

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

July 2023

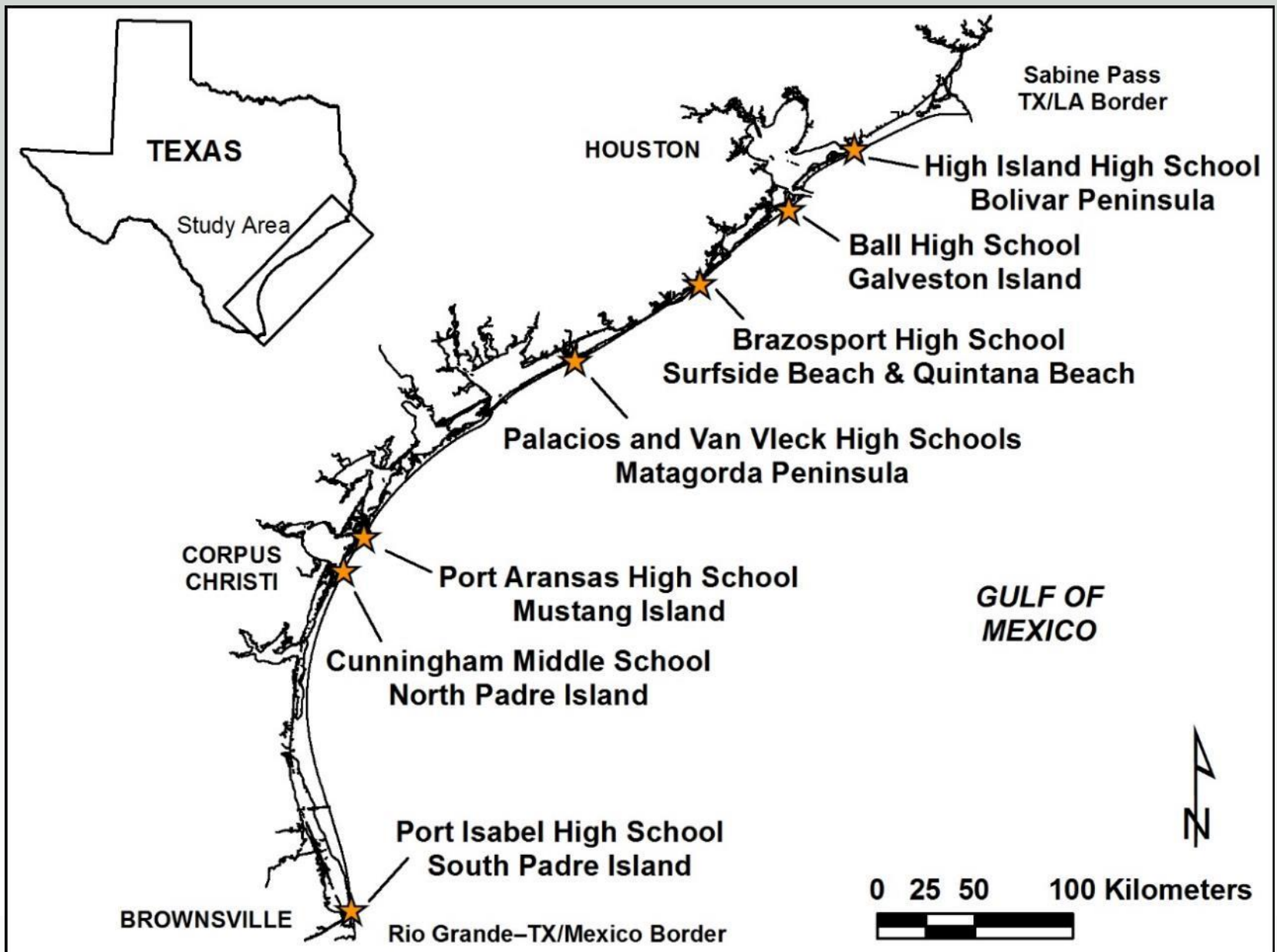


