Texas High School Coastal Monitoring Program at Cunningham Middle School at South Park: 2024-2025

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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 public.

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

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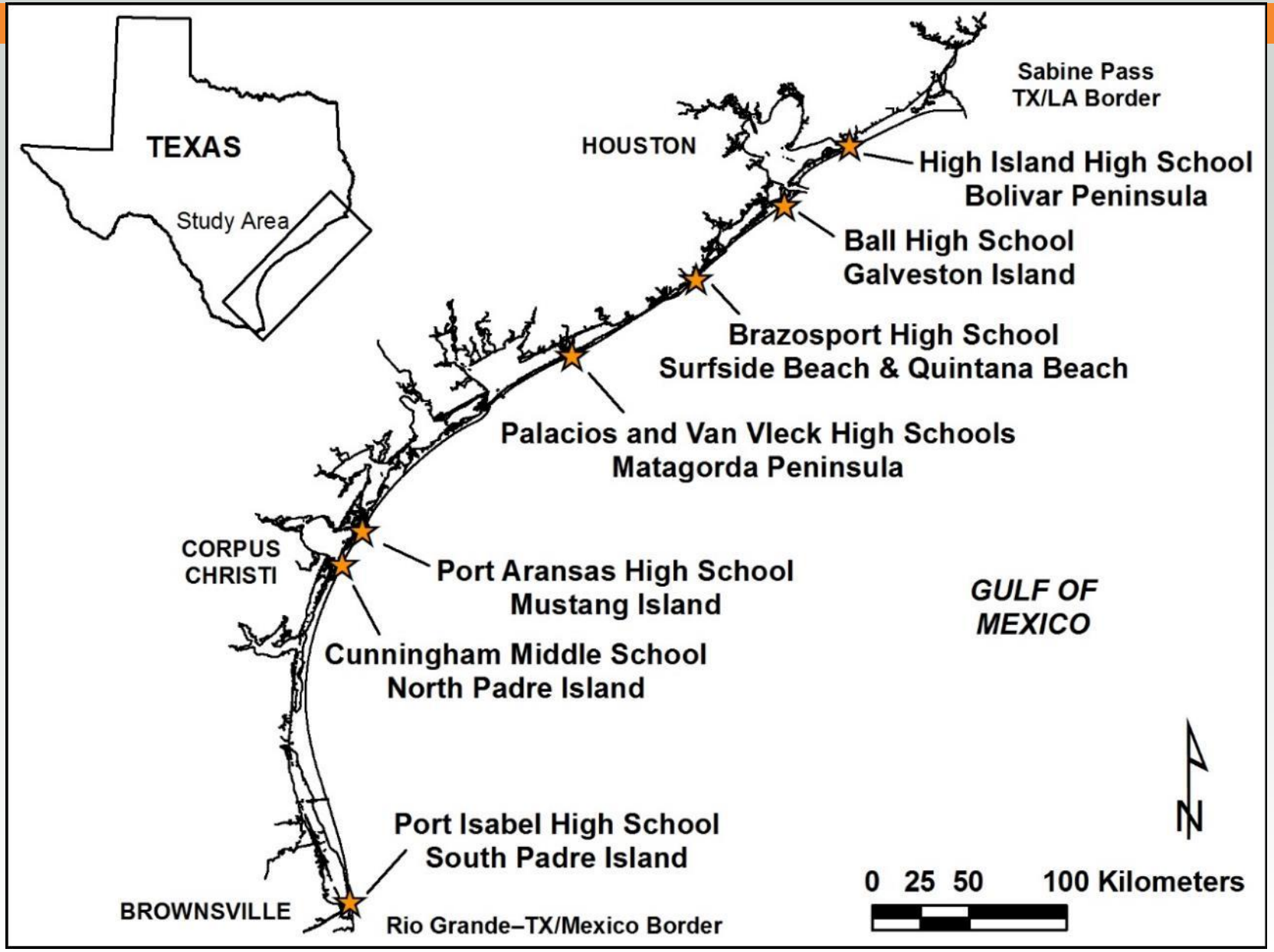

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2024-2025: 23 field trips with ~220 students

