

Texas High School Coastal Monitoring Program at Cunningham Middle School at South Park: 2021-2022

July 2022

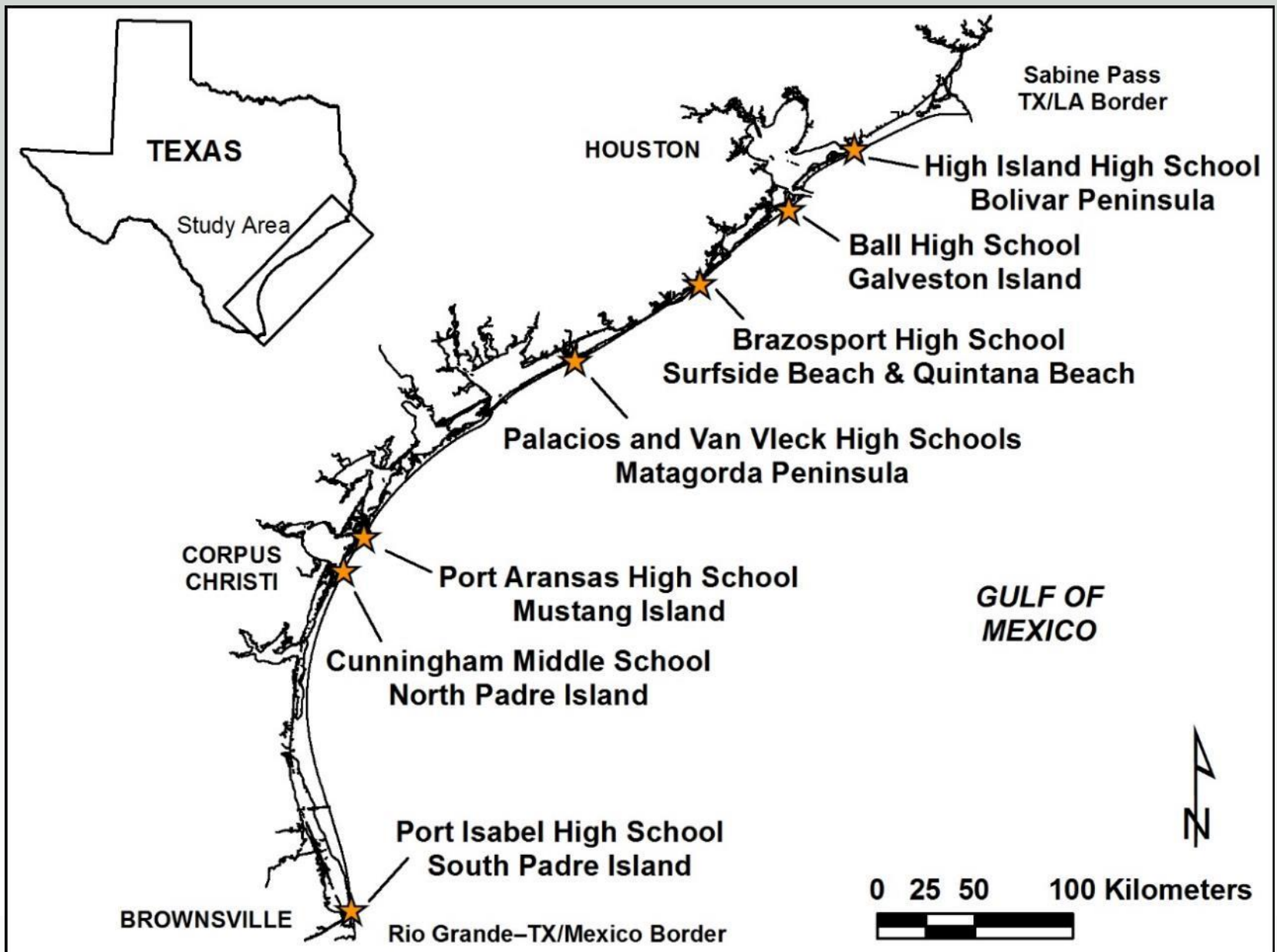


BUREAU OF
ECONOMIC
GEOLOGY

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



