

Texas High School Coastal Monitoring Program at High Island High School: 2022-2023

July 2023

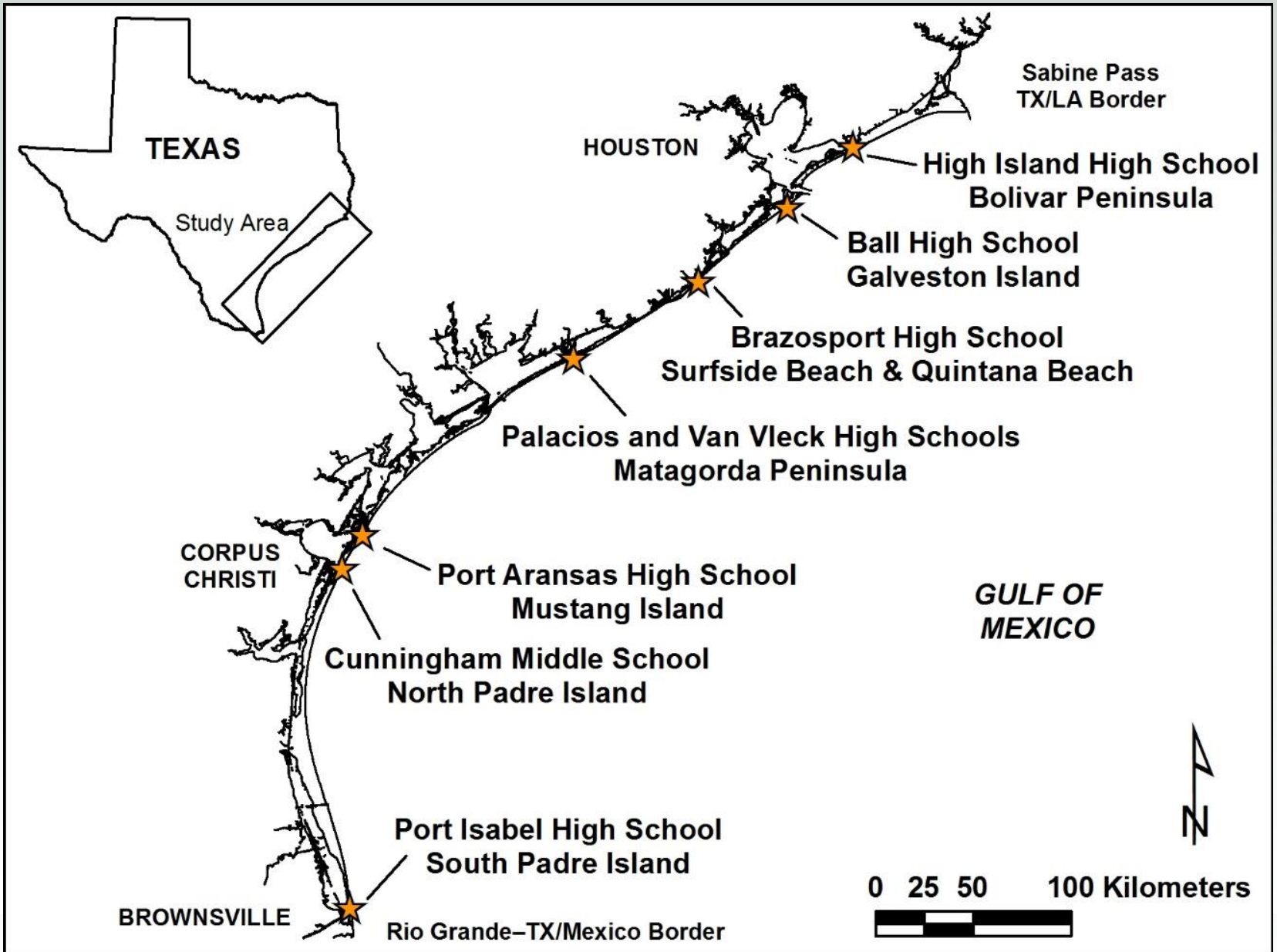


BUREAU OF
ECONOMIC
GEOLOGY

Texas High School Coastal Monitoring Program

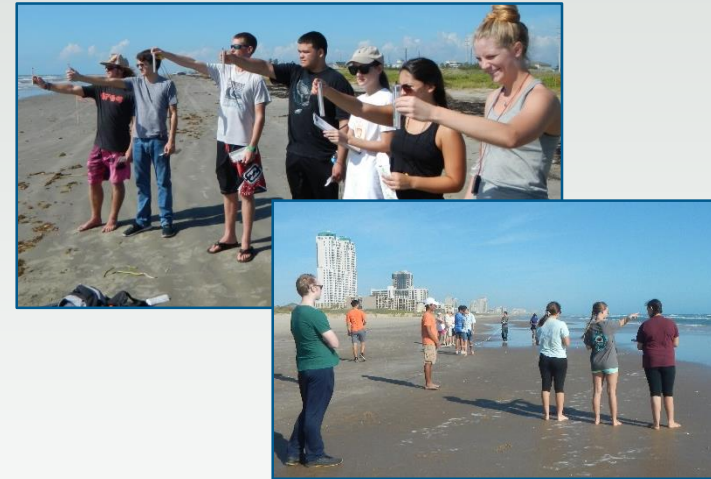
- Provide high school students with a real-world learning experience by monitoring the beach and dune environment.
- Obtain a better understanding of the relationship between coastal processes, beach morphology, and shoreline change
- Increase public awareness and understanding of coastal change, processes, and hazards by making data and findings available for coastal managers and scientists, students and teacher, and the general public.