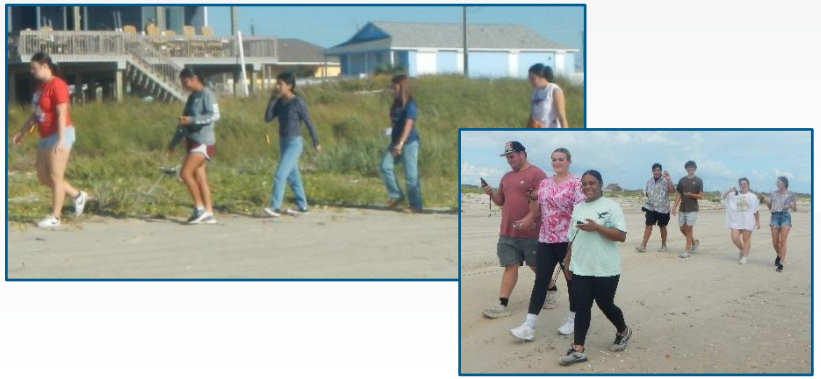
1997-2025 444 field trips

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



field trips

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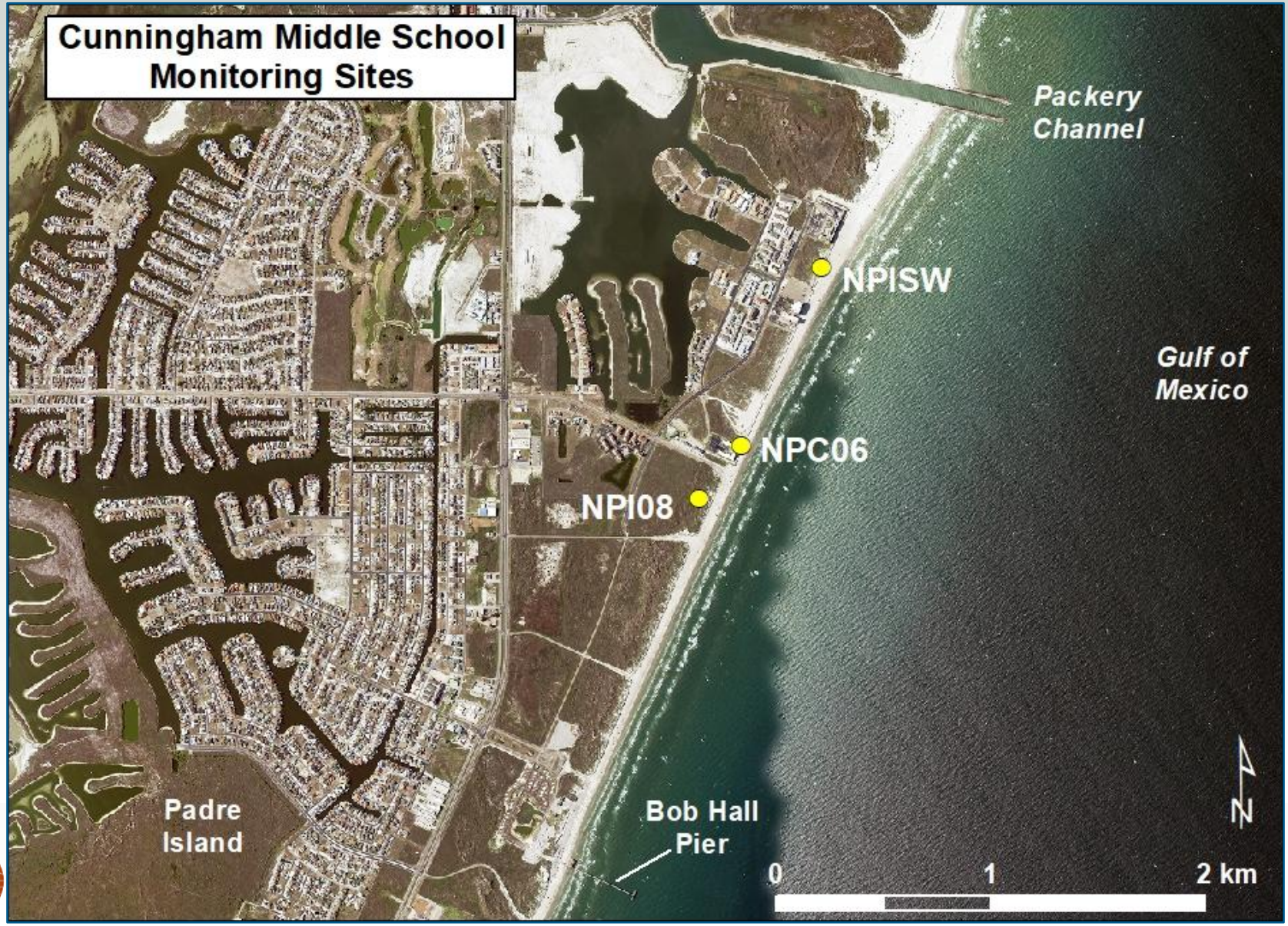
Northern Padre Island Study Sites