2021-2022 field trips

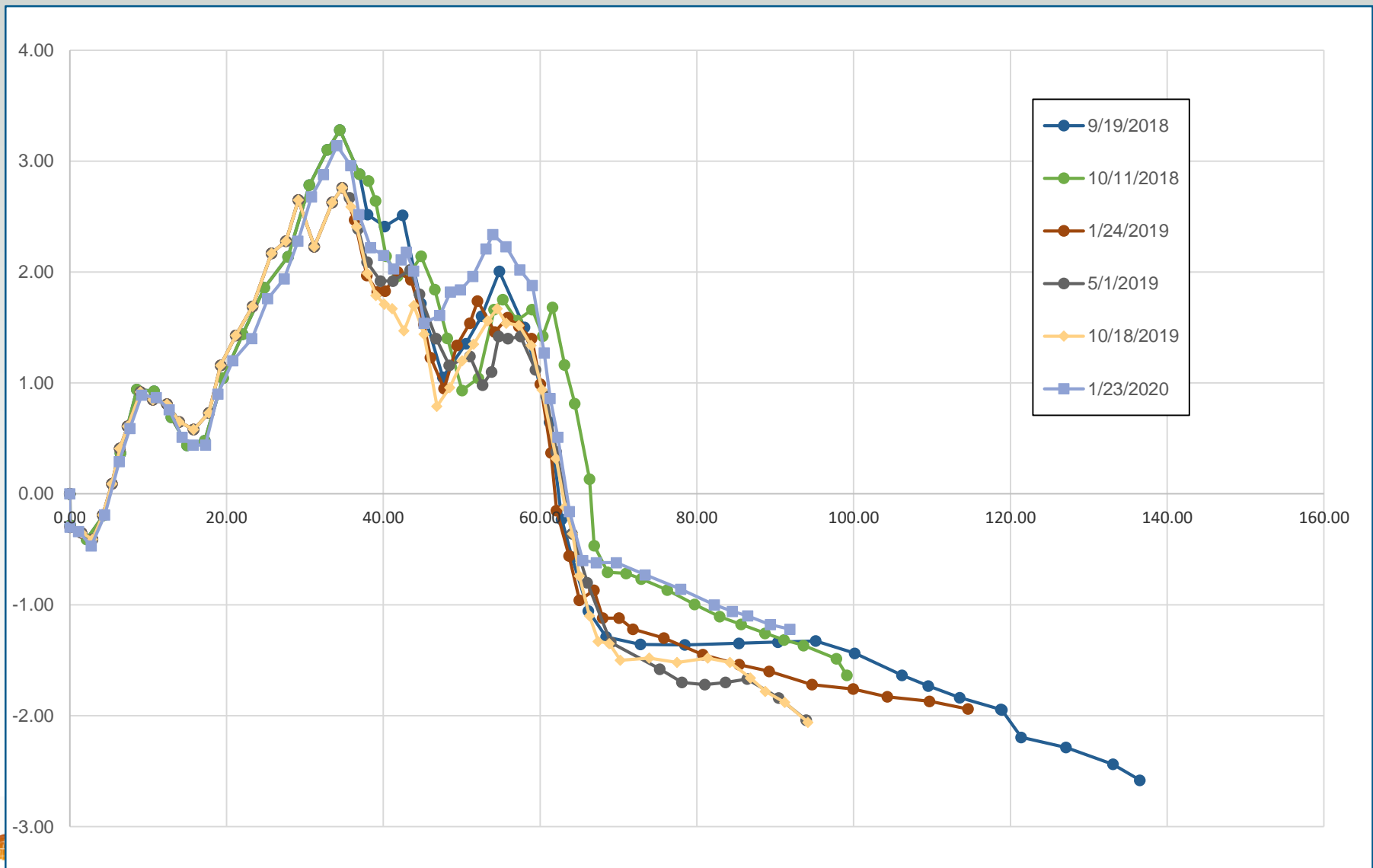
January 27, 2022



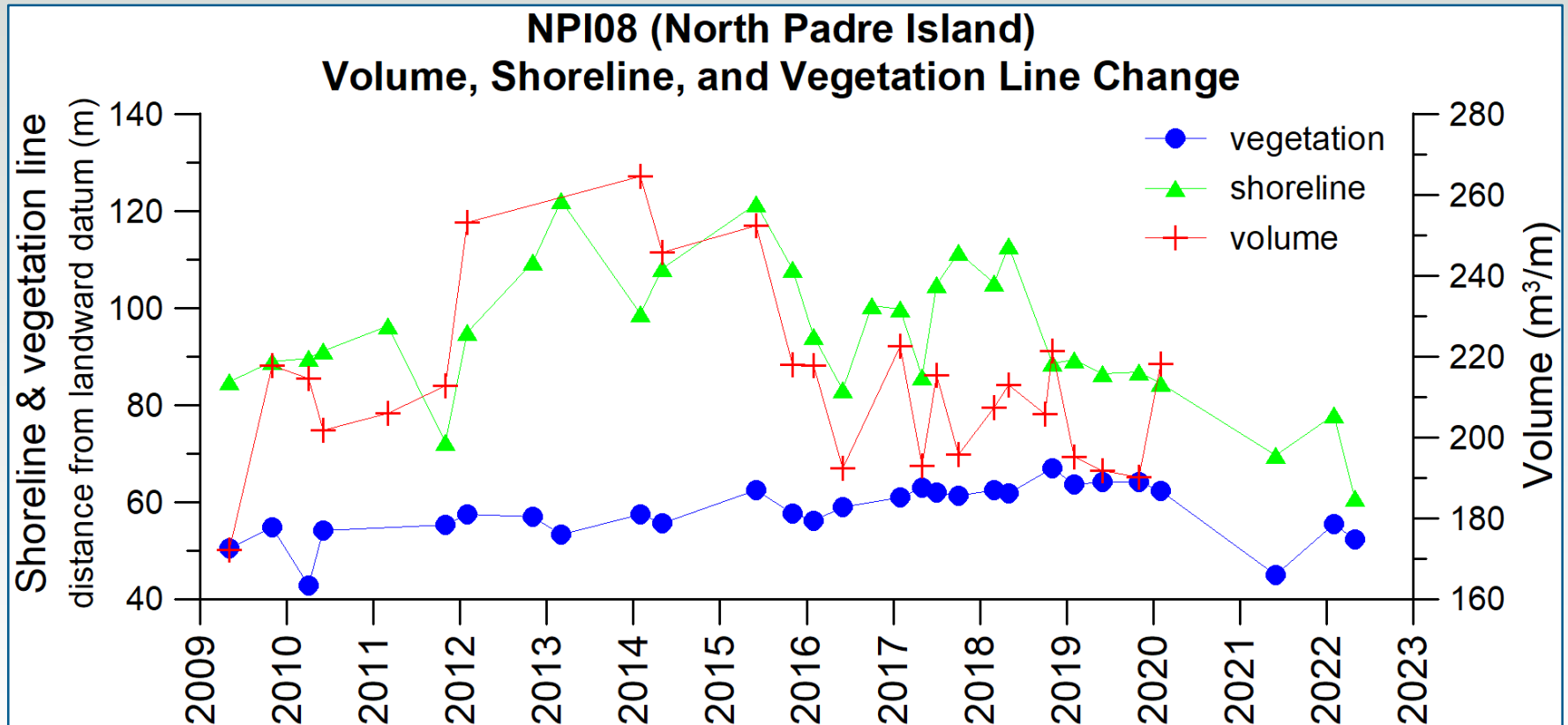
