Texas High School Coastal Monitoring Program at Port Isabel High School: 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.

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

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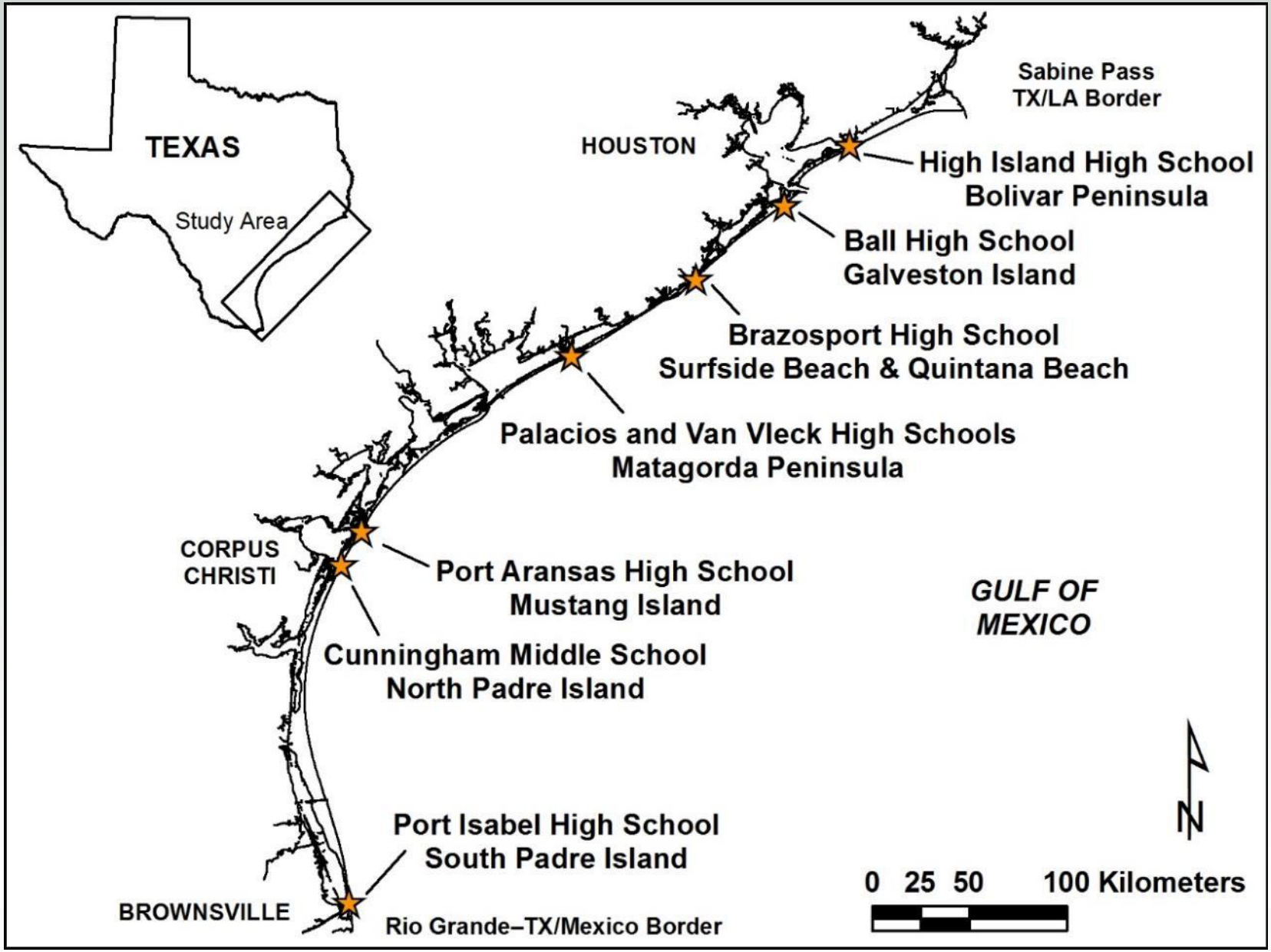