NPI08

October 9, 2024
Dunes N

October 9, 2024
Wet/dry line N

October 21, 2025
Veg line N

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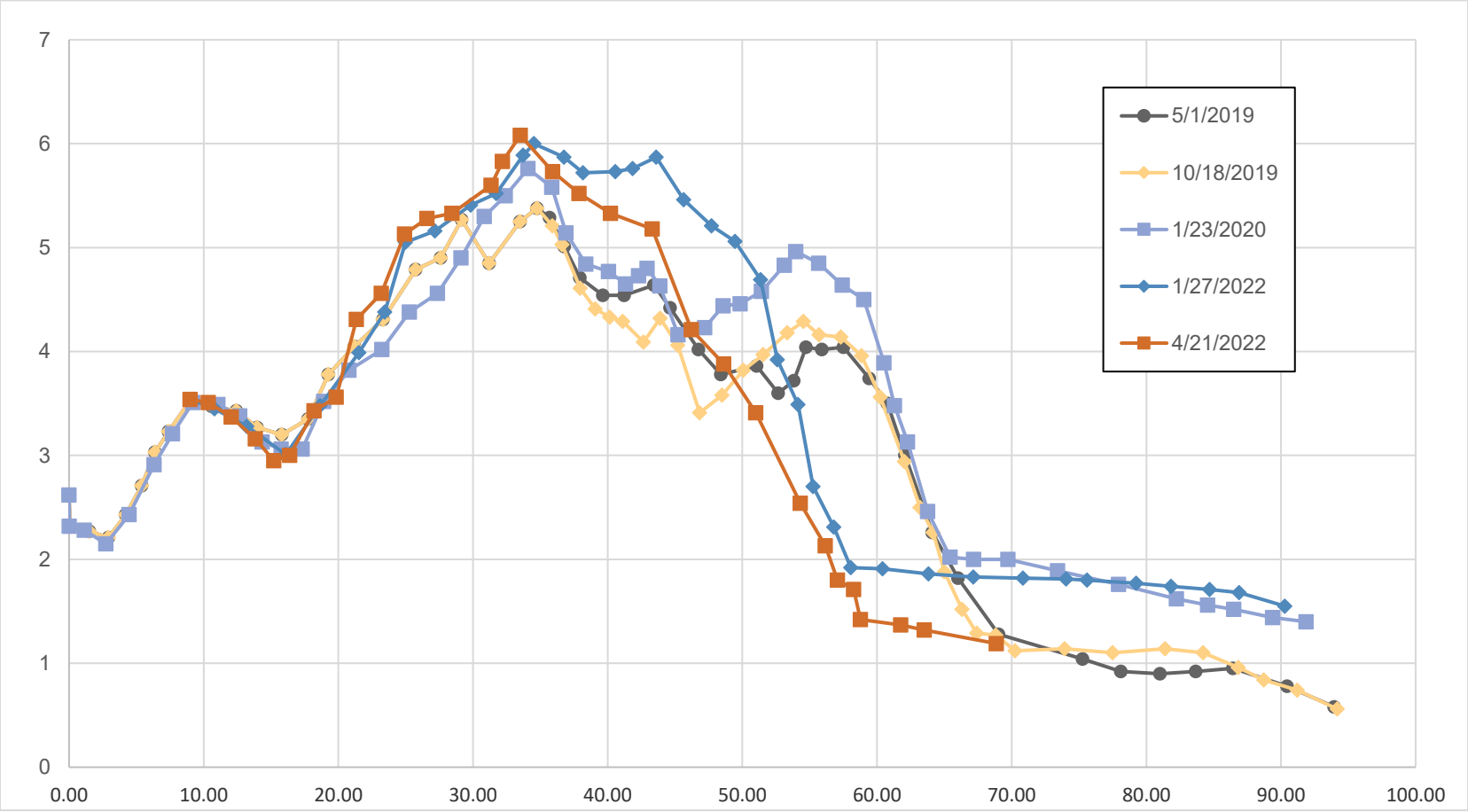
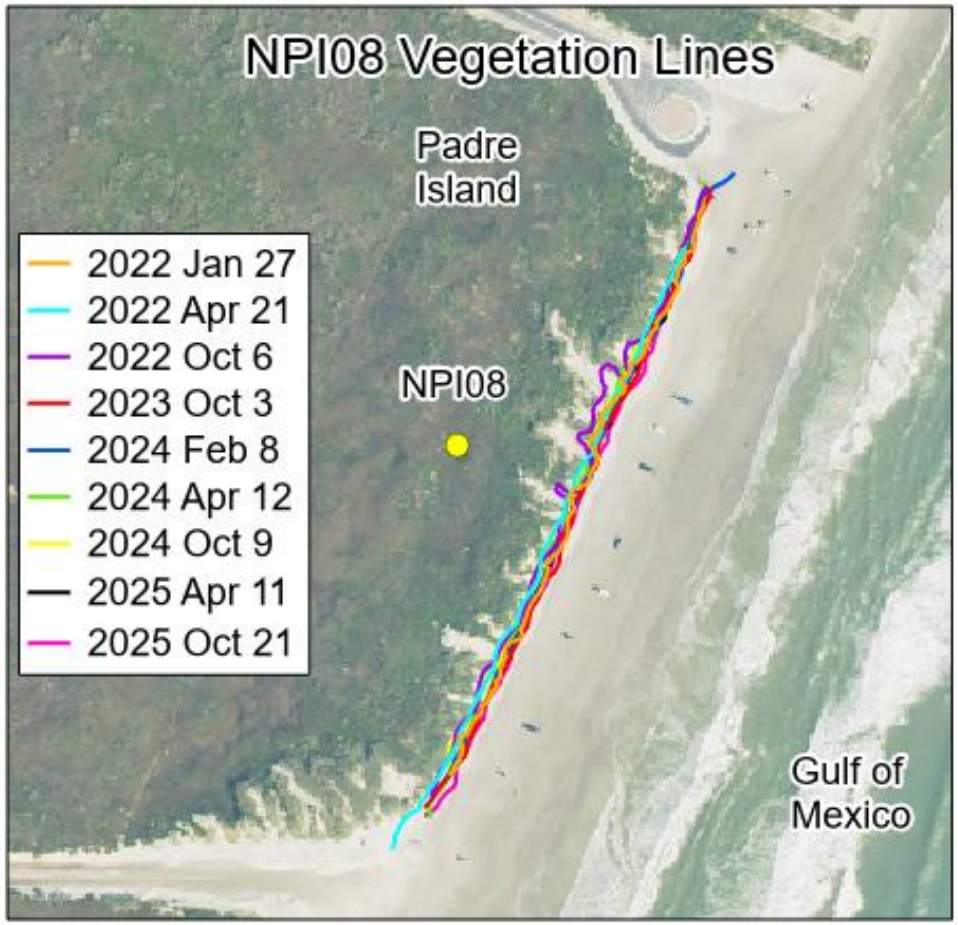
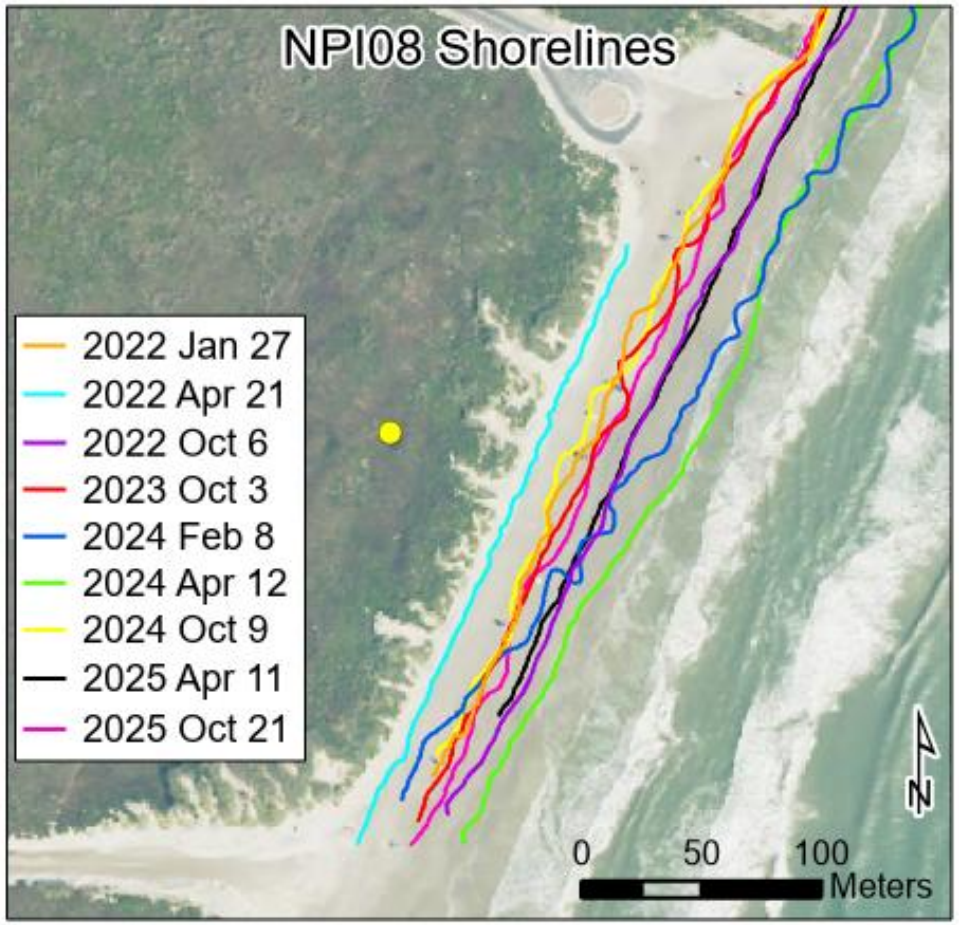
NPI08: fall 2018-winter 2020