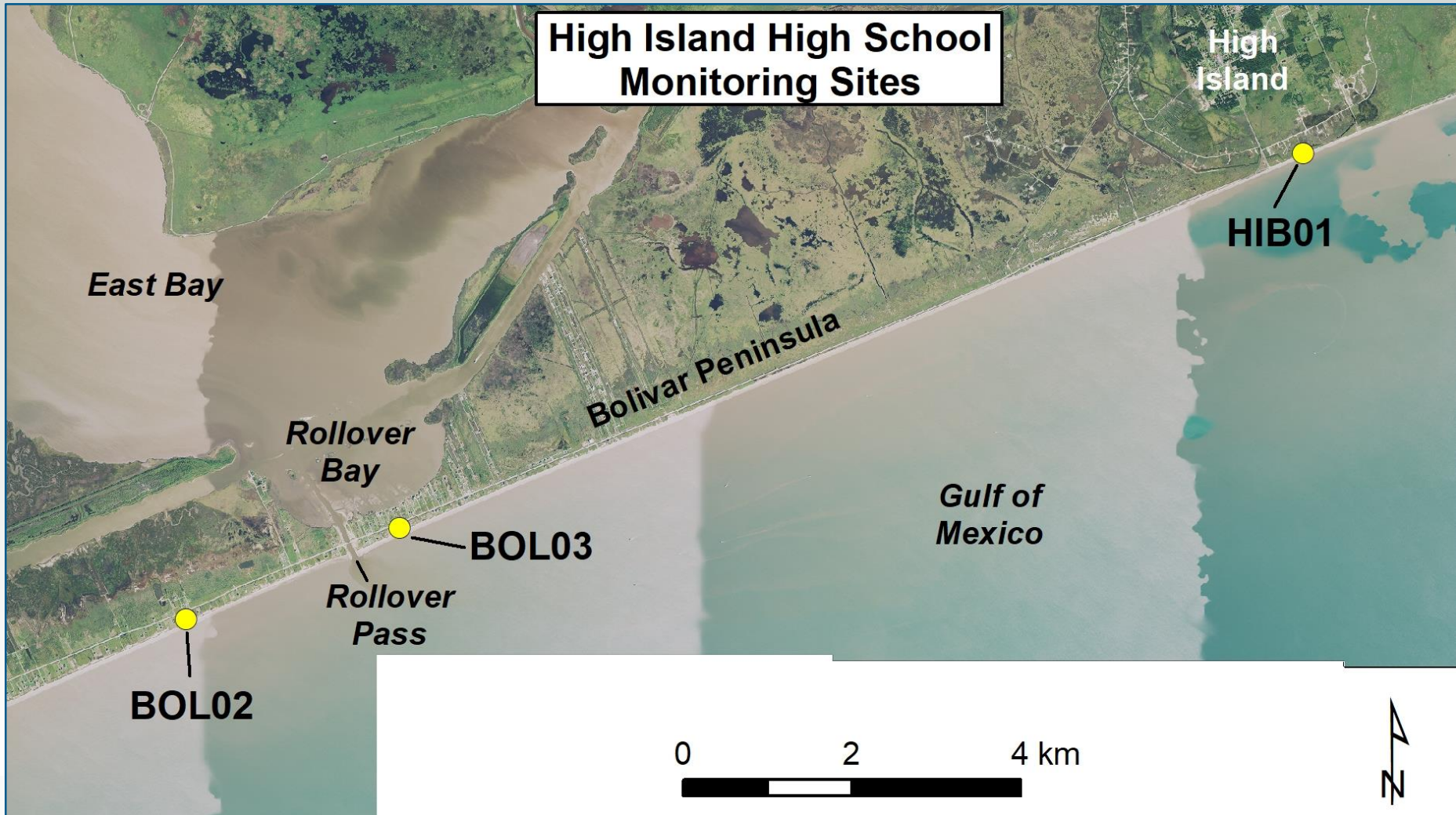


Student Collected Data

- 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



Bolivar Peninsula Study Sites