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Student Collected Data

- 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

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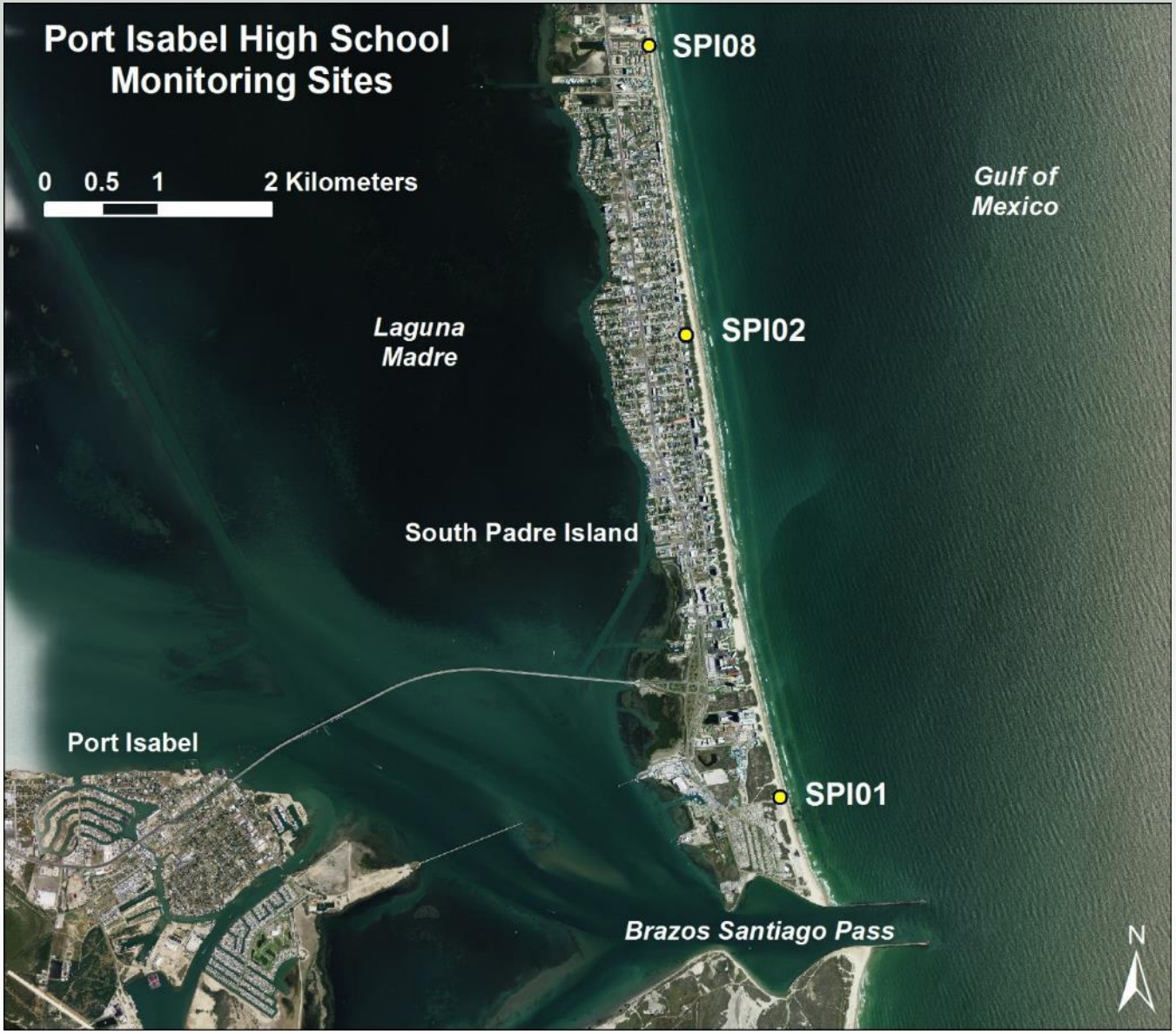
South Padre Island Study Sites