April 21, 2022



NPI08: fall 2018-winter 2020

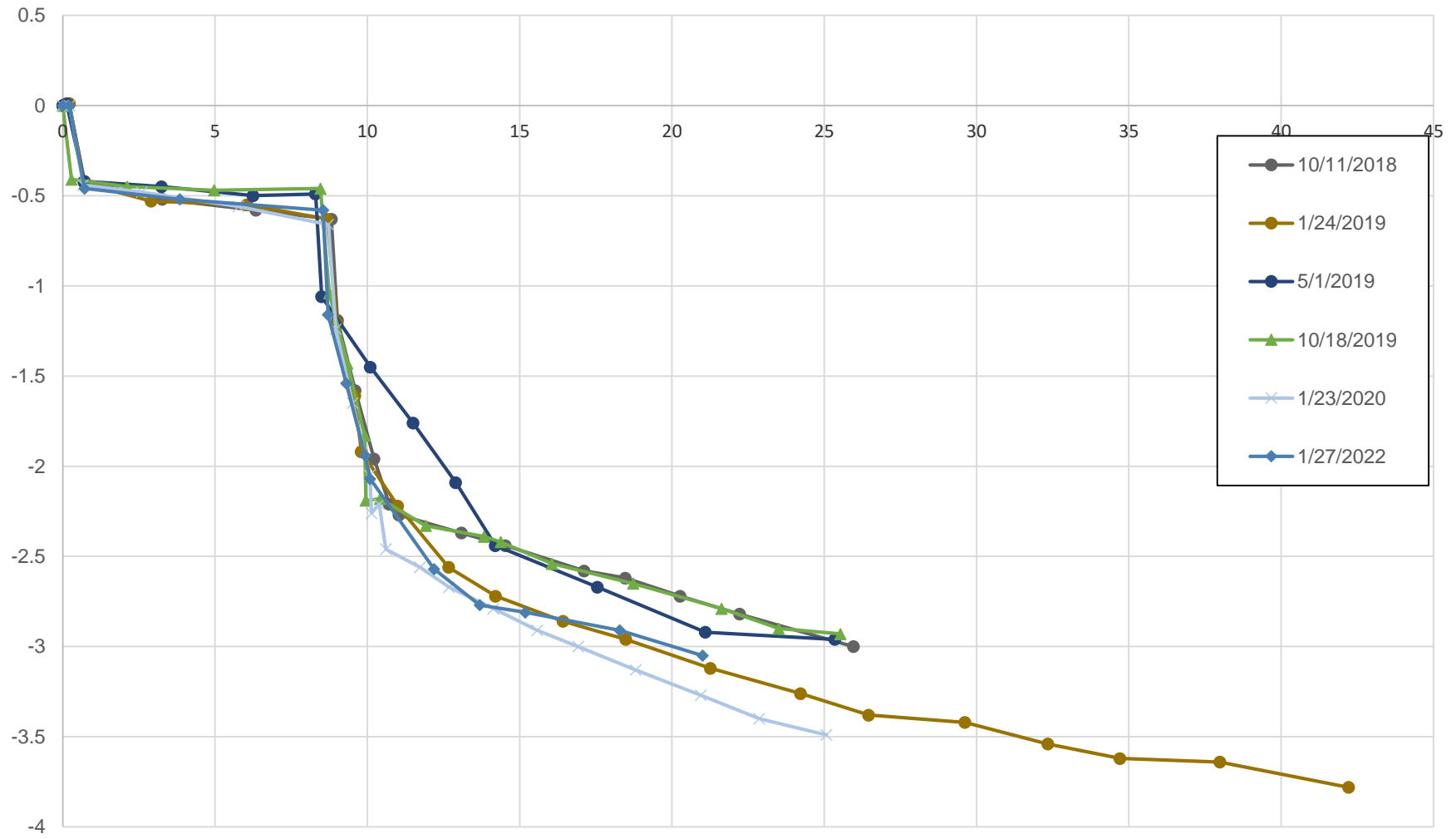


NPI08: shoreline, vegetation