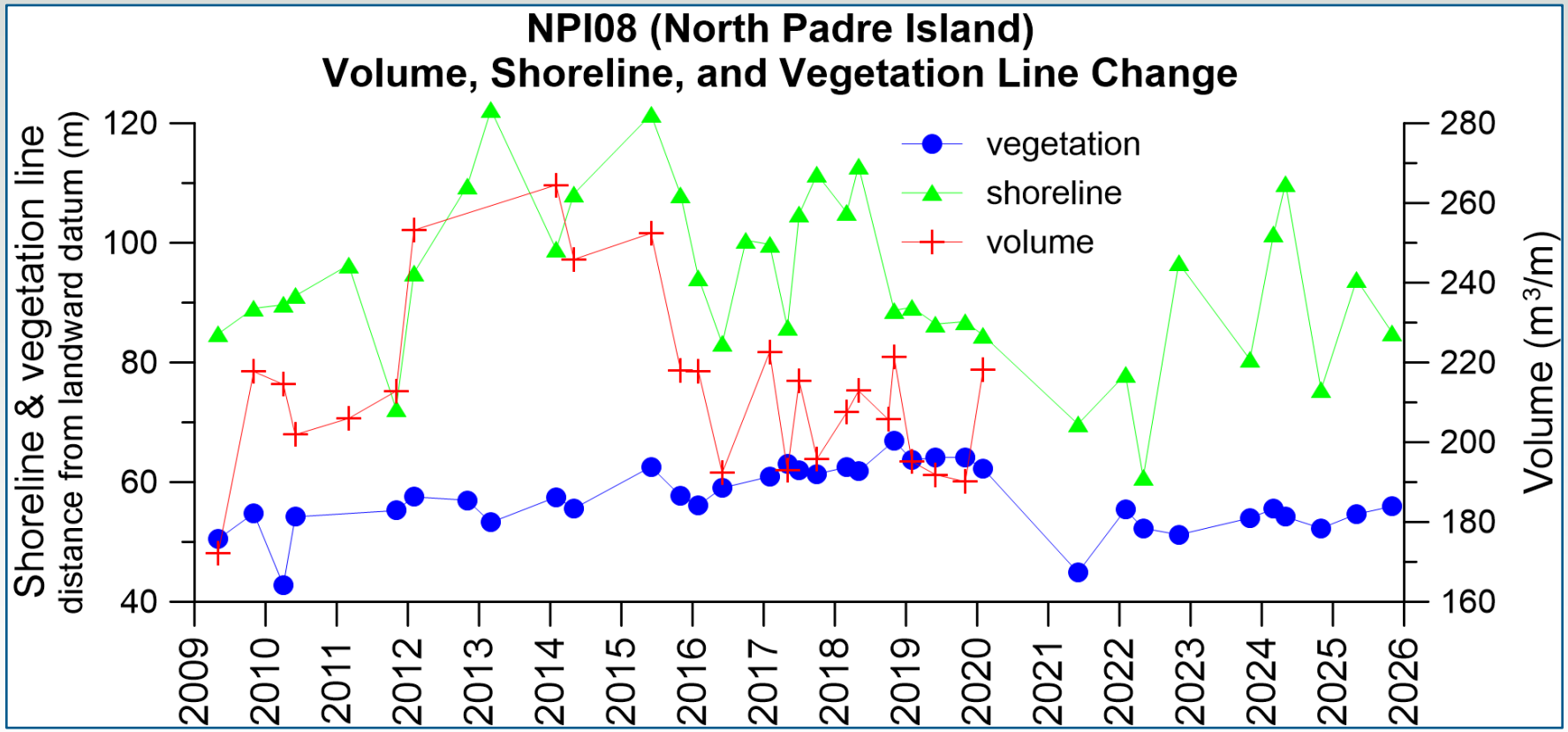


NPI08 shore and vegetation line positions





NPI08: shoreline, vegetation line, and volume changes



Sediment volume was calculated above 1-meter NAVD88.