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2022-2023 field trips

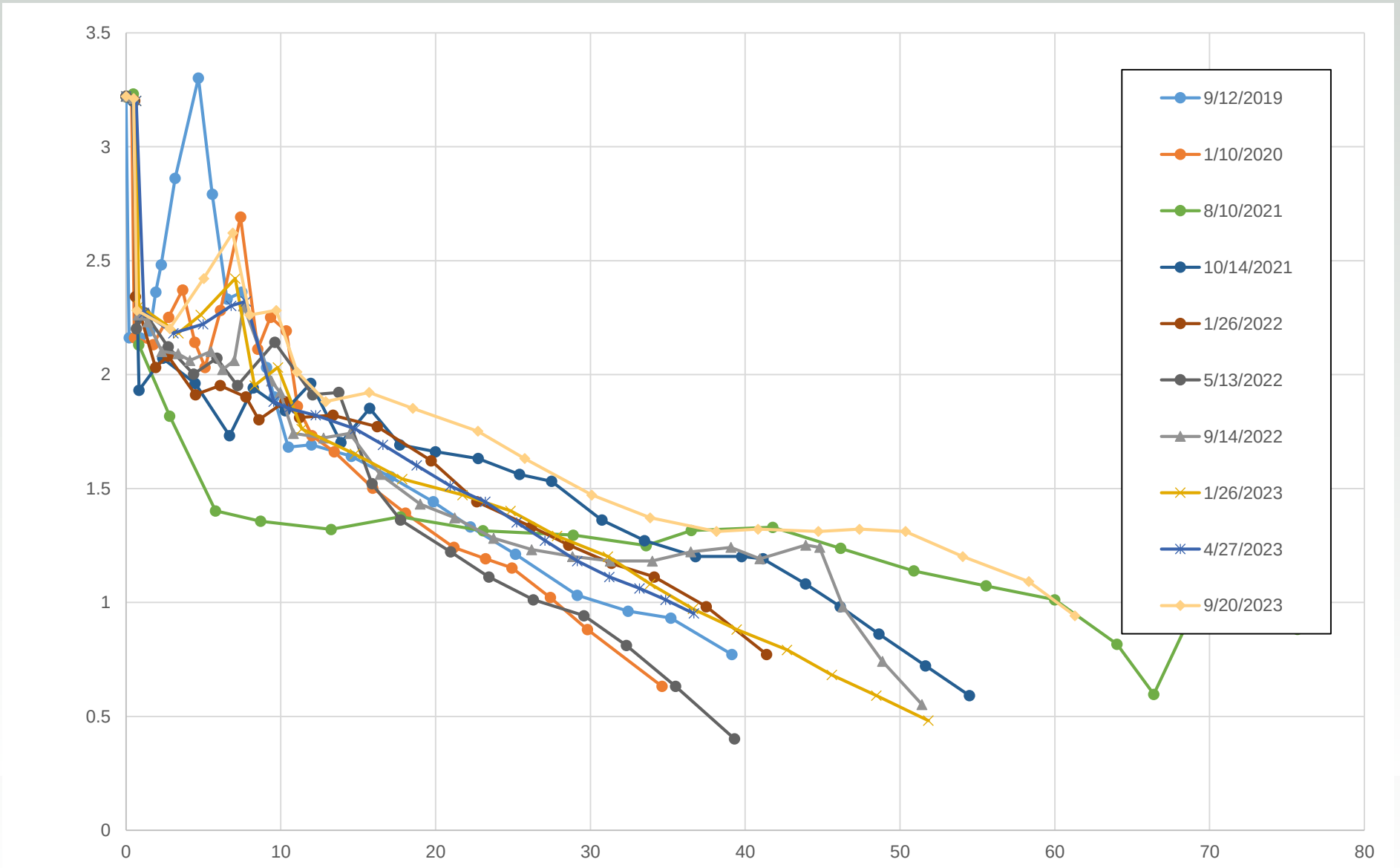
September 14, 2022

January 26, 2023

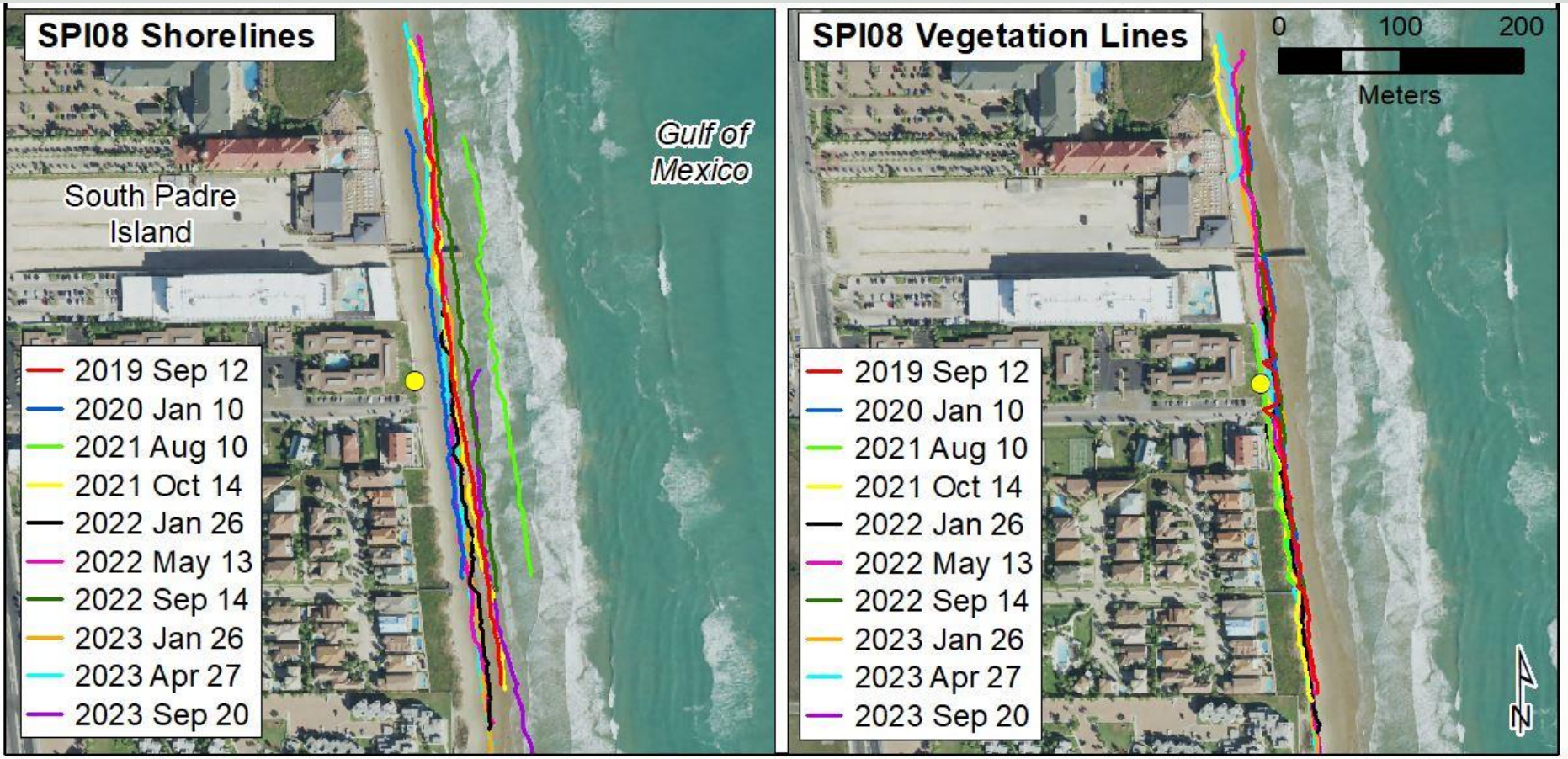
April 27, 2023

September 20, 2023

