

Texas High School Coastal Monitoring Program at Cunningham Middle School at South Park: 2022-2023

December 2023

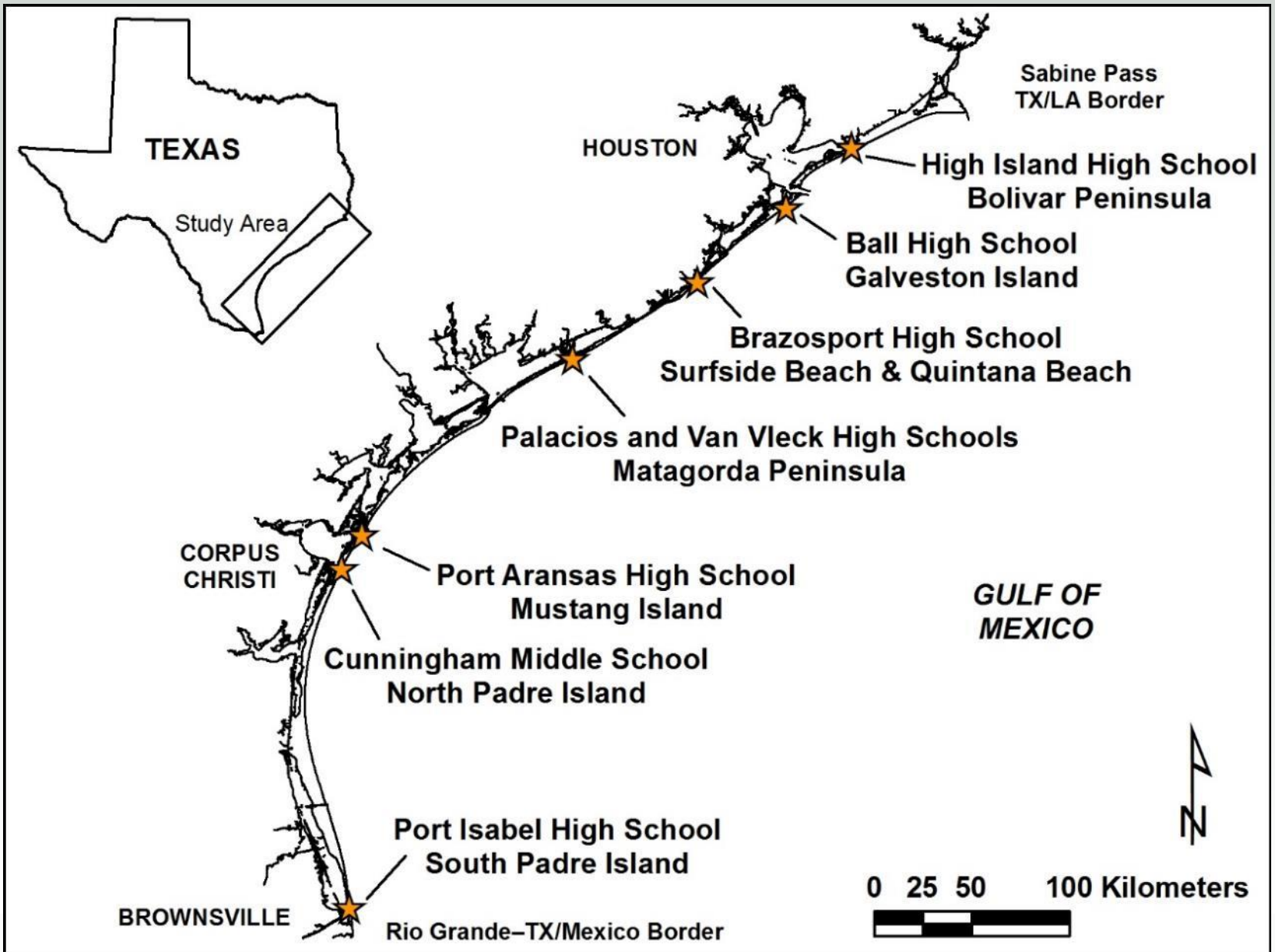


BUREAU OF
ECONOMIC
GEOLOGY

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 general public.