BUREAU OF  
ECONOMIC  
GEOLOGY

# 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



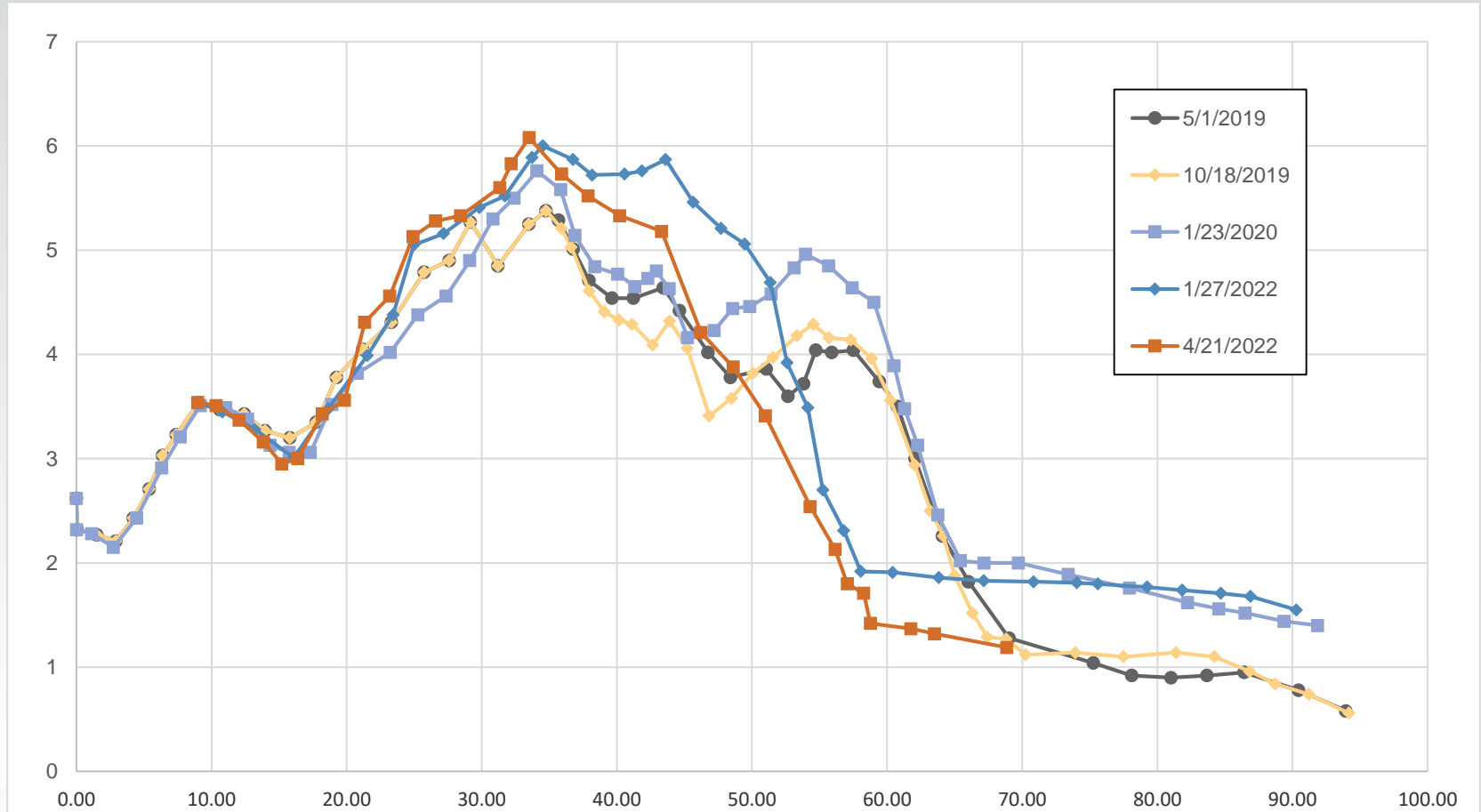