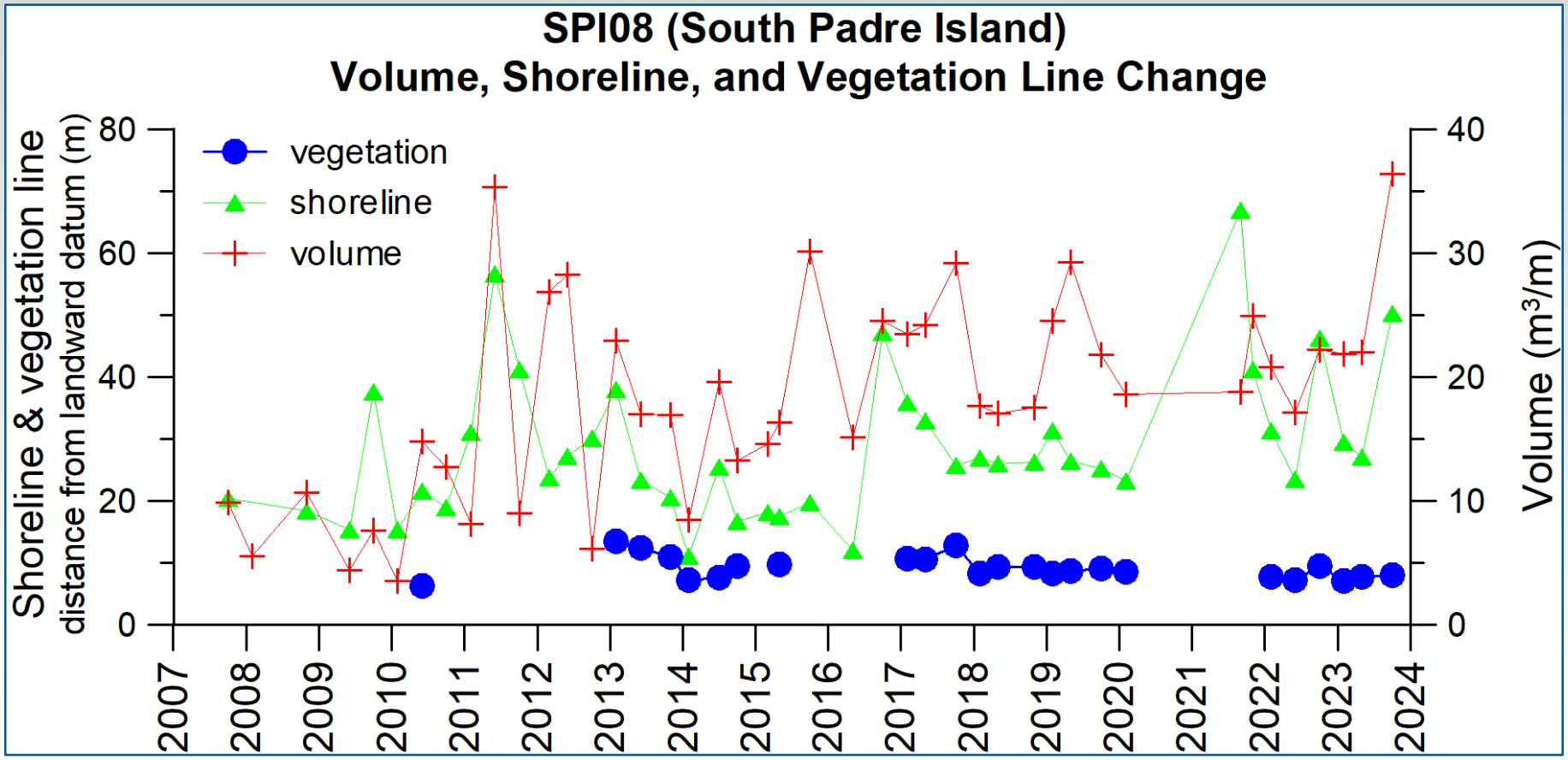
SPI08: fall 2019-fall 2023



SPI08 shore and vegetation line positions



SPI08: shoreline, vegetation line, and volume changes



Sediment volume was calculated above 1 meter NAVD88.