line, and volume changes

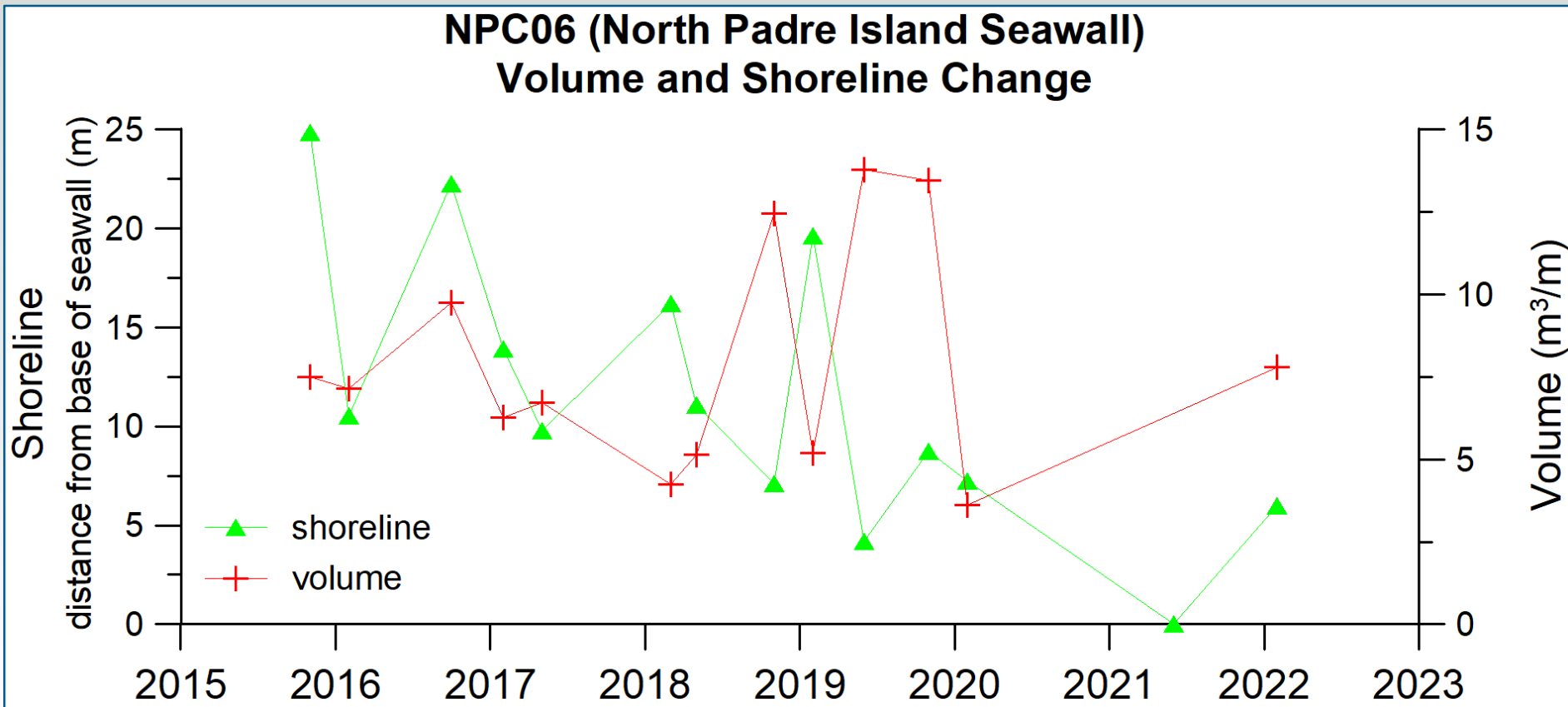


Sediment volume was calculated above 1 meter NAVD88.