2022-2023 field trips

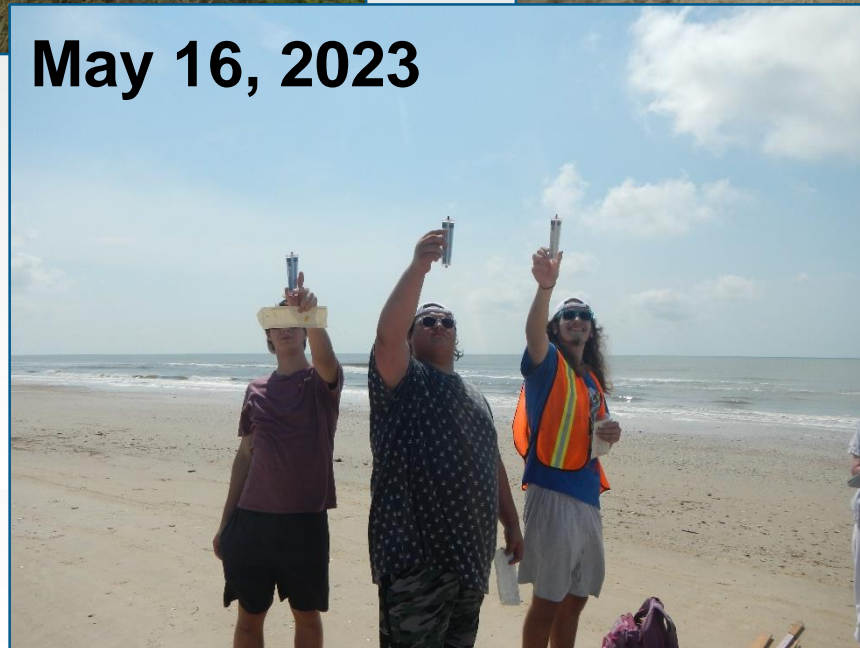
October 18, 2022



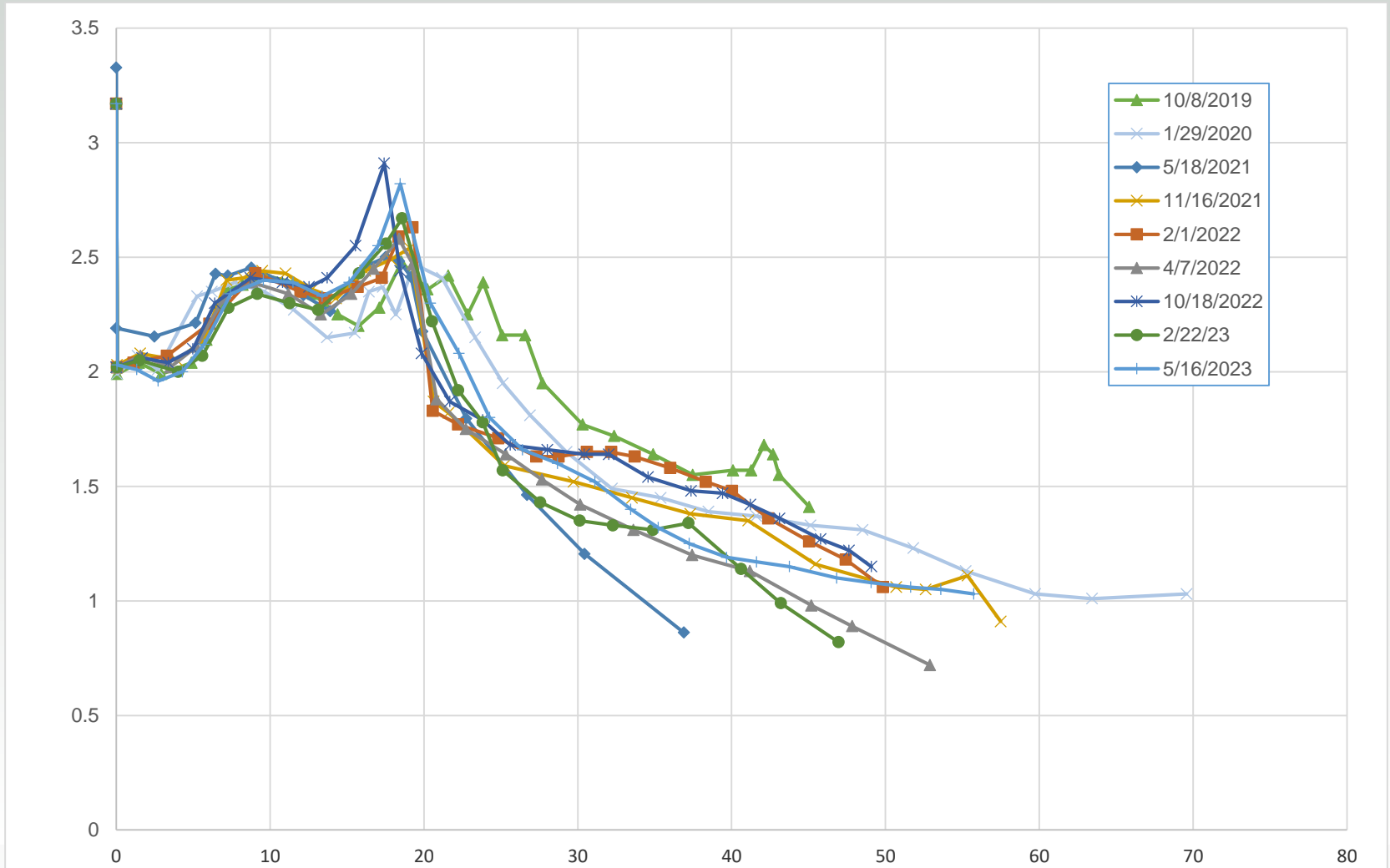
February 22, 2023



May 16, 2023

