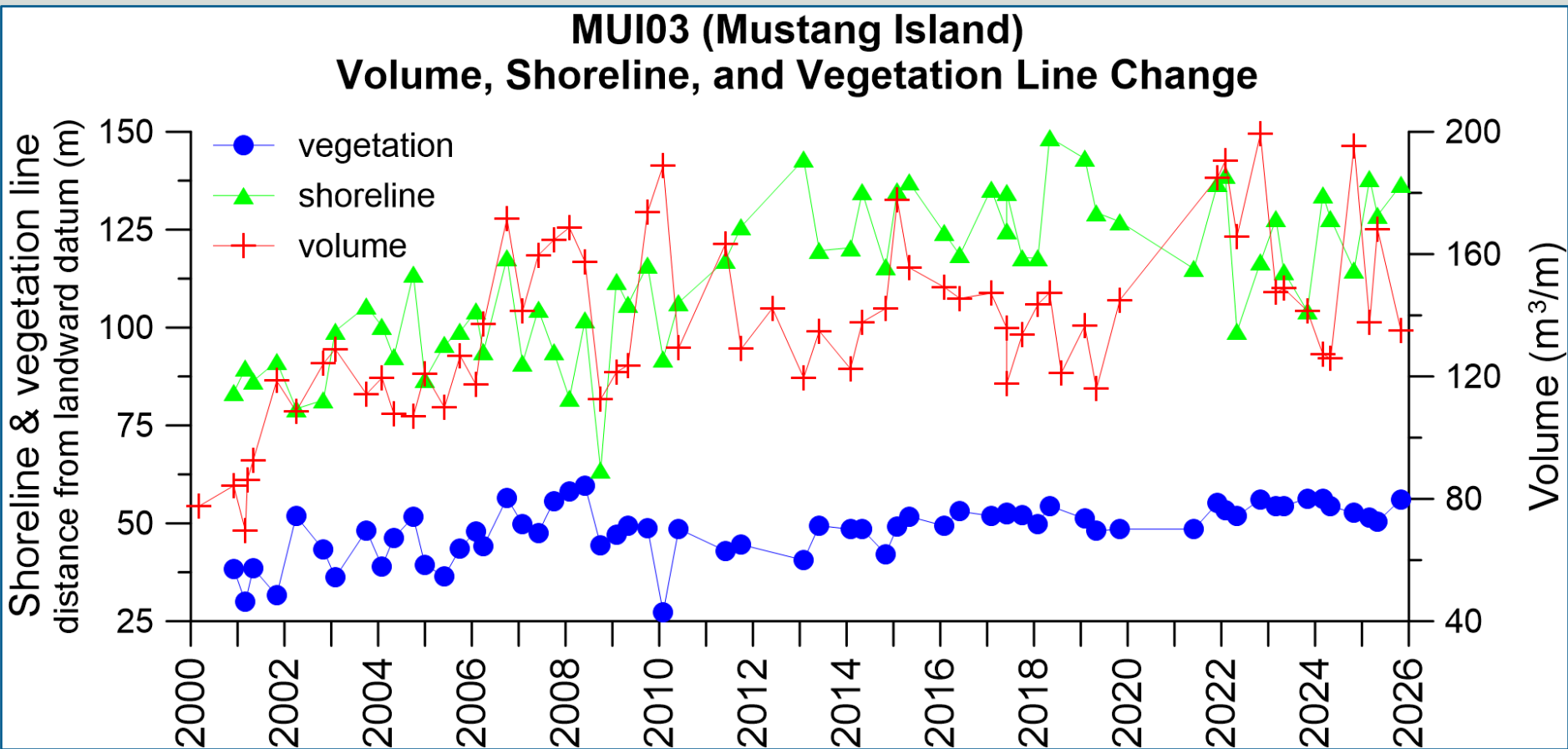
MUI03: fall 2022-fall 2025



MUI03 shore and vegetation line positions



MUI03: shoreline, vegetation line, and volume changes



Sediment volume was calculated above 1.5 meter NAVD88.