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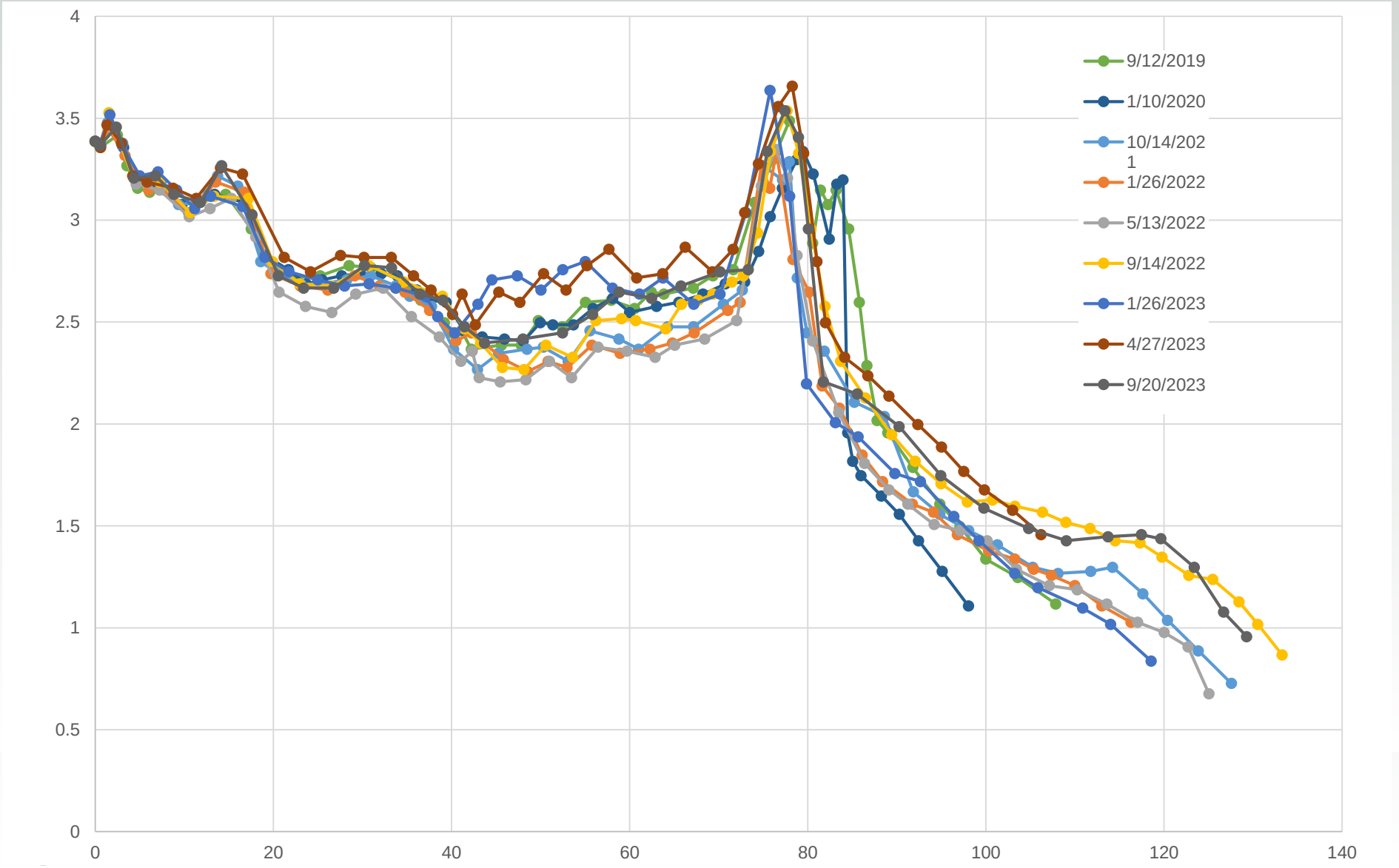
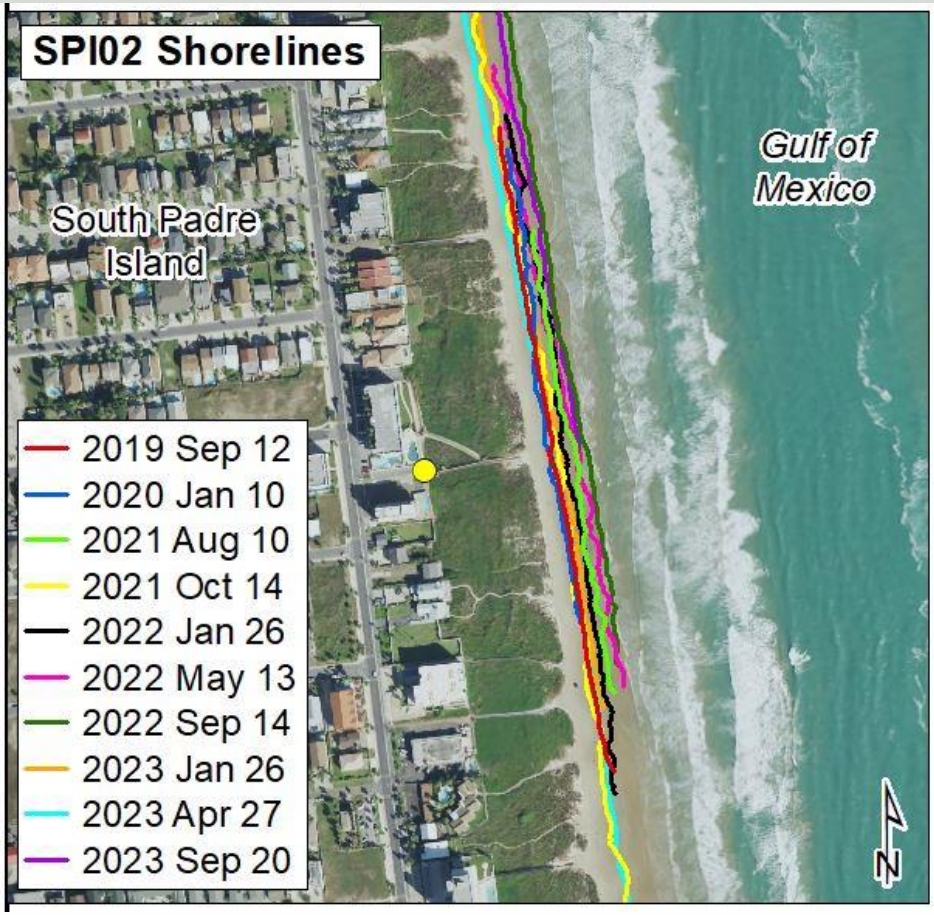
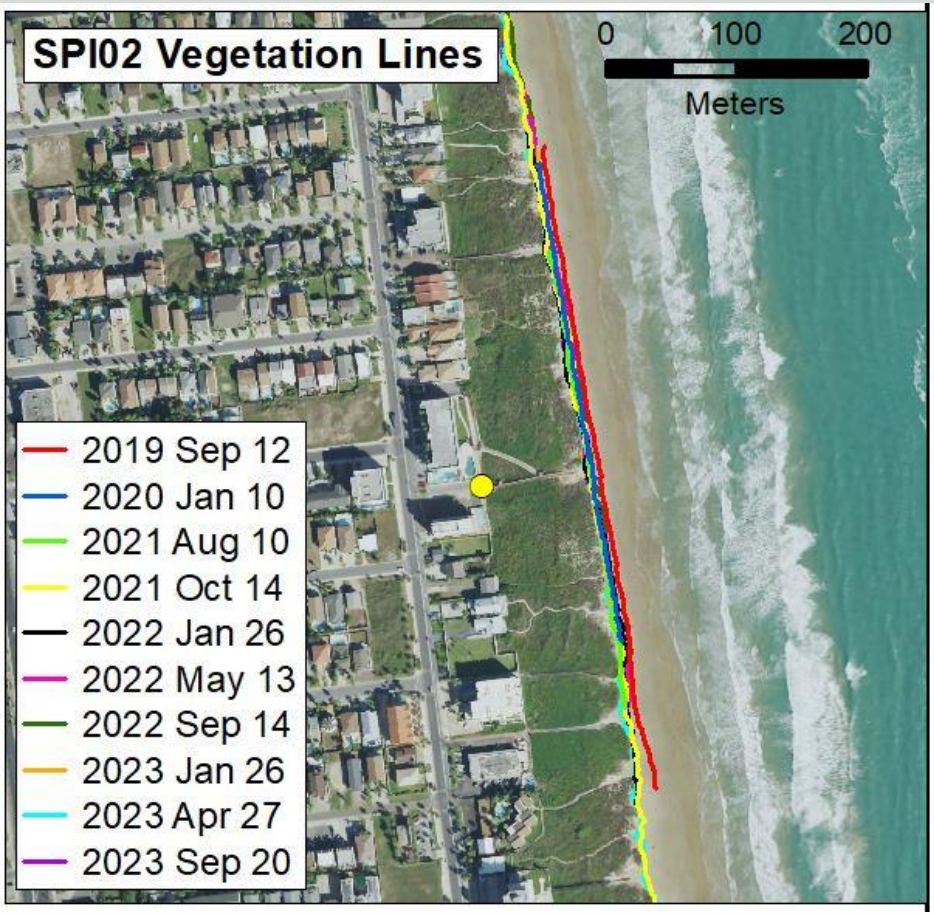
SPI02: fall 2019-fall 2023