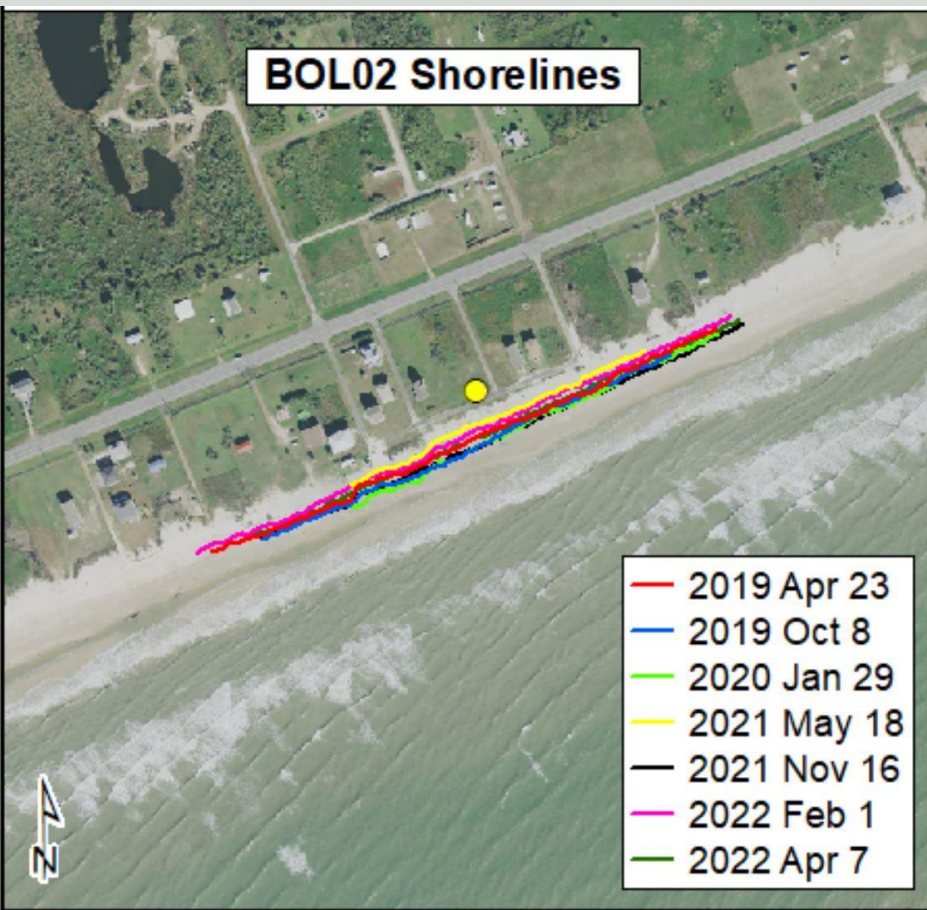


BOL02: fall 2019-spring 2023

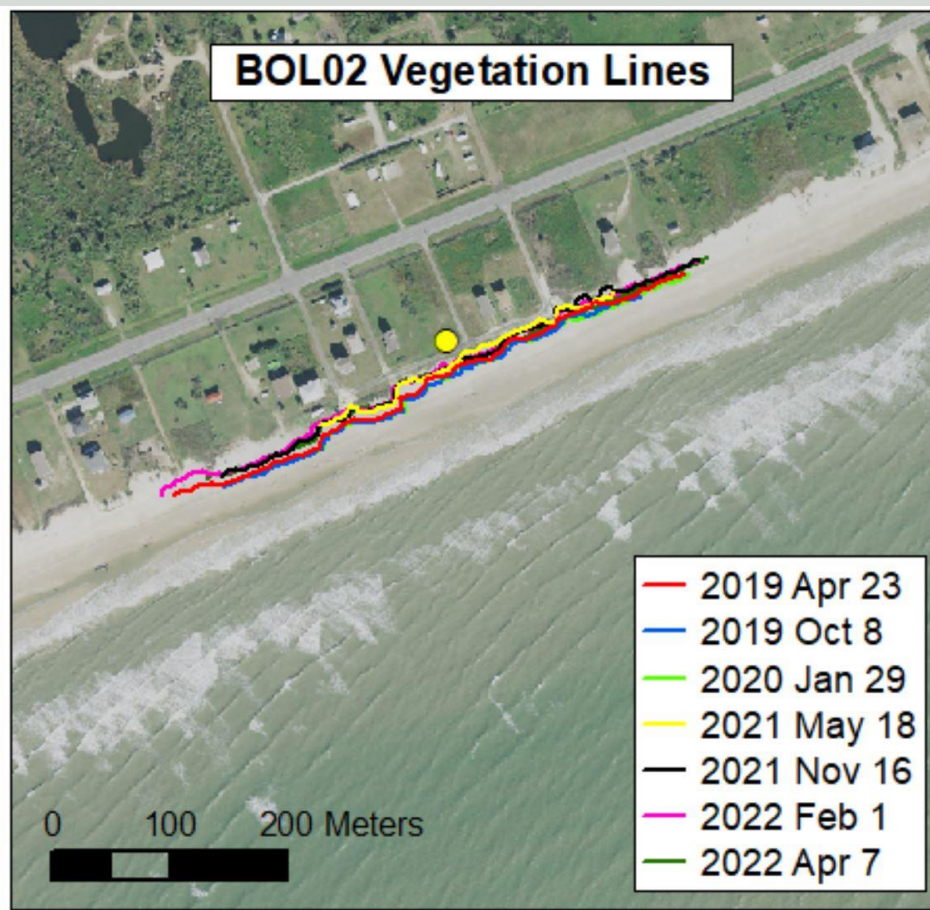


BOL02 shore and vegetation line positions