# 2022-2023 field trips

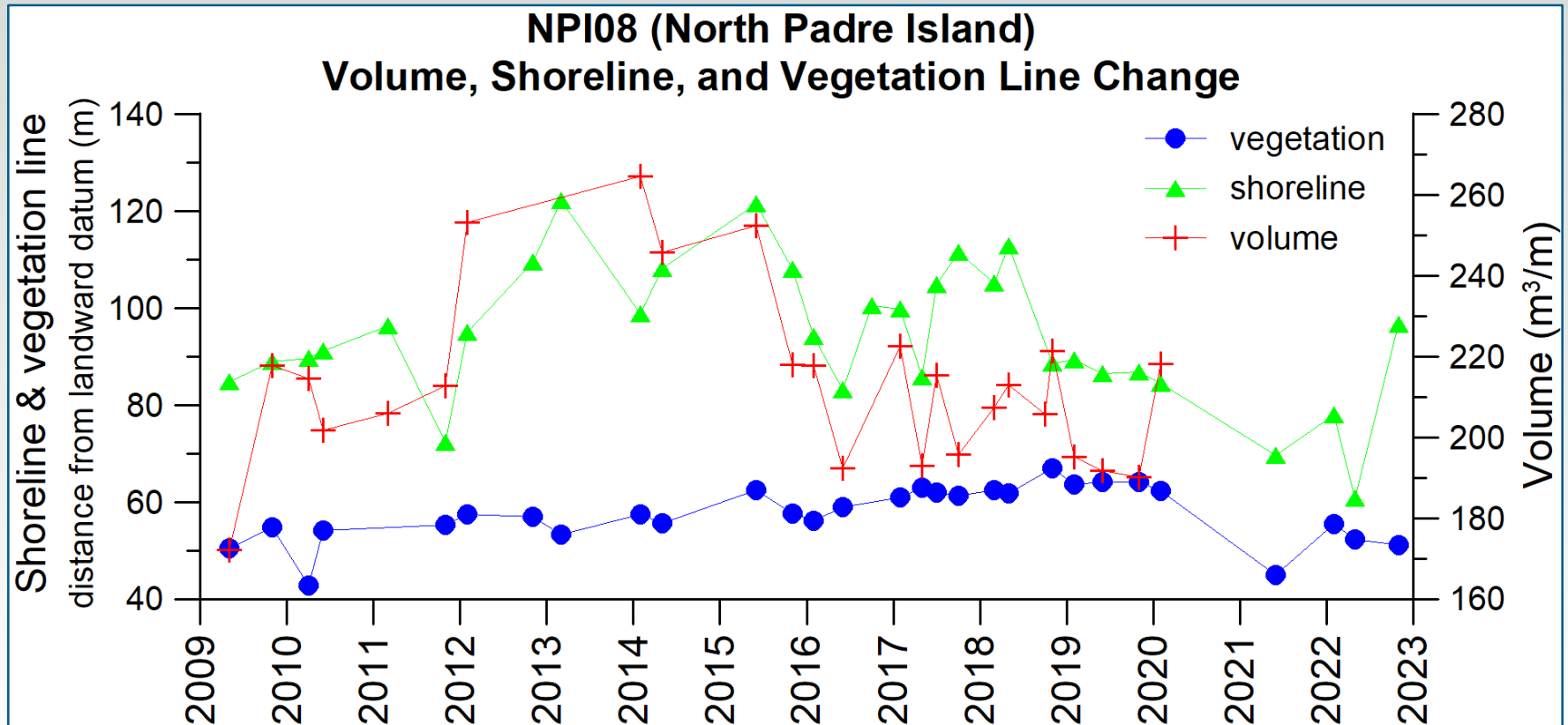
October 6, 2022



# NPI08: fall 