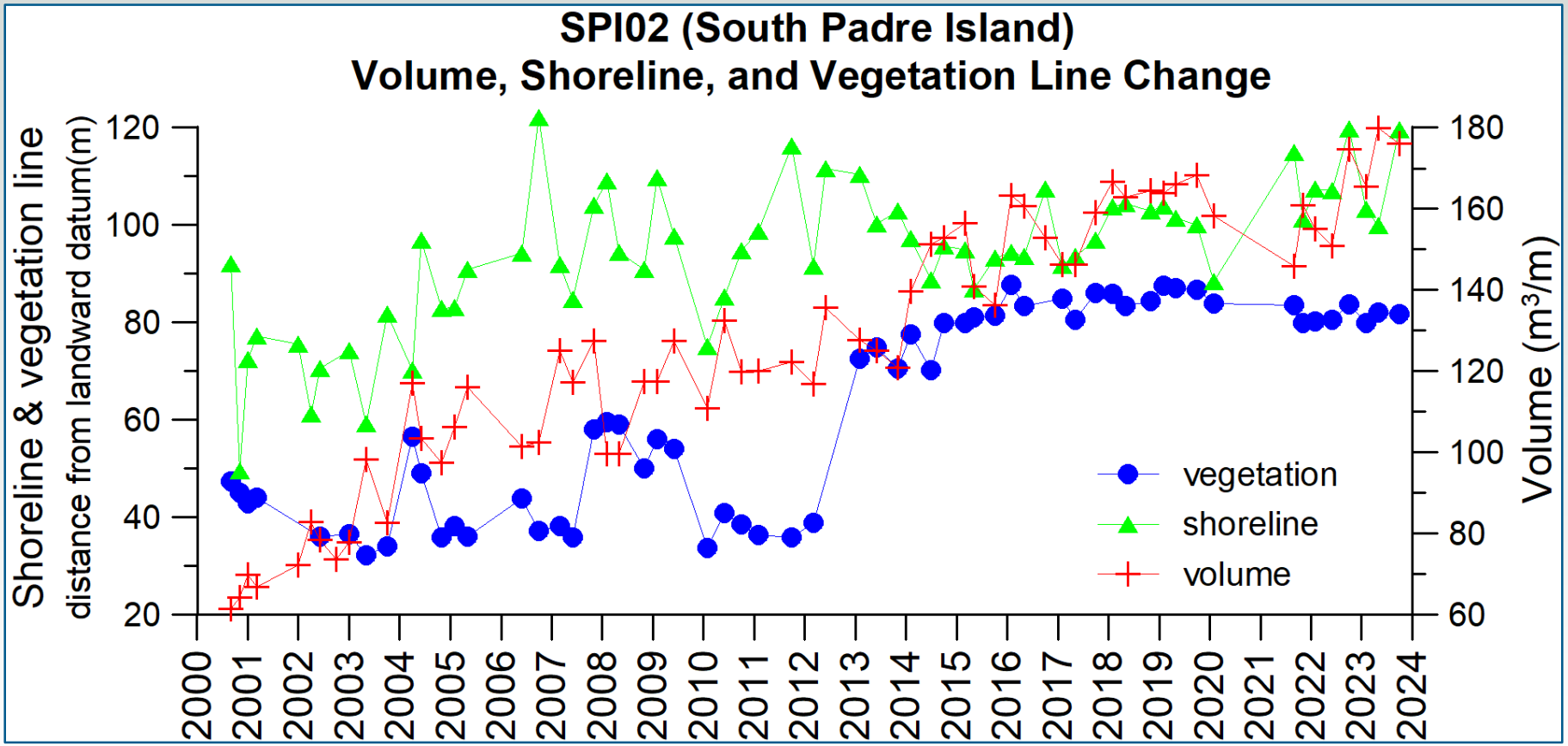


SPI02 shore and vegetation line positions





SPI02: shoreline, vegetation line, and volume changes



Sediment volume was calculated above 1 meter NAVD88.