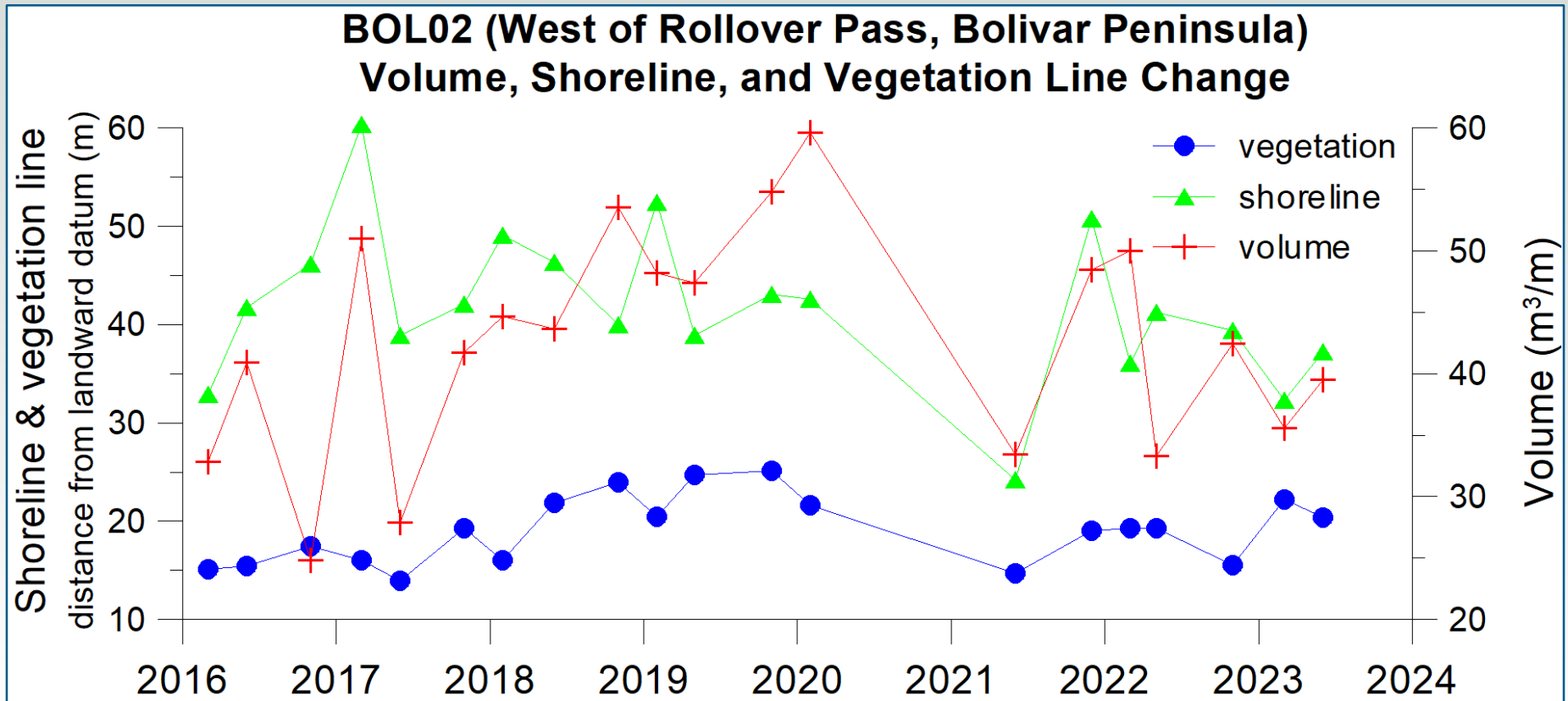
BOL02 Shorelines



BOL02 Vegetation Lines

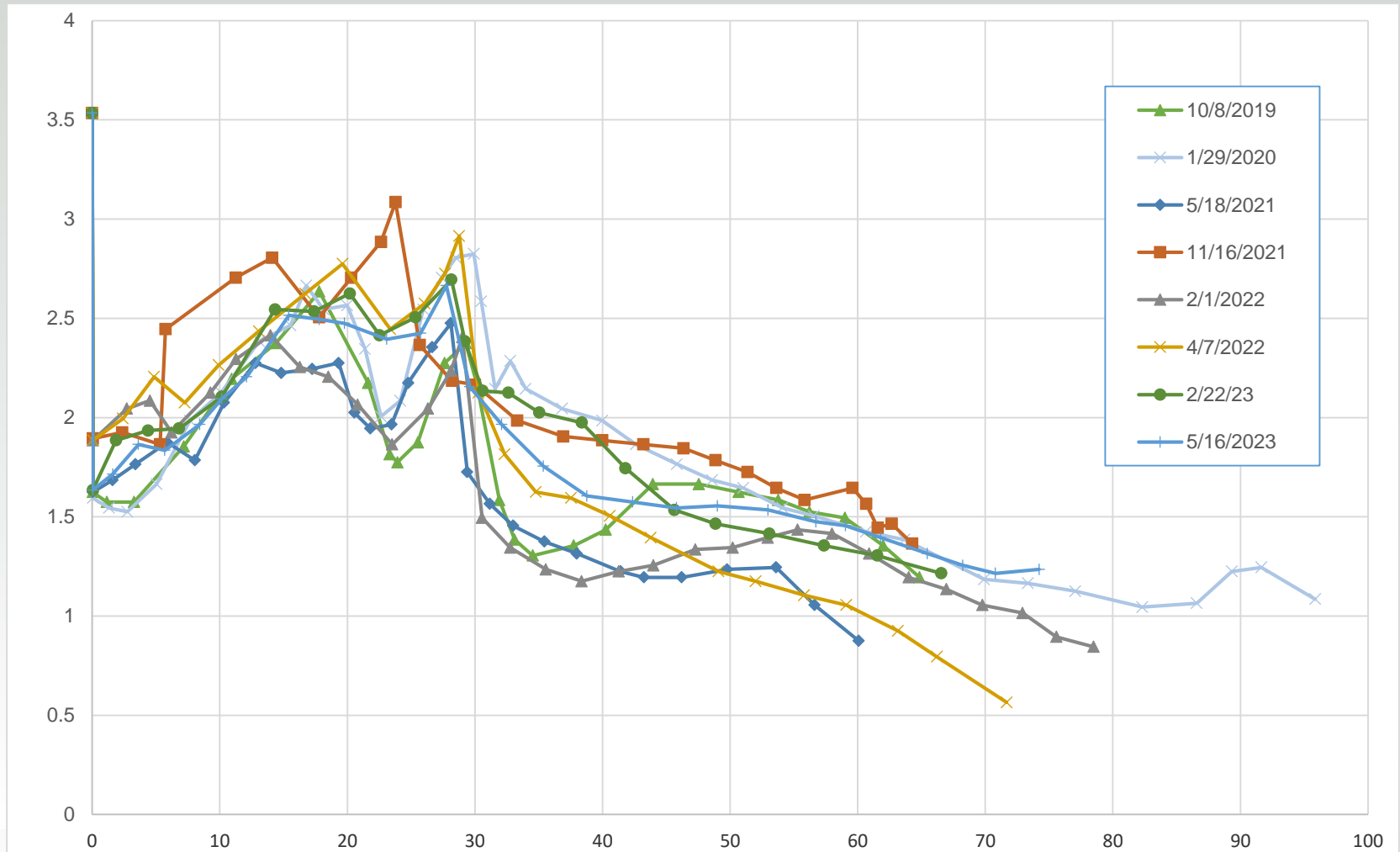


BOL02: shoreline, vegetation line, and volume changes