2018-winter 2020



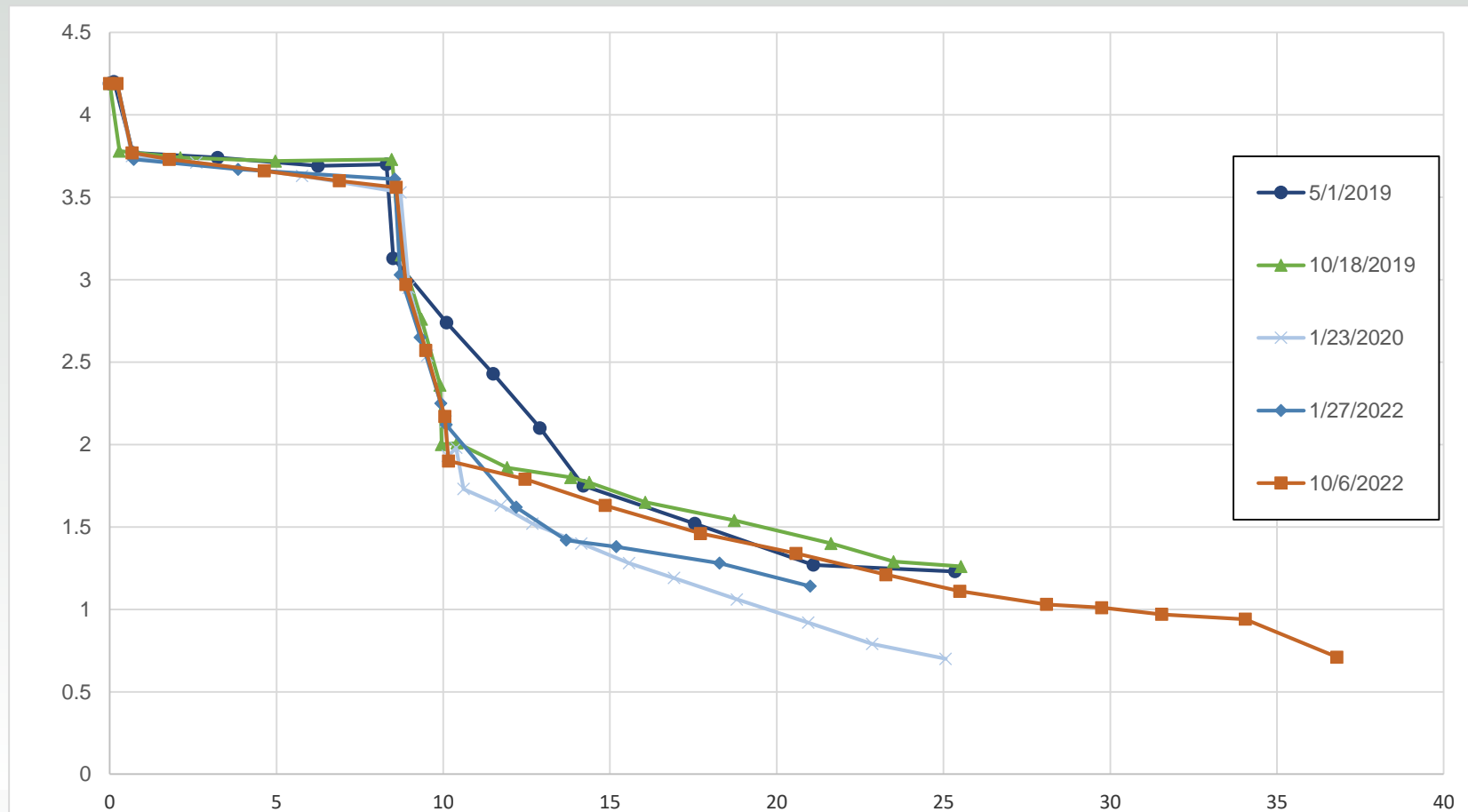
# NPI08: shoreline, vegetation line, and volume changes