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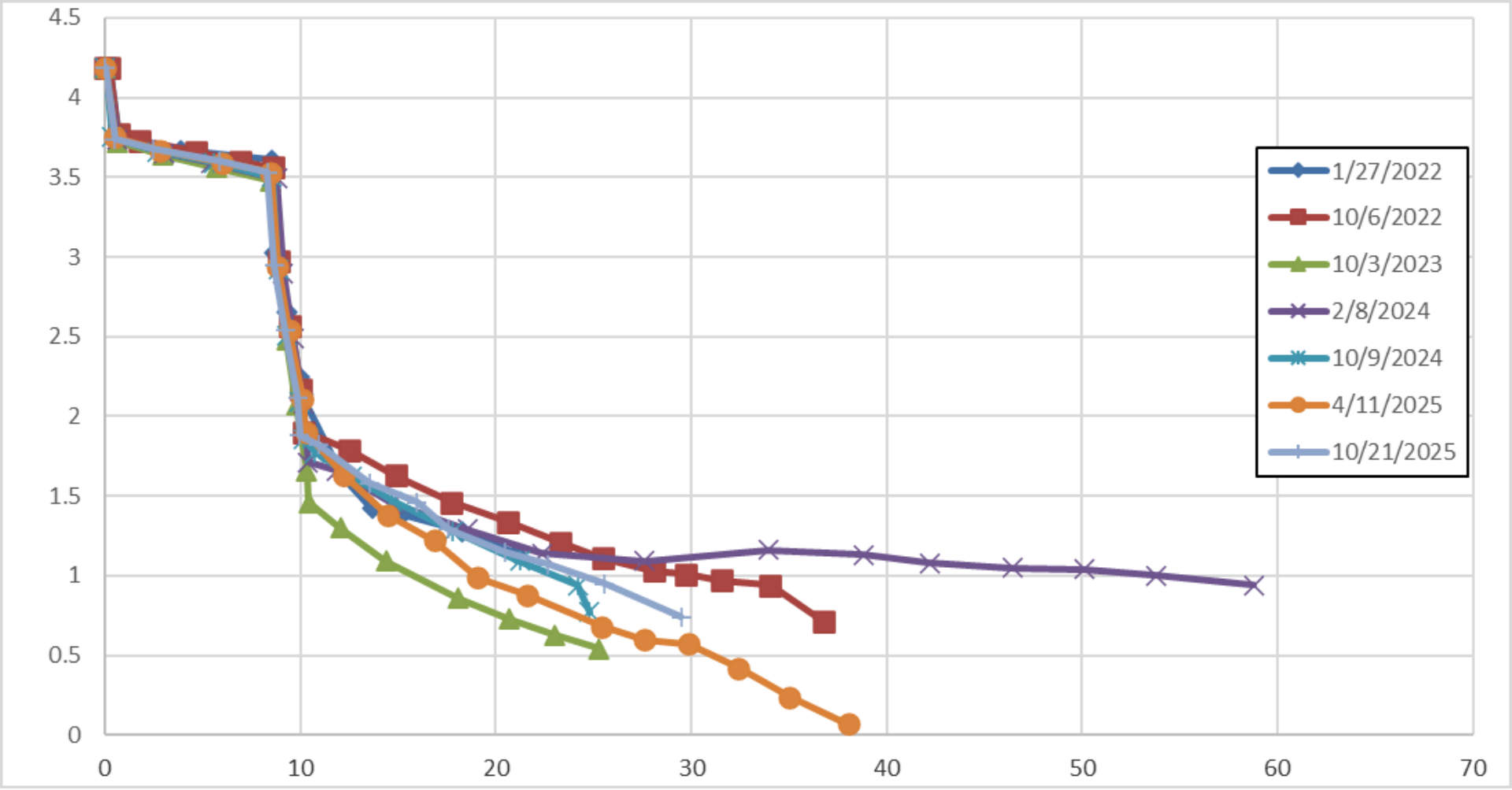
NPC06