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



Northern Padre Island Study Sites



2022-2023 field trips

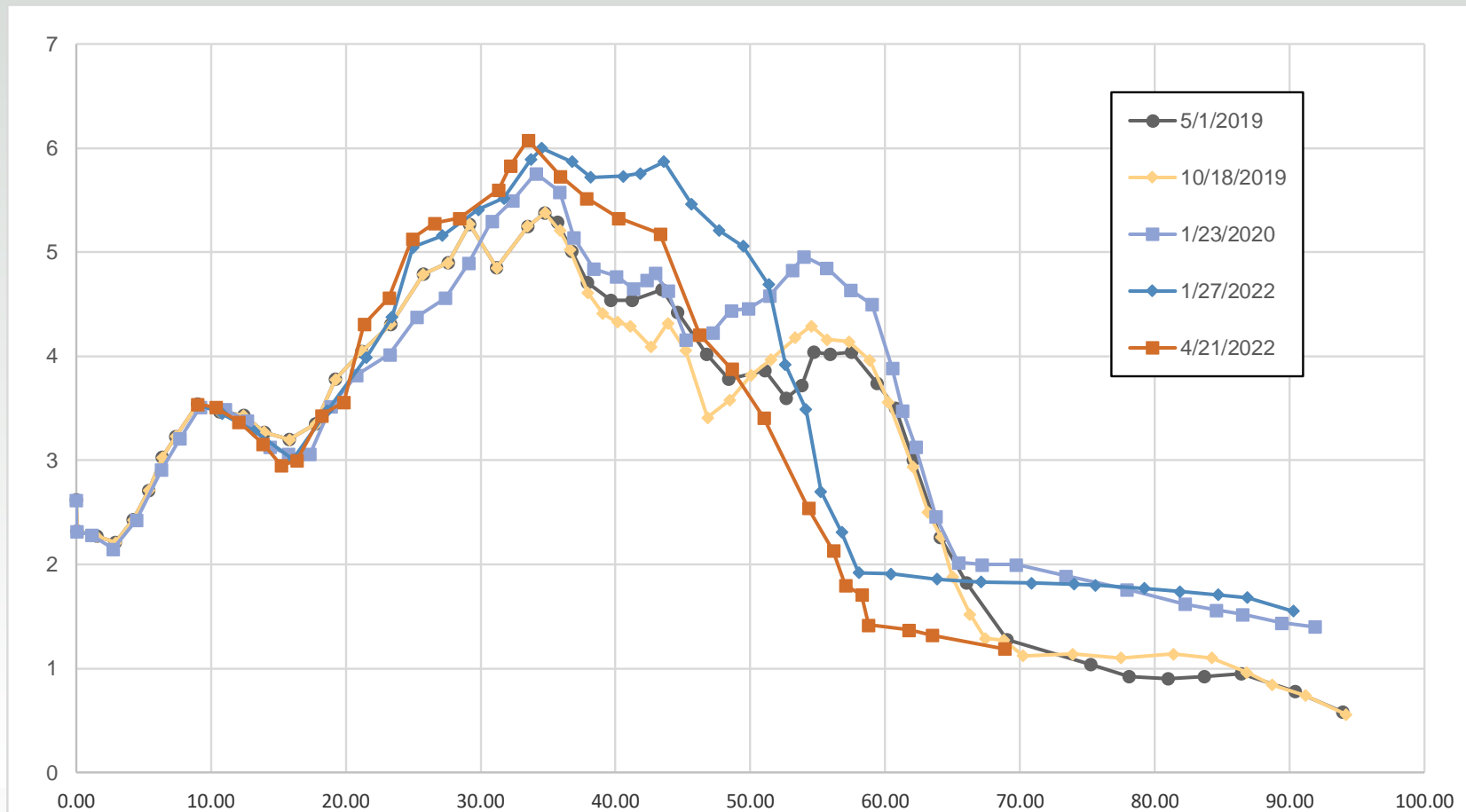
October 6, 2022



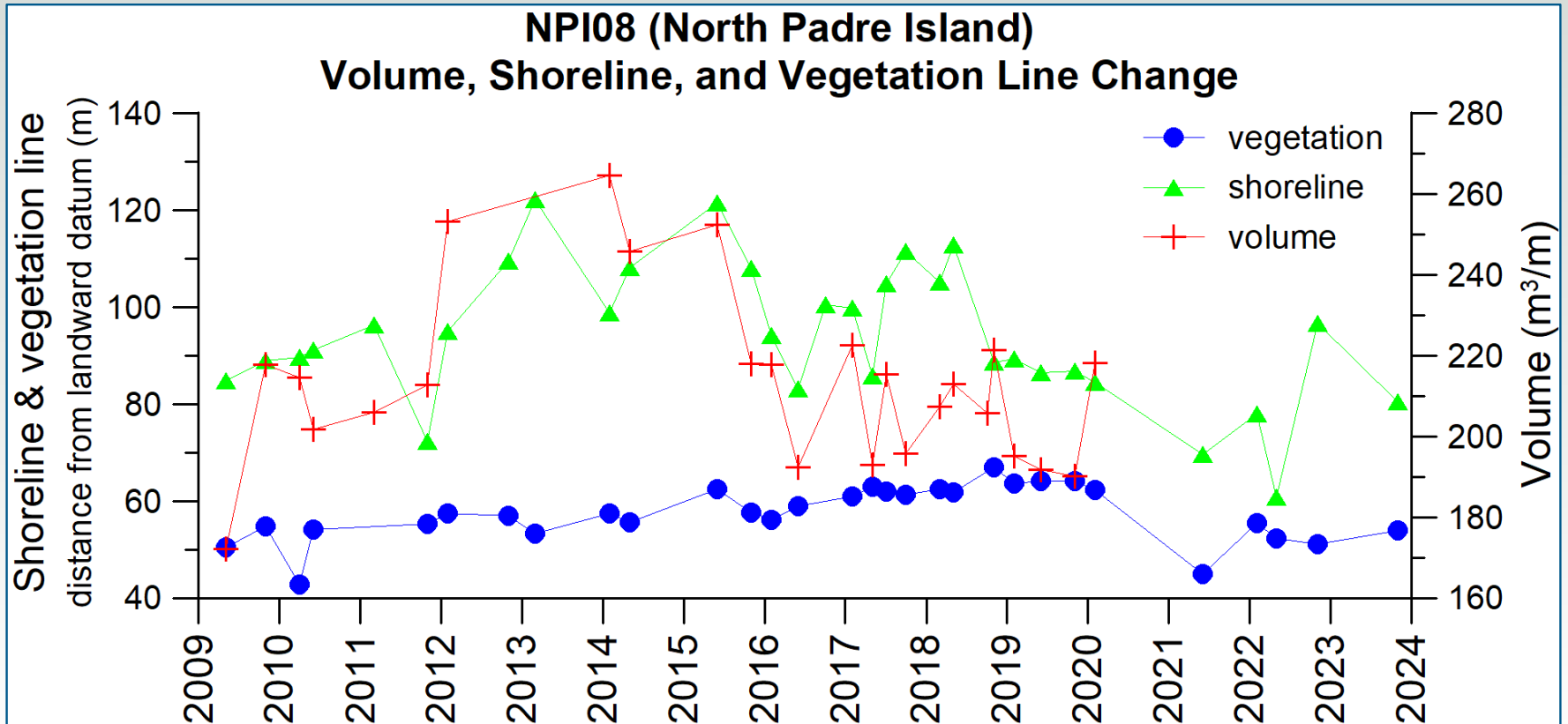
October 3, 2023