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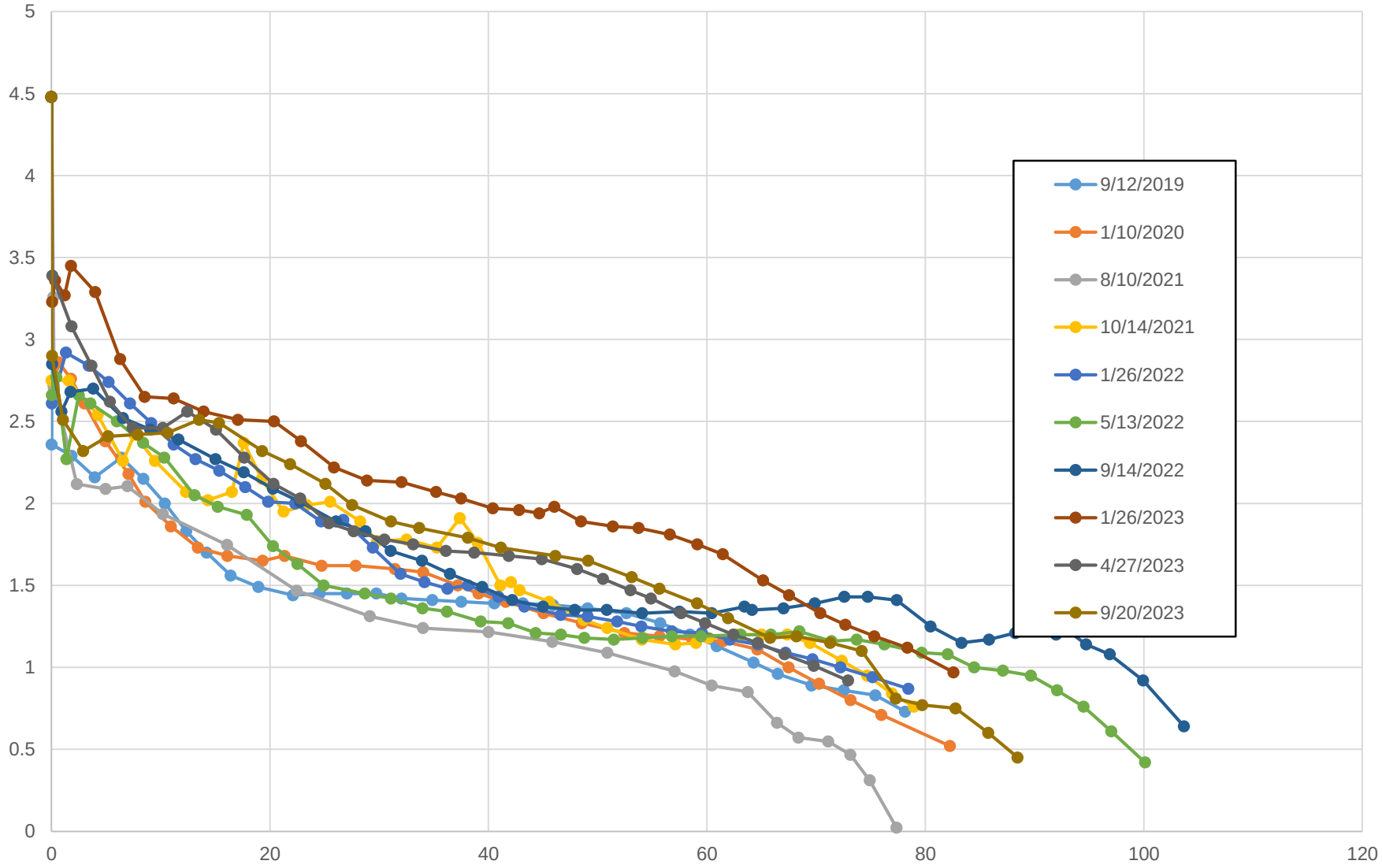
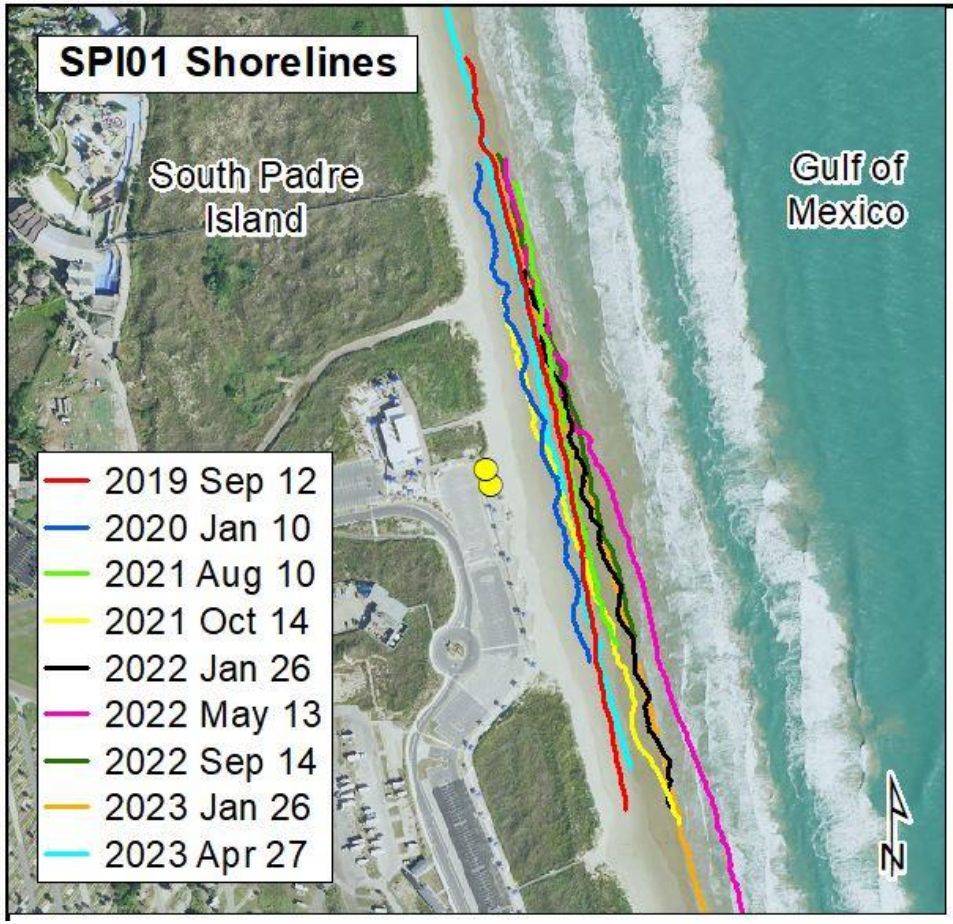
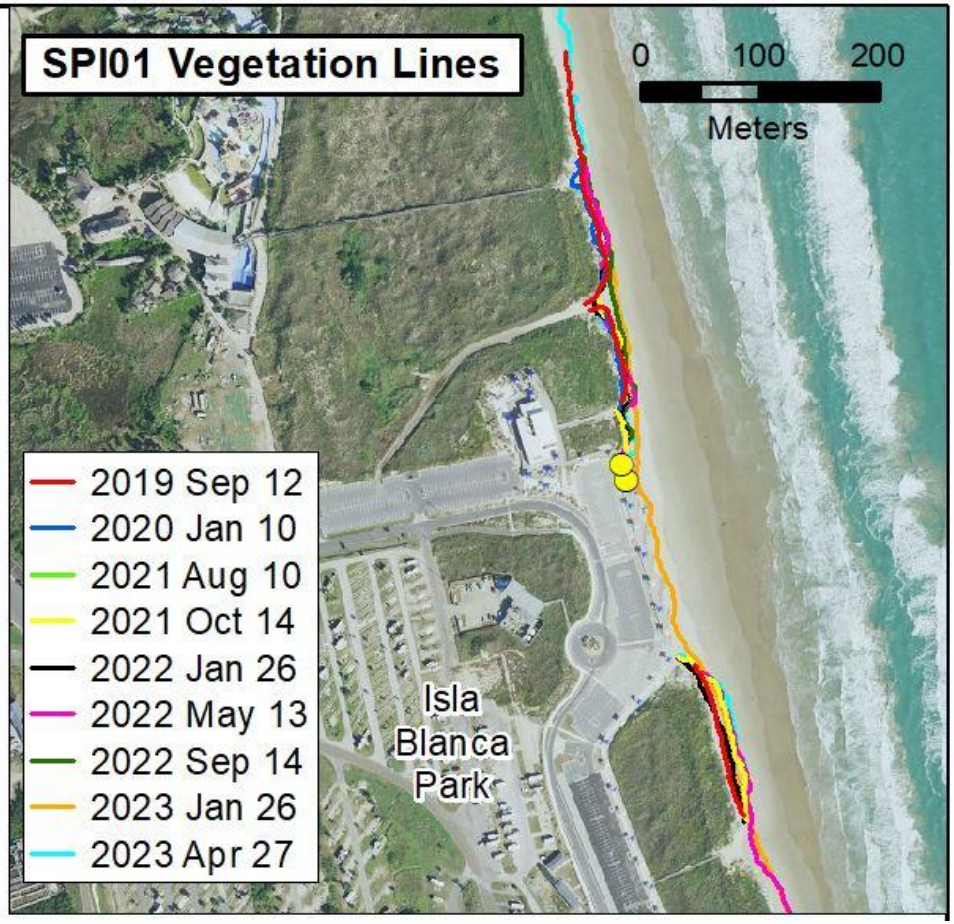
SPI01R: fall 2019-fall 2023