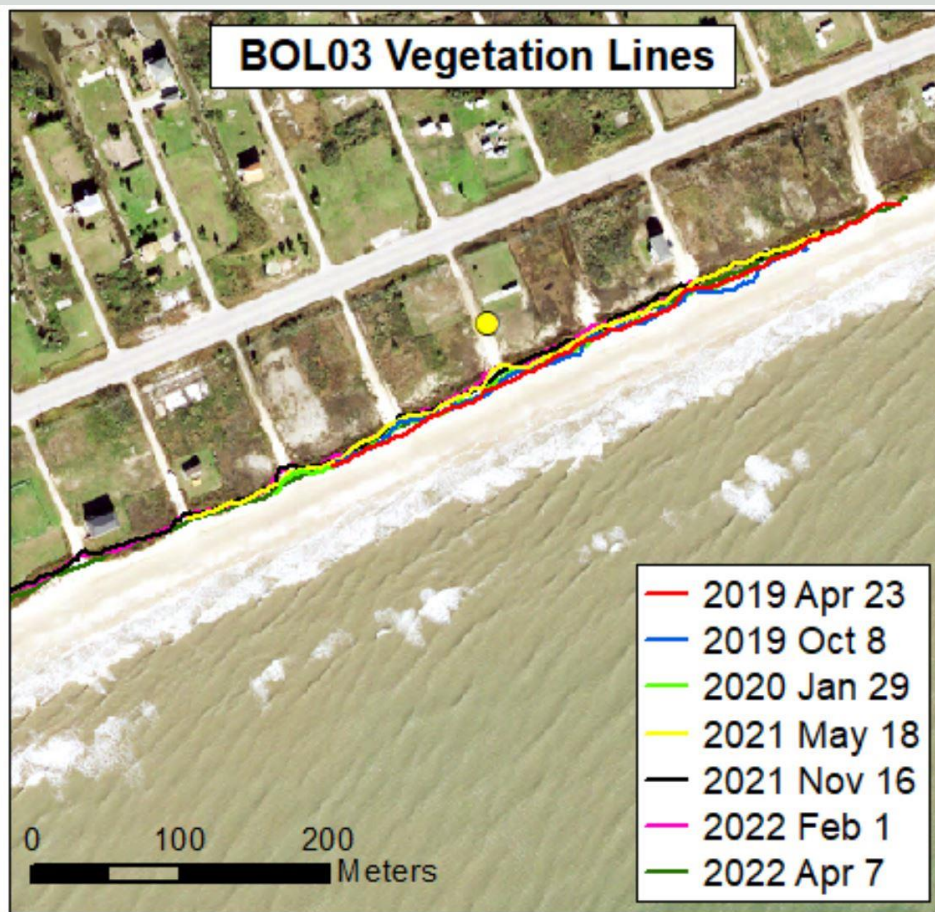
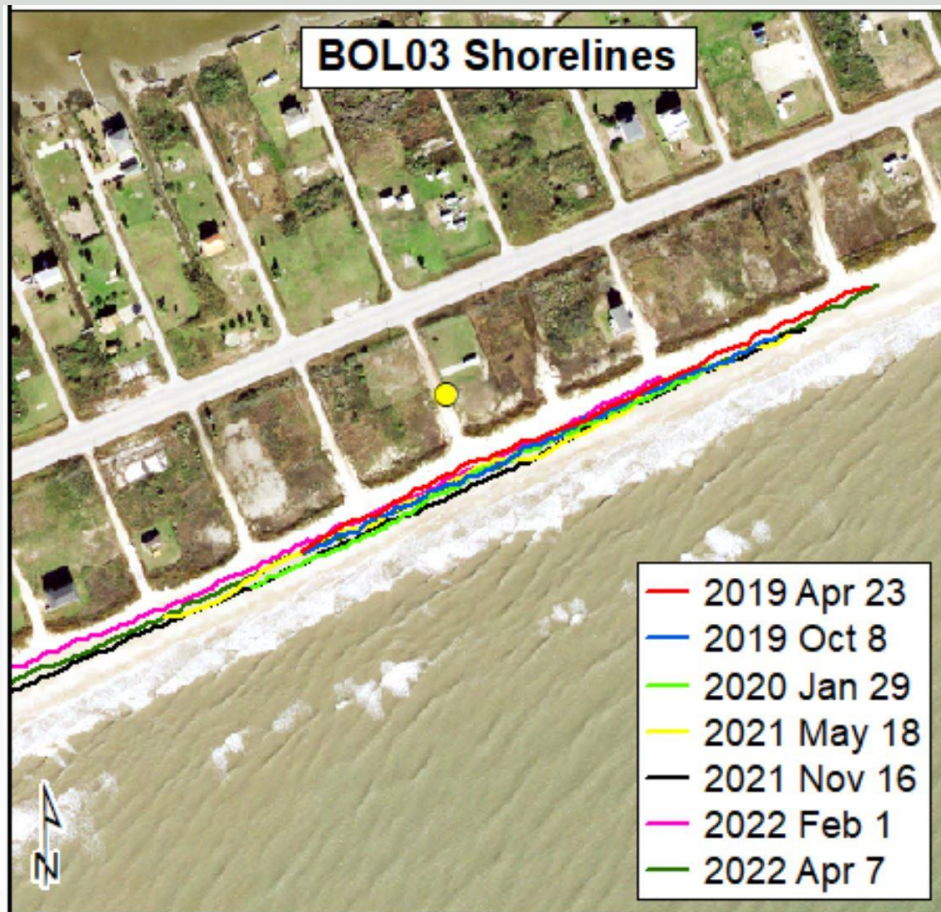


Sediment volume was calculated above 1 meter NAVD88.