October 9, 2024
Wet/dry line N

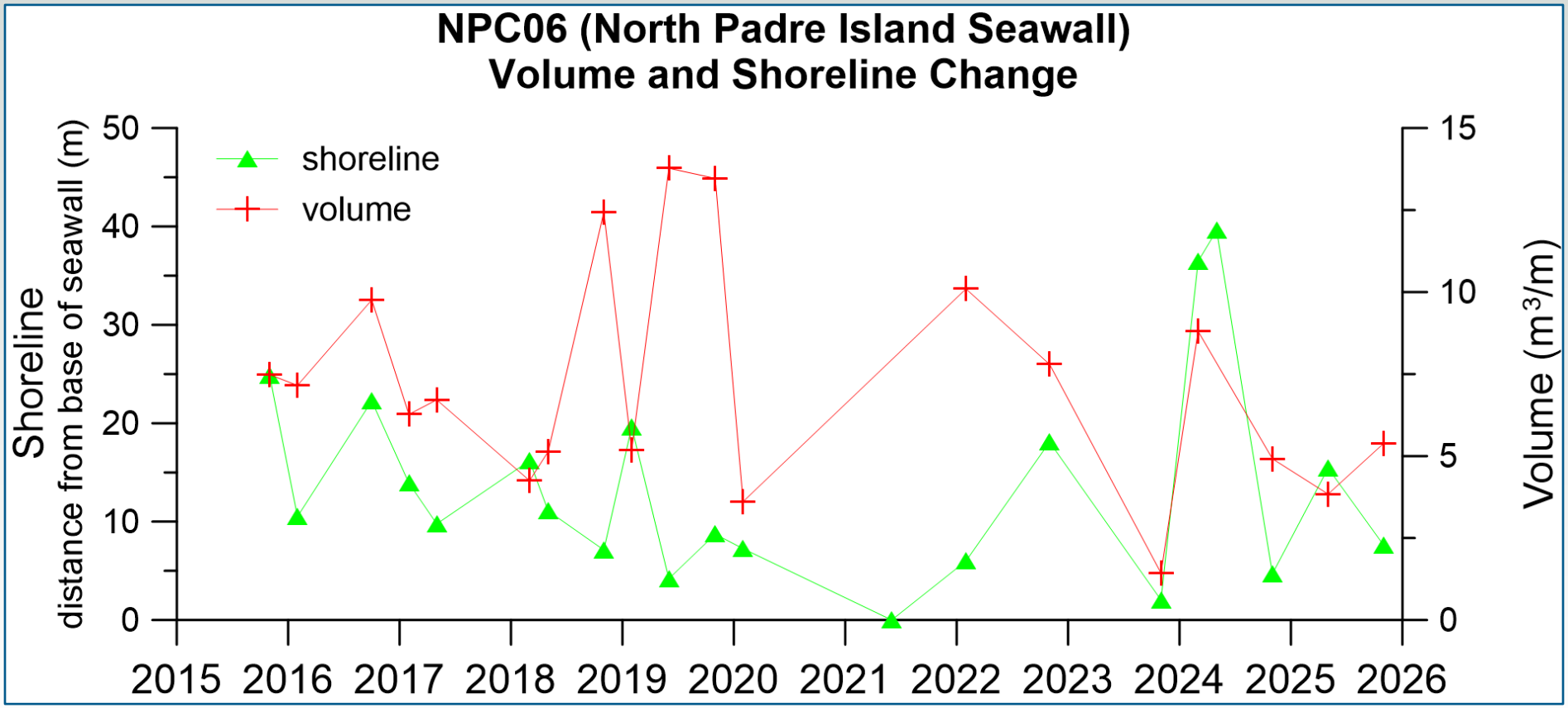

April 11, 2025
Backbeach N


October 21, 2025
Wet/dry line N

NPC06: winter 2022-fall 2024



NPC06: shoreline and volume changes



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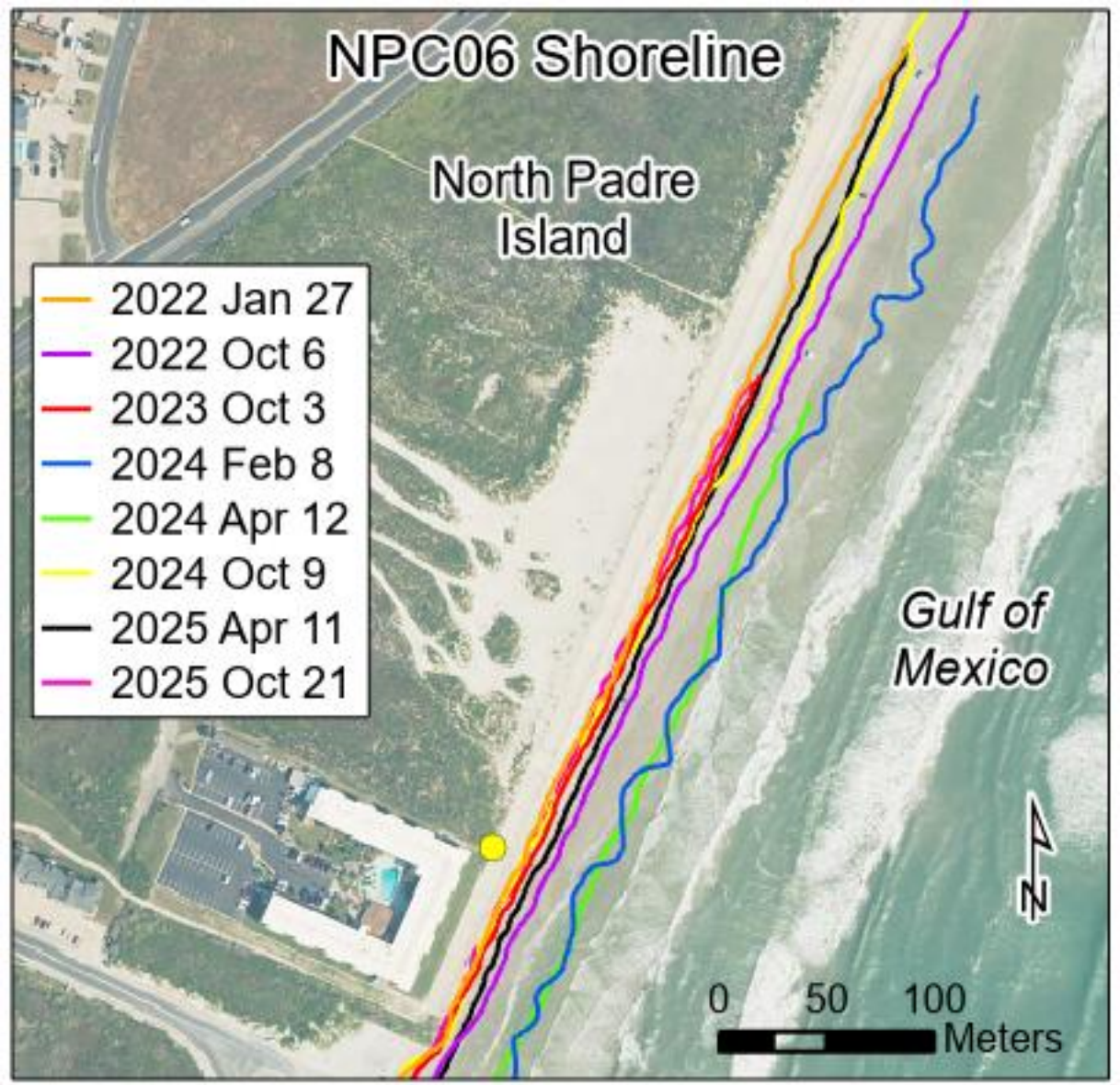
Sediment volume was calculated above 1-meter NAVD88.