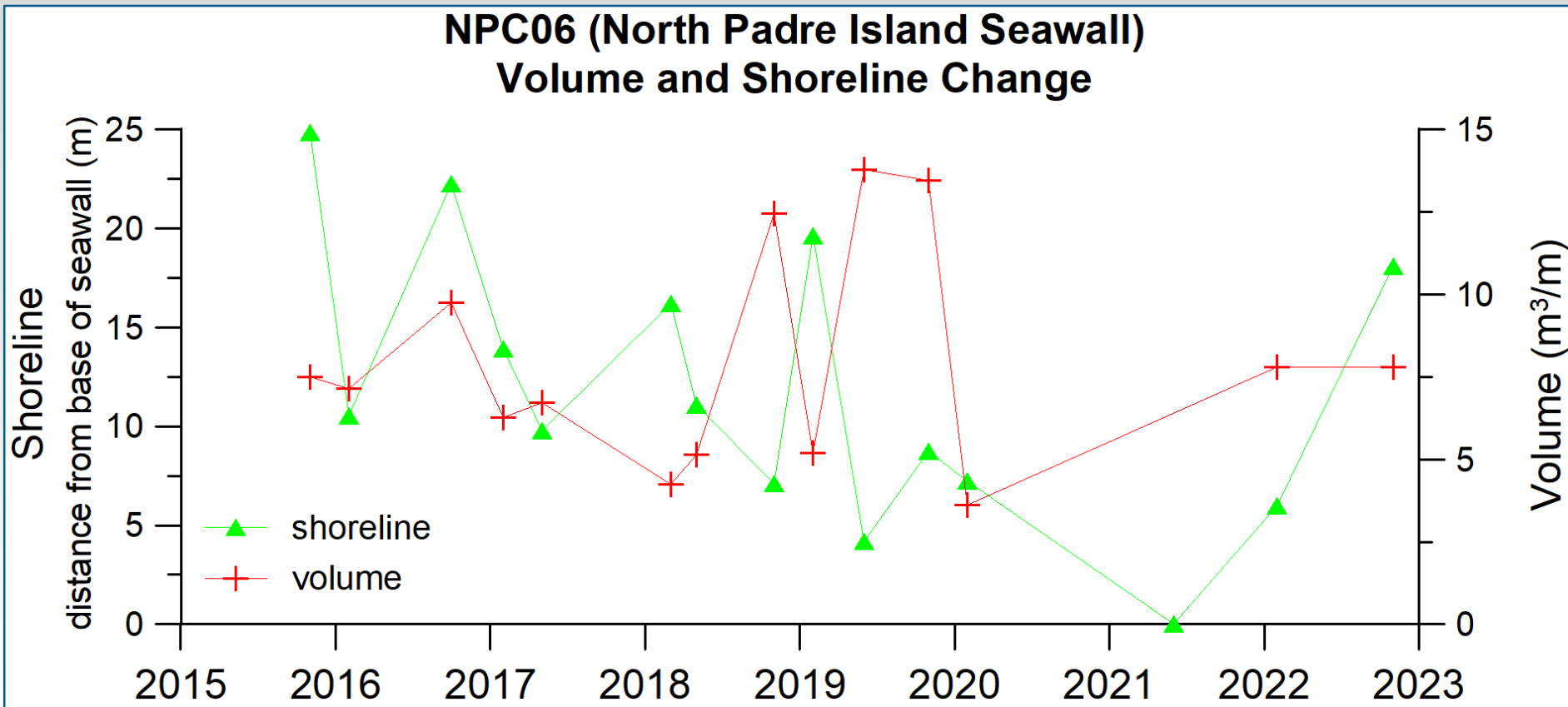
Sediment volume was calculated above 1 meter NAVD88.