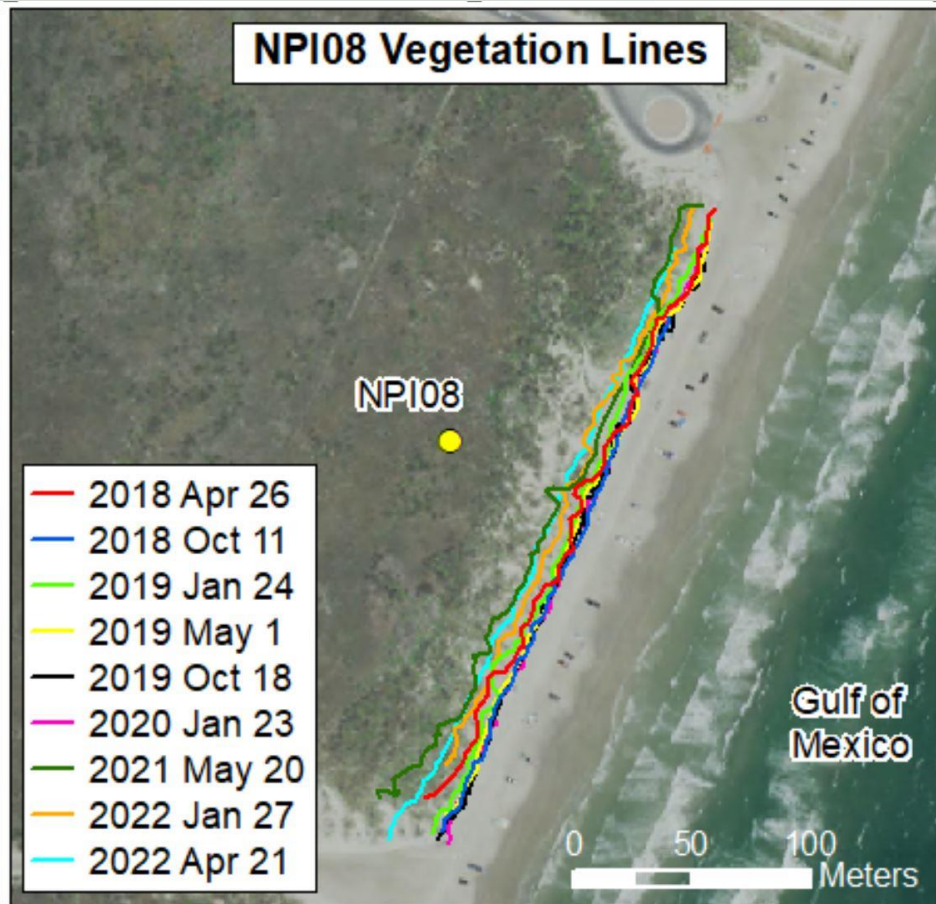
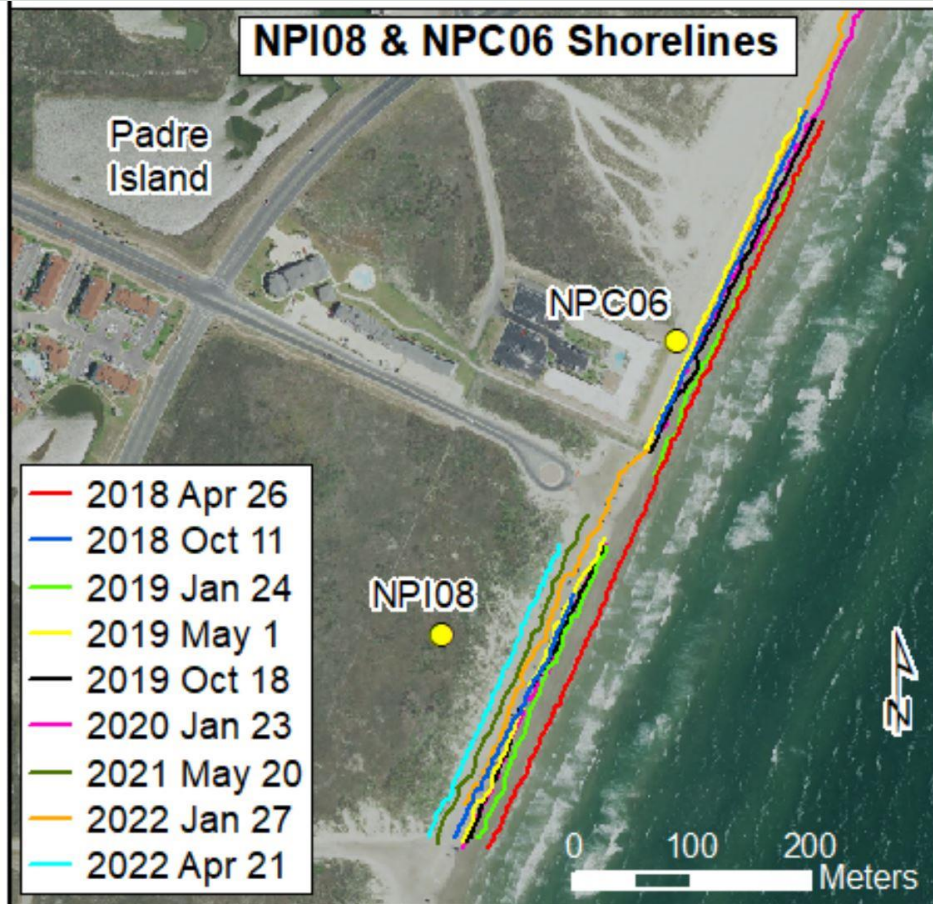
NPC06: fall 2018-winter 2022



NPC06: shoreline, vegetation line, and volume changes



NPI08 & NPC06 shore and vegetation line positions



Seawall shoreline position