NPC06 shoreline positions



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NPISW

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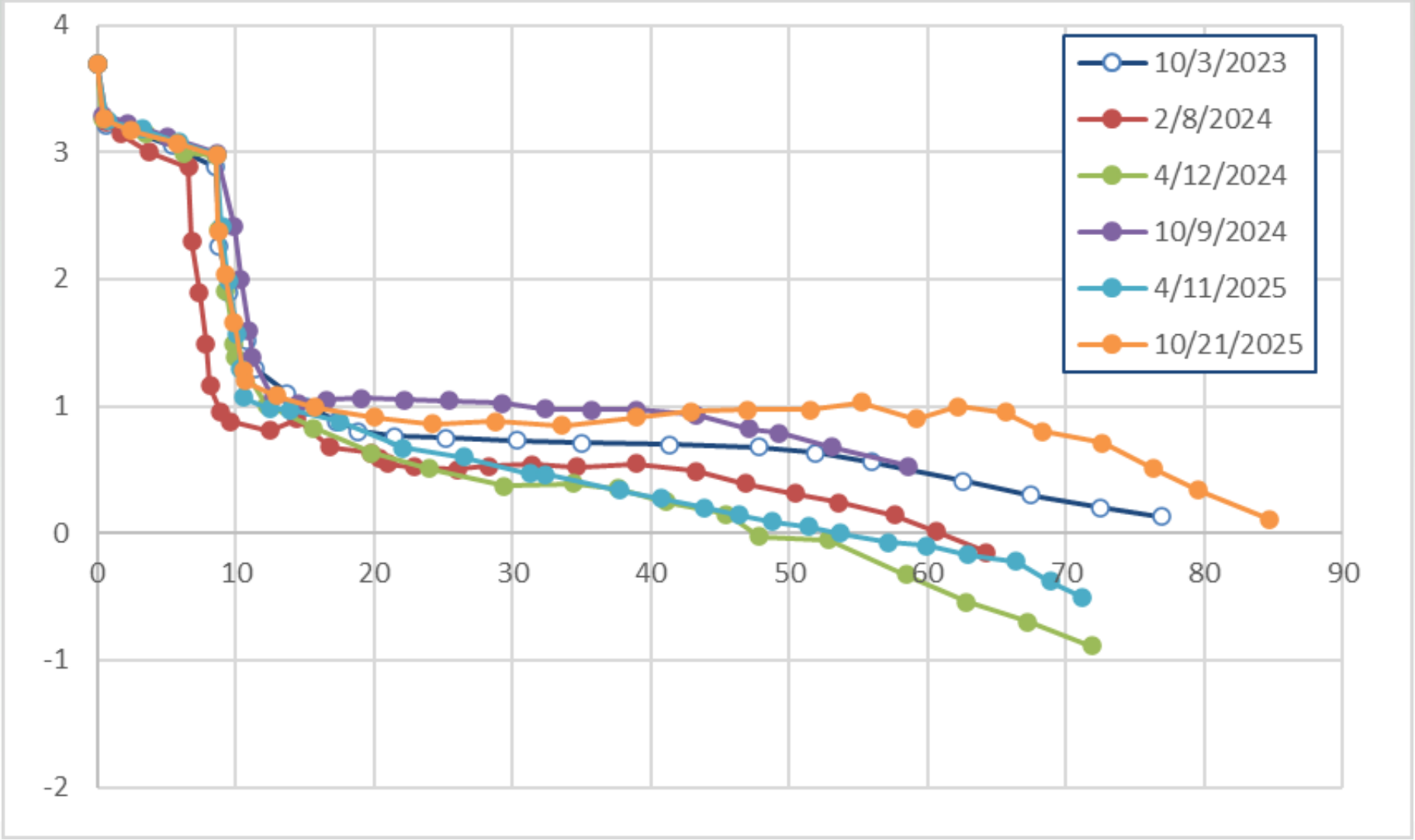
NPISW: fall 2023-fall 2025



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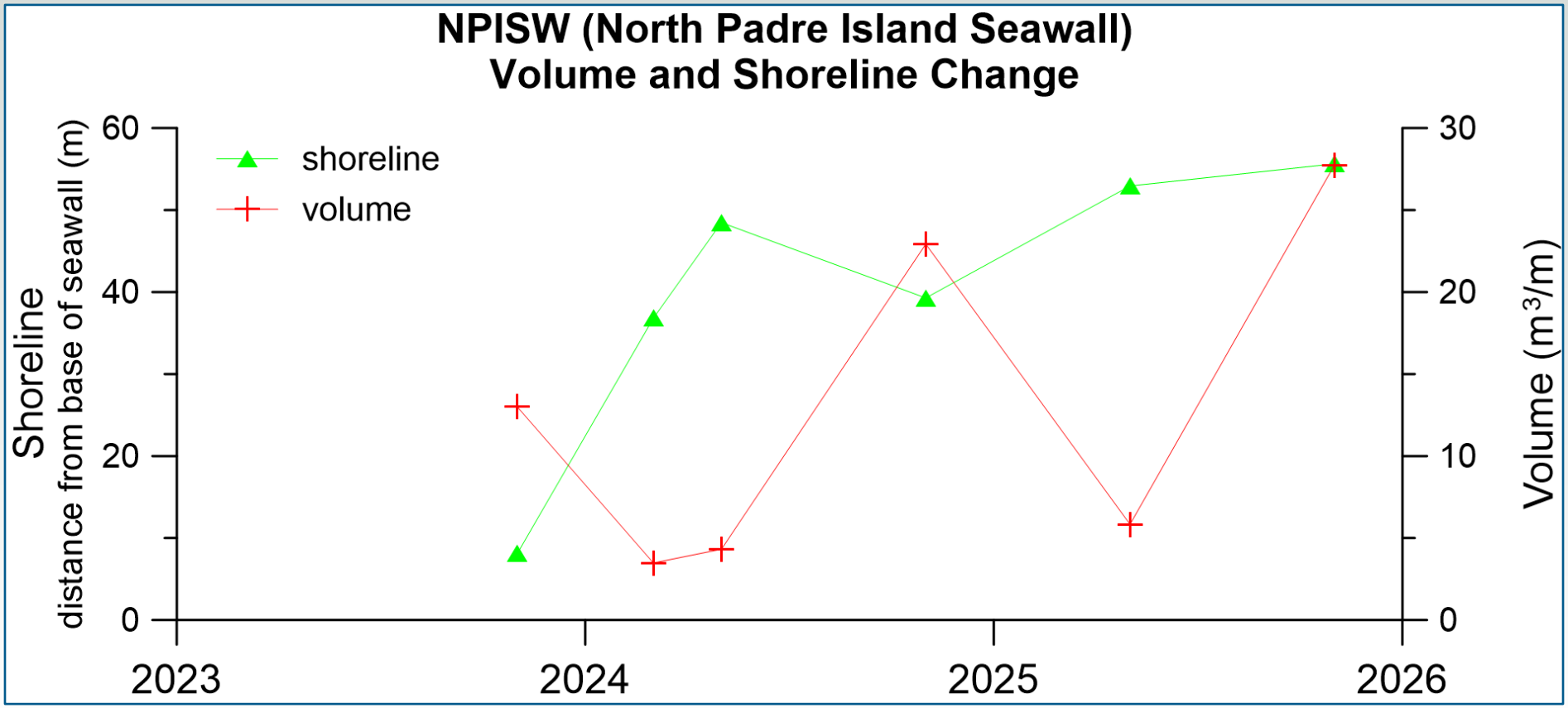
NPISW: shoreline and volume changes