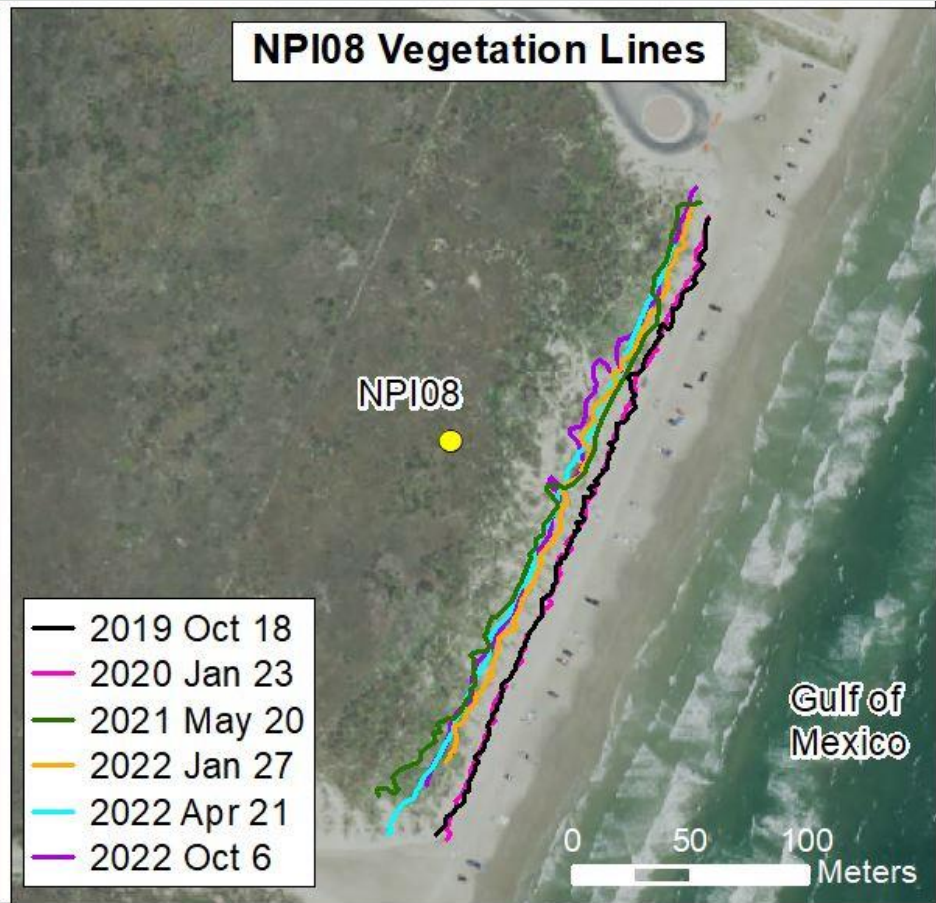
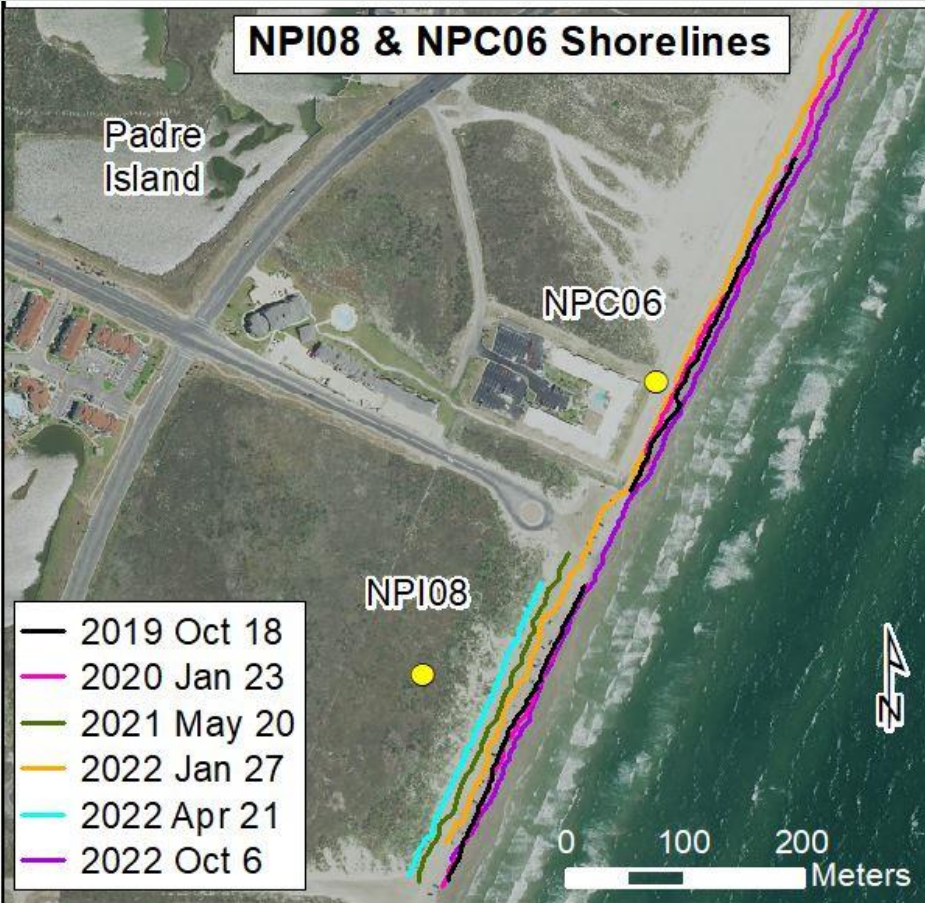
# NPC06: spring 2019-fall 2022



# NPC06: shoreline, vegetation line, and volume changes



# NPI08 & NPC06 shore and vegetation line positions





# Seawall shoreline position