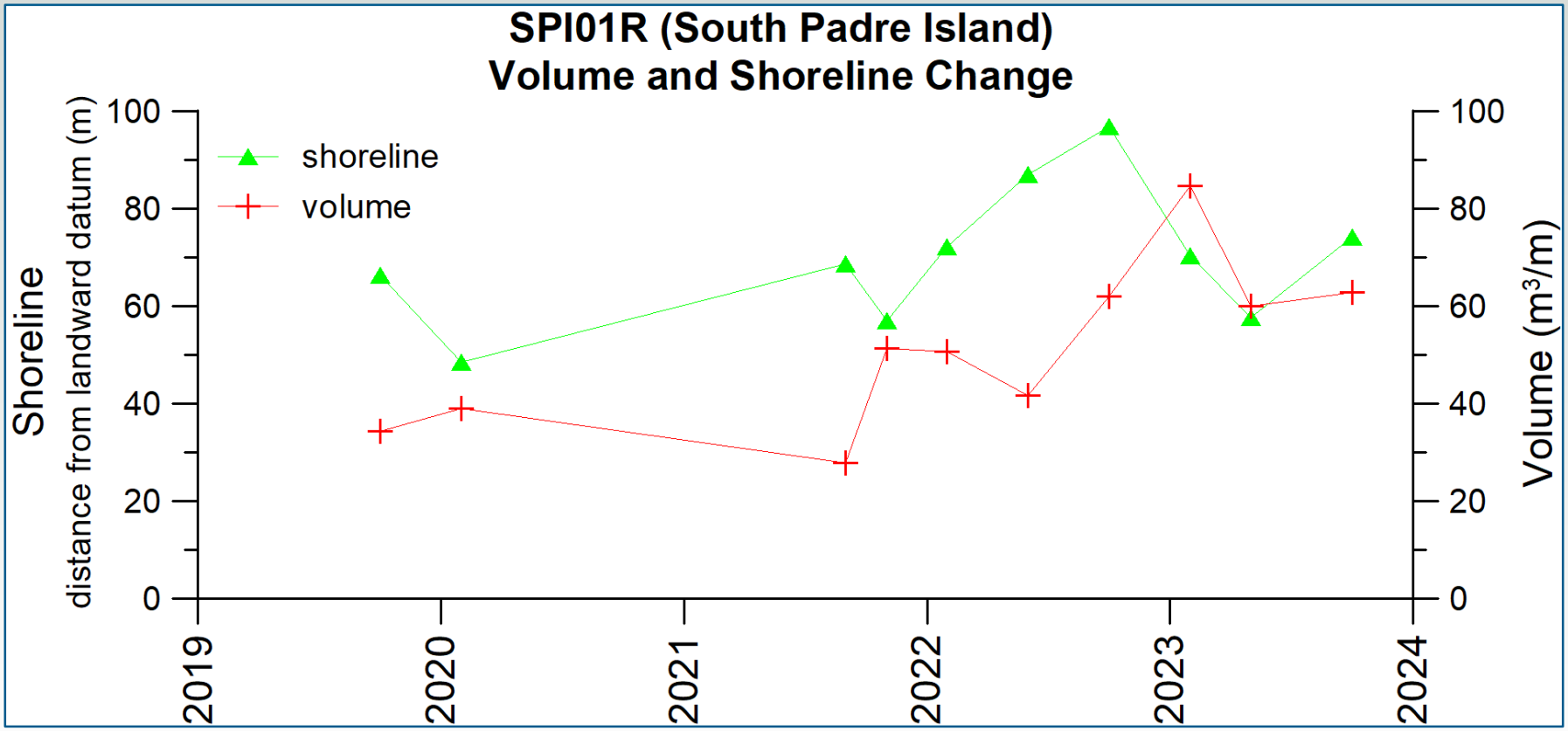


SPI01 shore and vegetation line positions





SPI01R: shoreline, vegetation line, and volume changes



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