BOL03: fall 2019-spring 2023

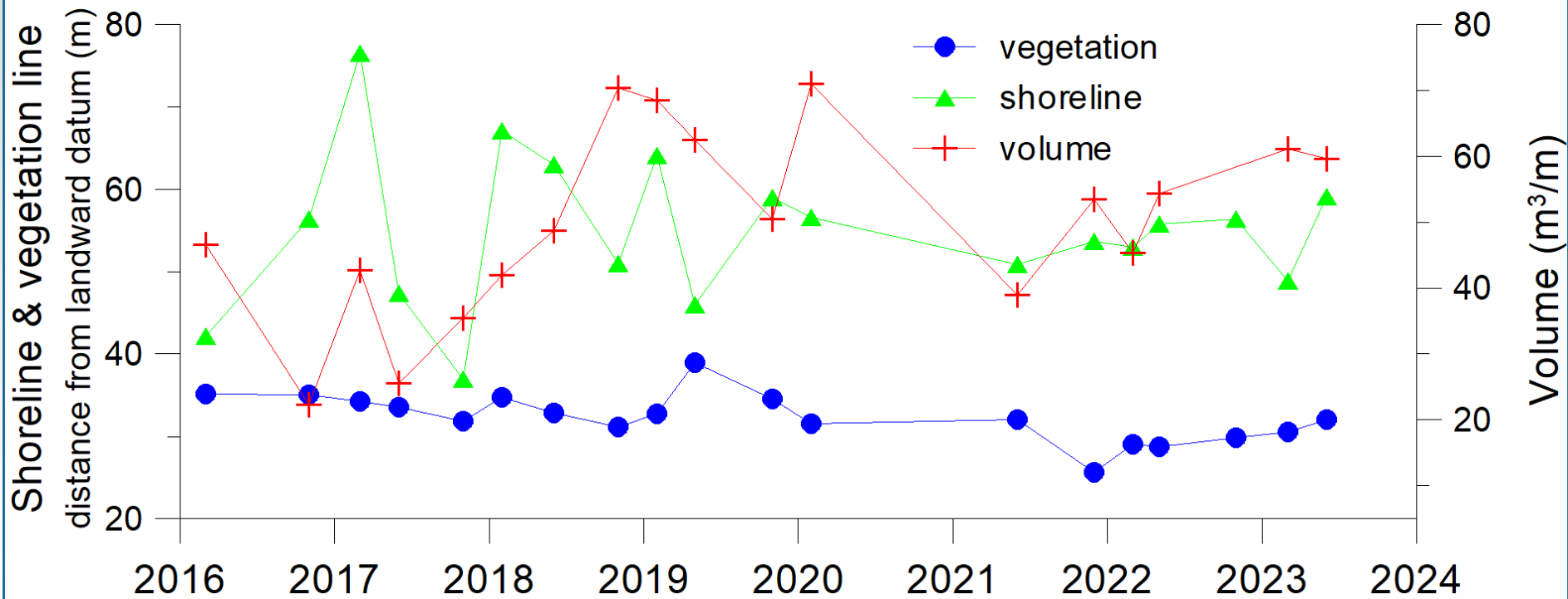


BOL03 shore and vegetation line positions



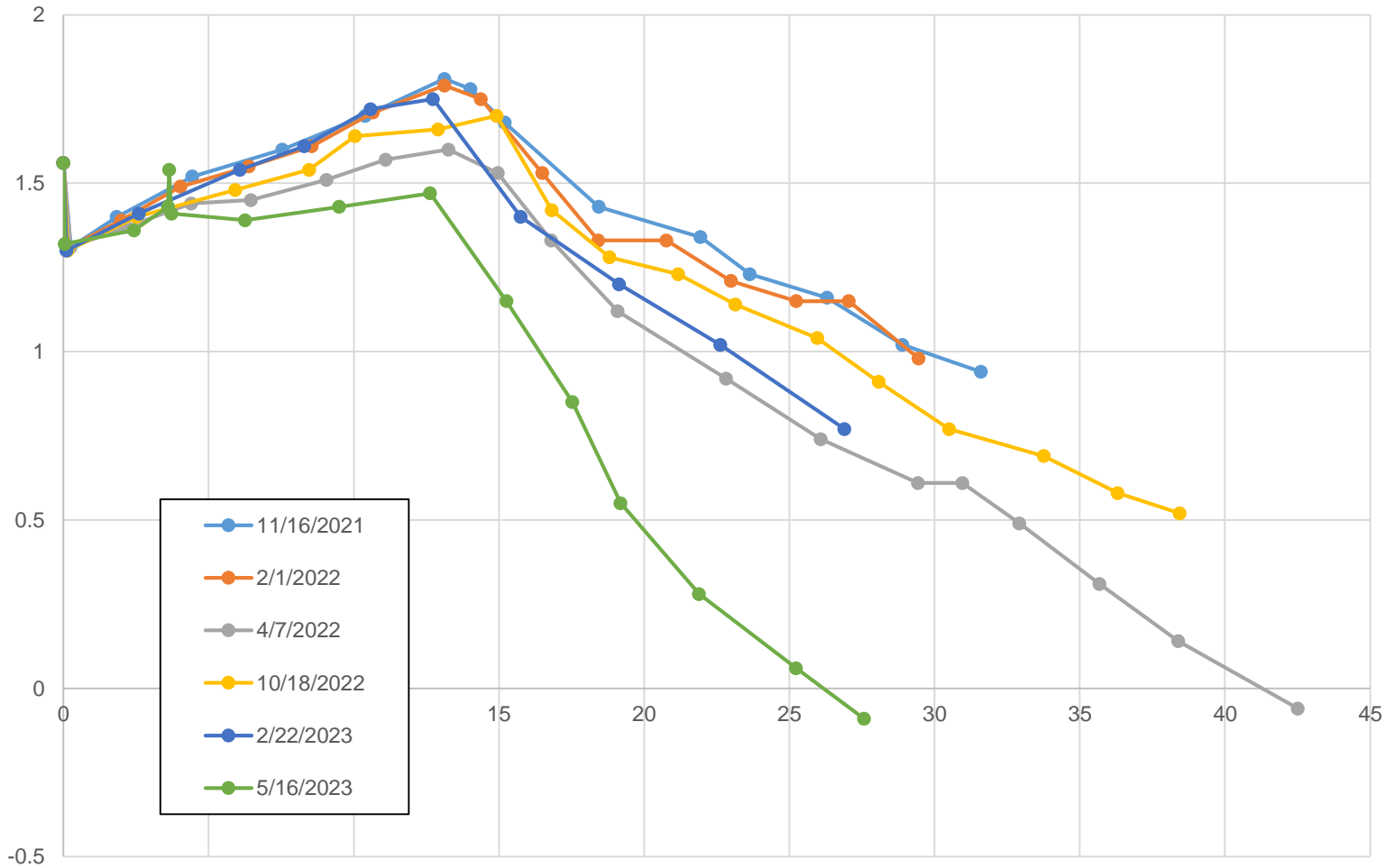
BOL03: shoreline, vegetation line, and volume changes