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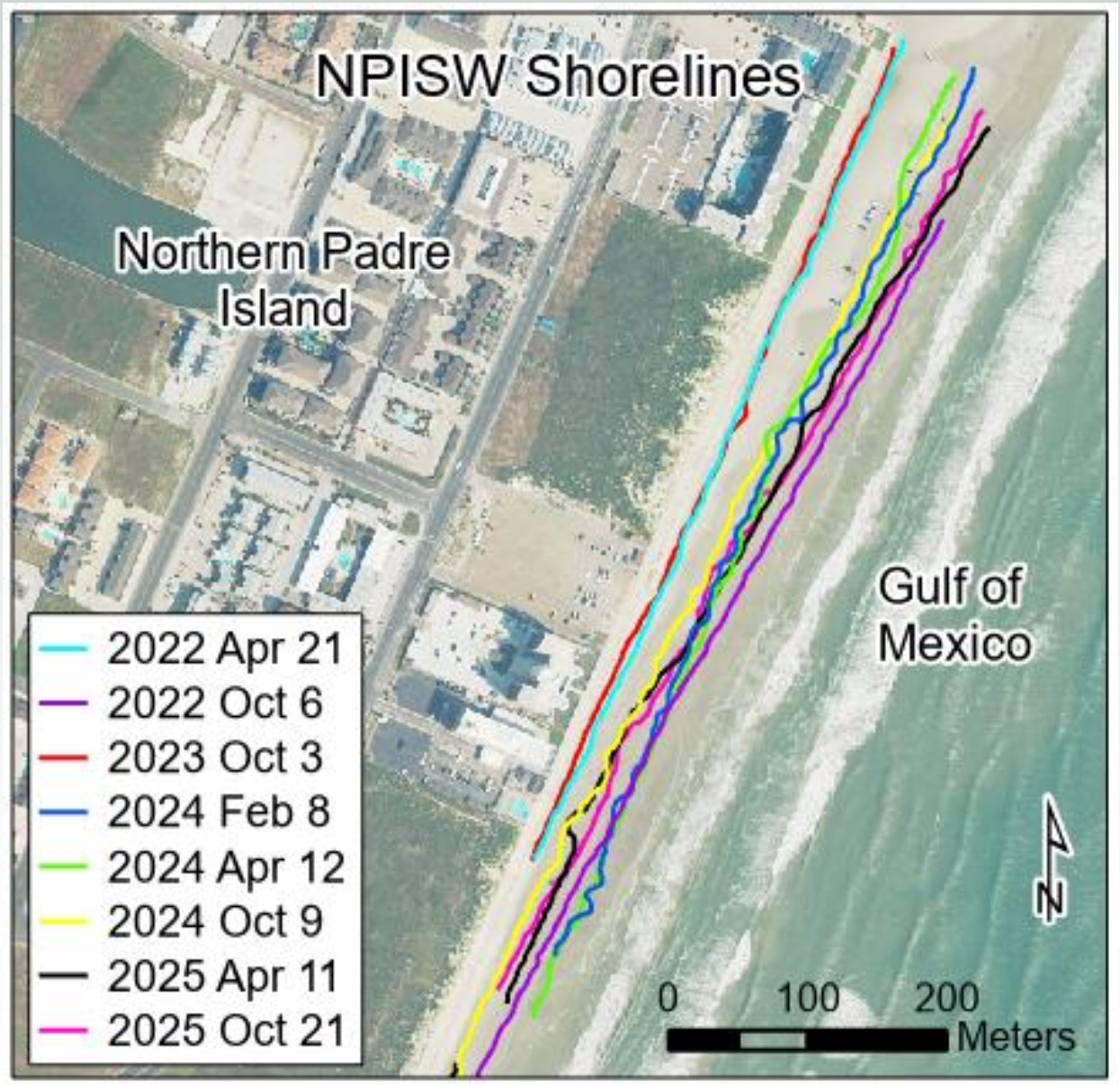
Sediment volume was calculated above 1-meter NAVD88.

Seawall shoreline positions



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