NPI08: fall 2018-winter 2020

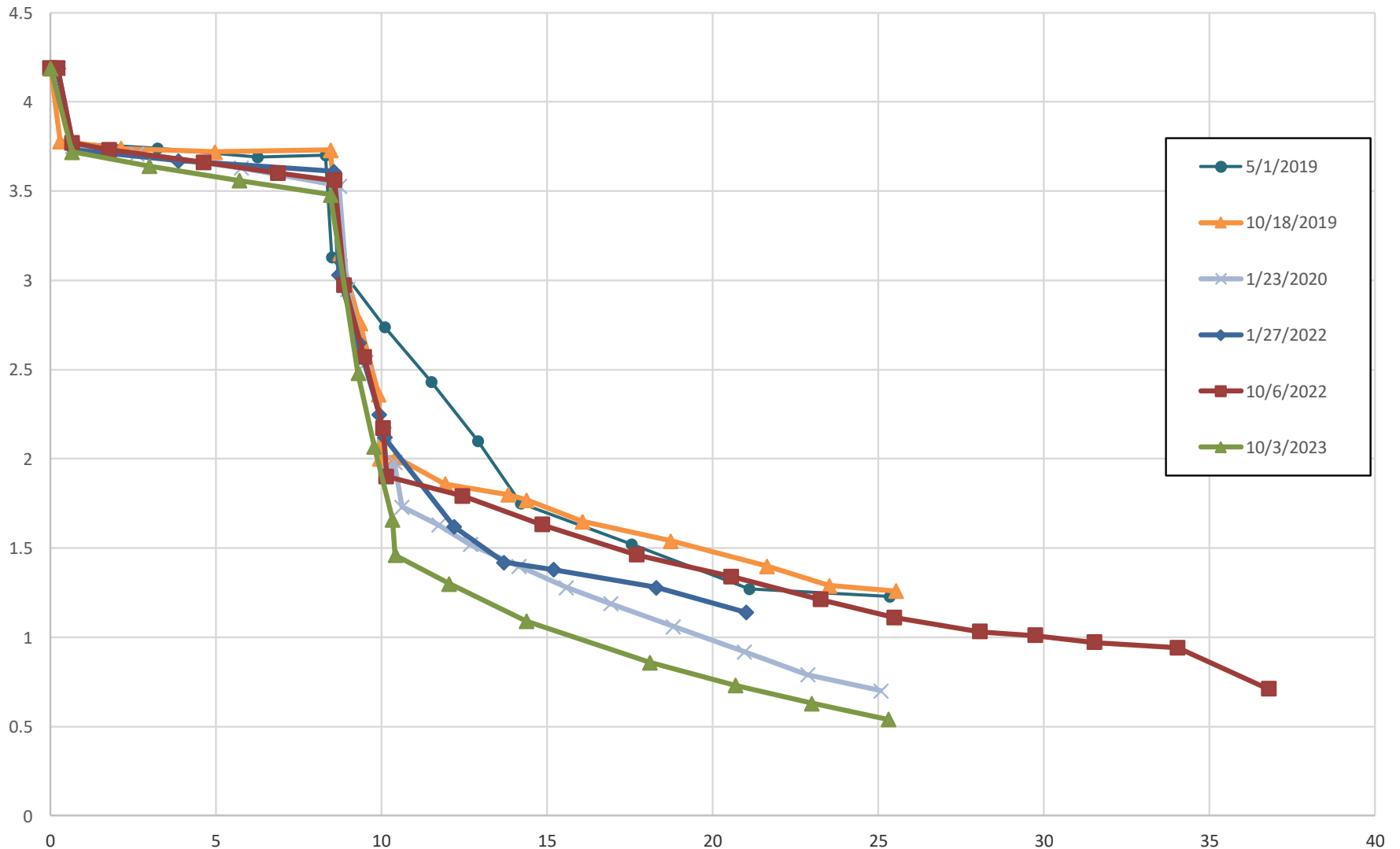


NPI08: shoreline, vegetation line, and