**BOL03 (East of Rollover Pass, Bolivar Peninsula)
Volume, Shoreline, and Vegetation Line Change**

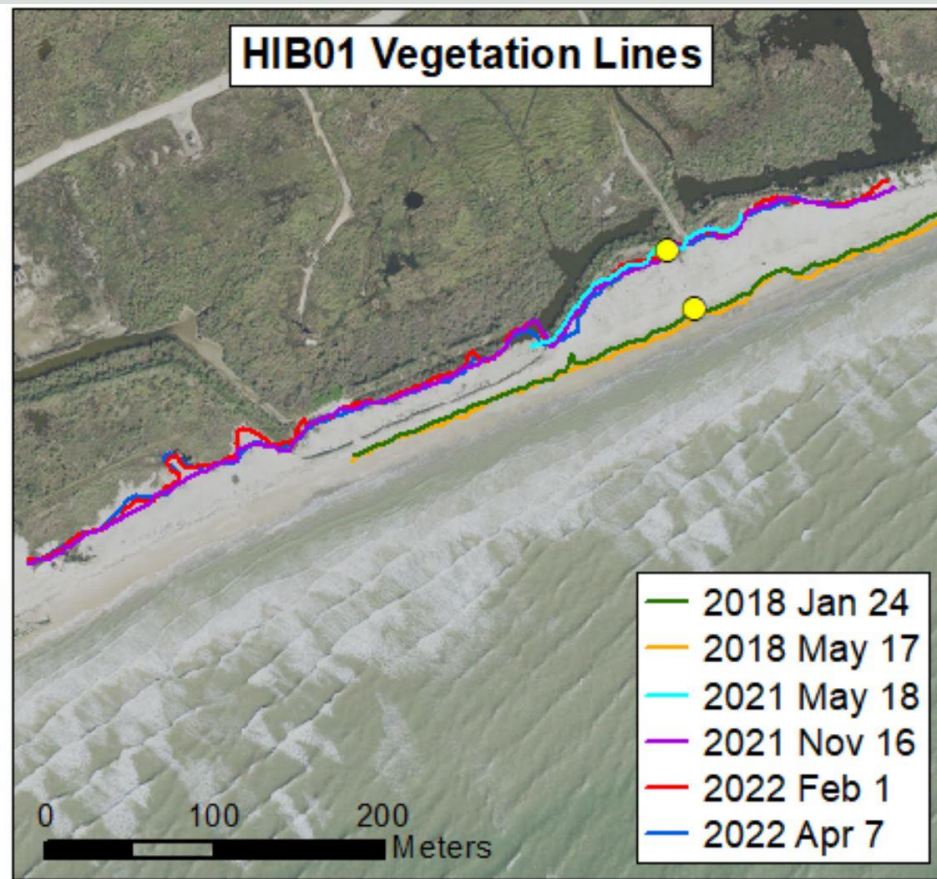
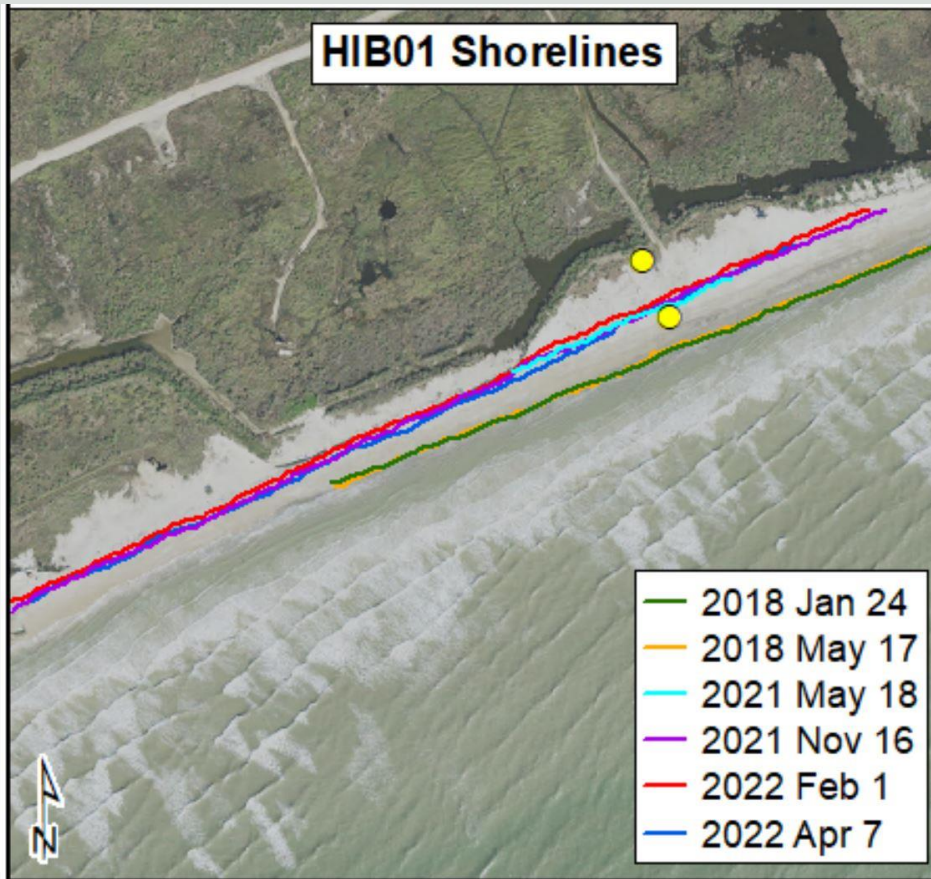


Sediment volume was calculated above 1 meter NAVD88.

HIB01: fall 2021-spring 2023



HIB01 shore and vegetation line positions



HIB01 Reset: shoreline, vegetation line, and volume changes