volume changes

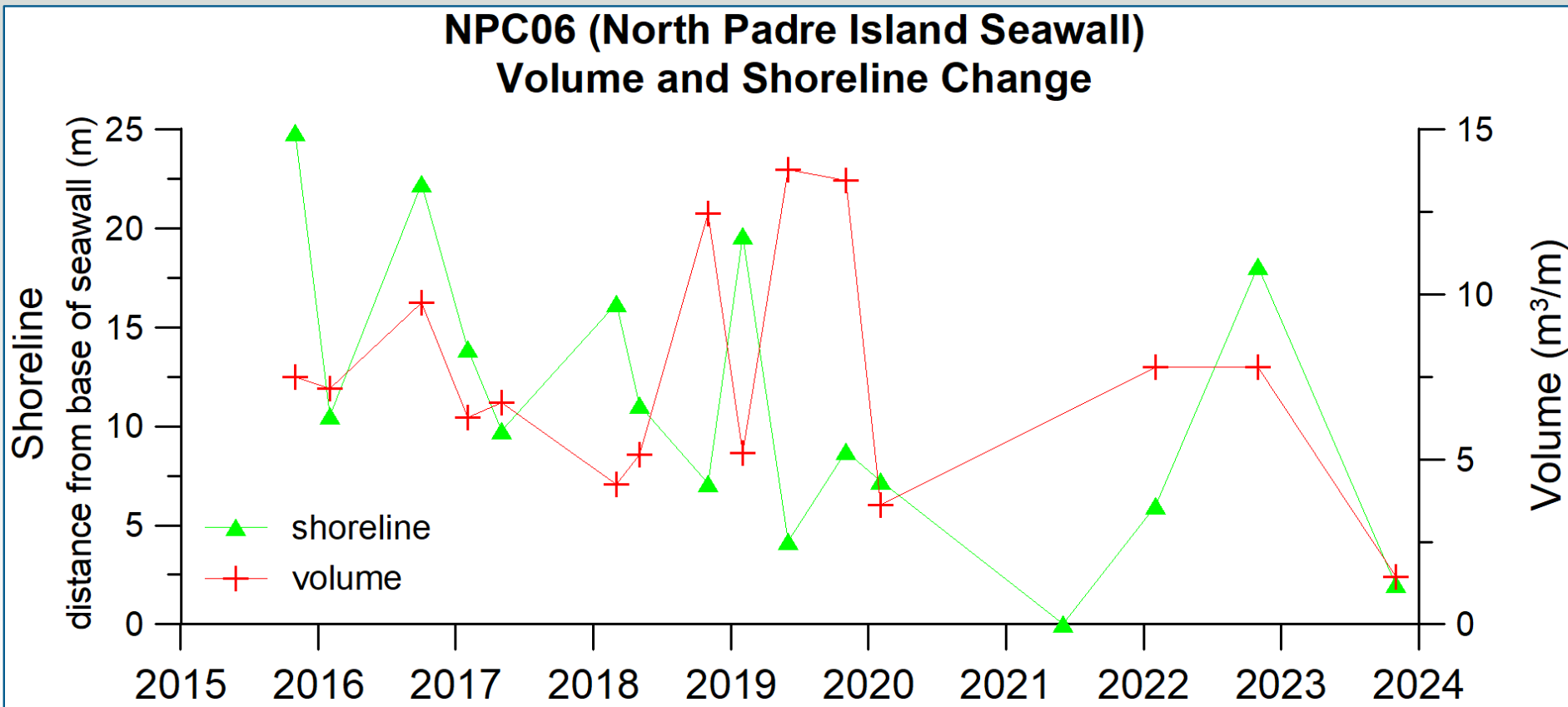


Sediment volume was calculated above 1 meter NAVD88.

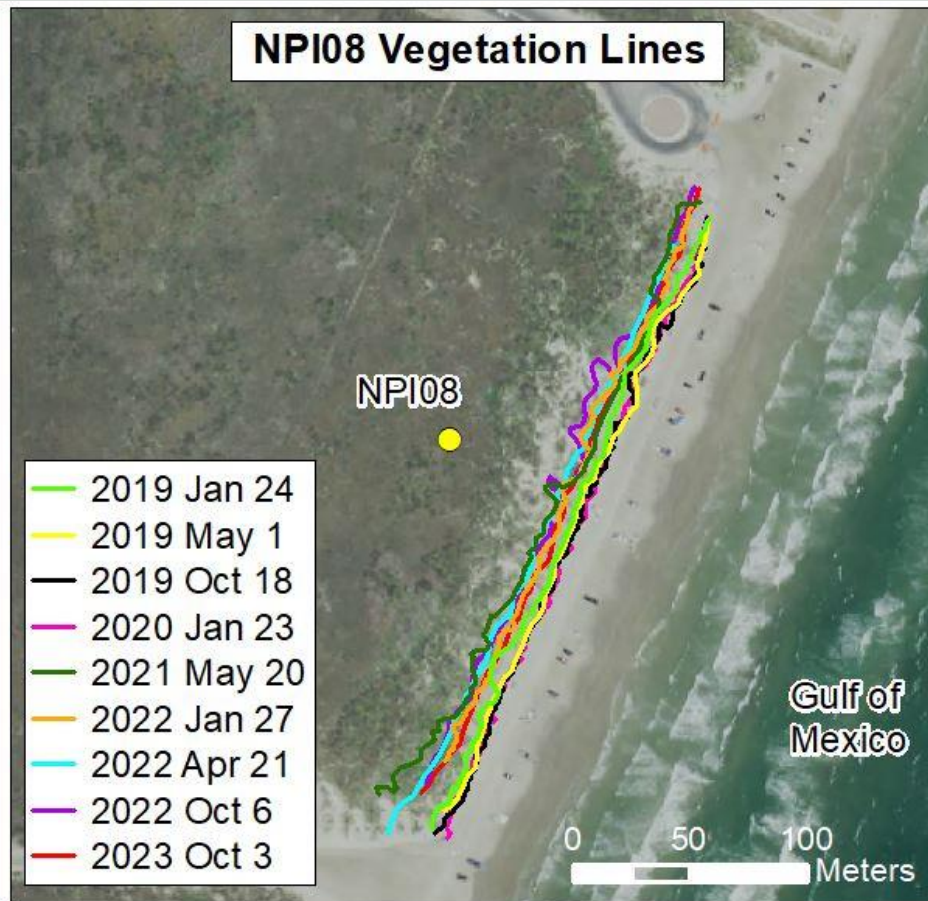
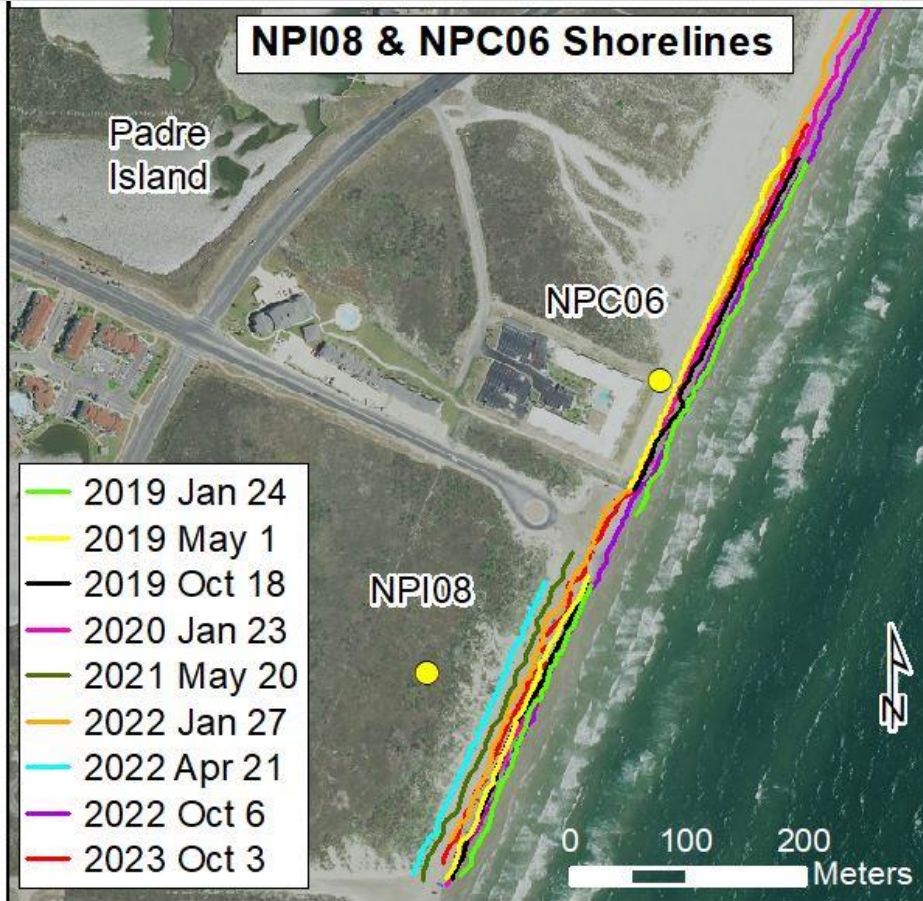
NPC06: spring 2019-fall 2023



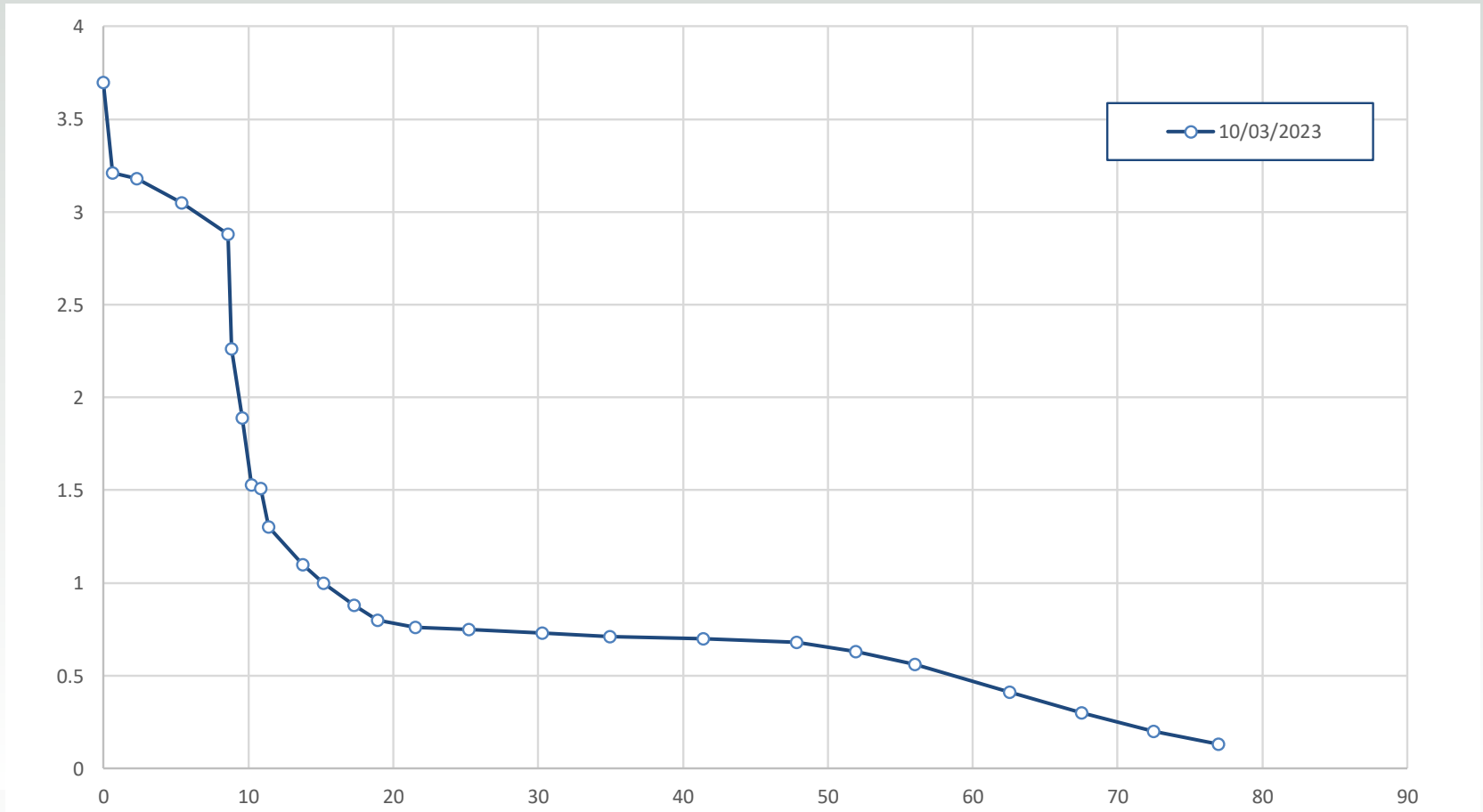
NPC06: shoreline, vegetation line, and volume changes



NPI08 & NPC06 shore and vegetation line positions



NPISW new: fall2023



Seawall shoreline position

