Texas High School Coastal Monitoring Program at Brazosport High School: 2021-2022

July 2022

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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 general public.

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

TEXAS A&M UNIVERSITY CORPUS CHRISTI | HARTE RESEARCH INSTITUTE FOR GULF OF MEXICO STUDIES

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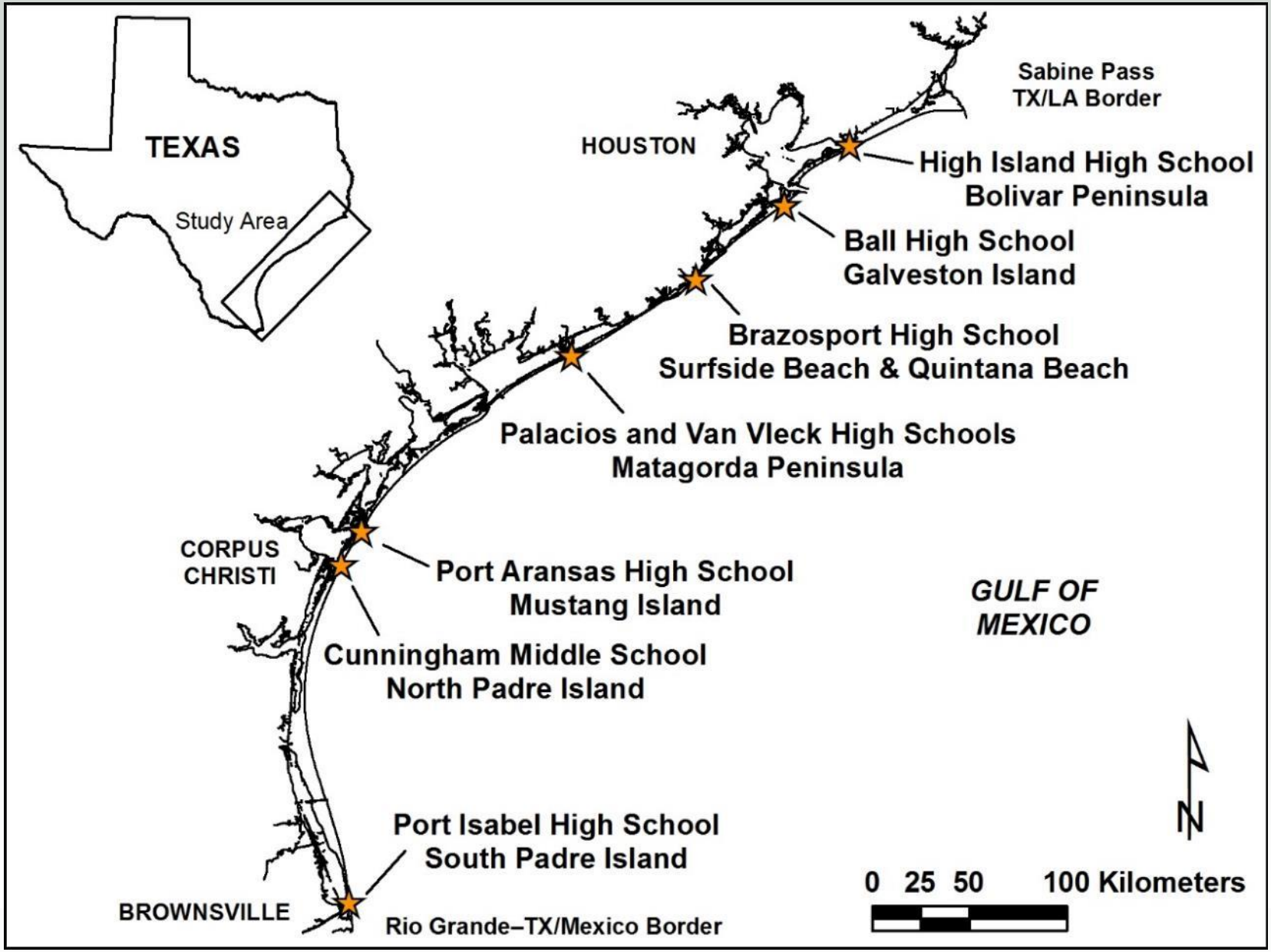

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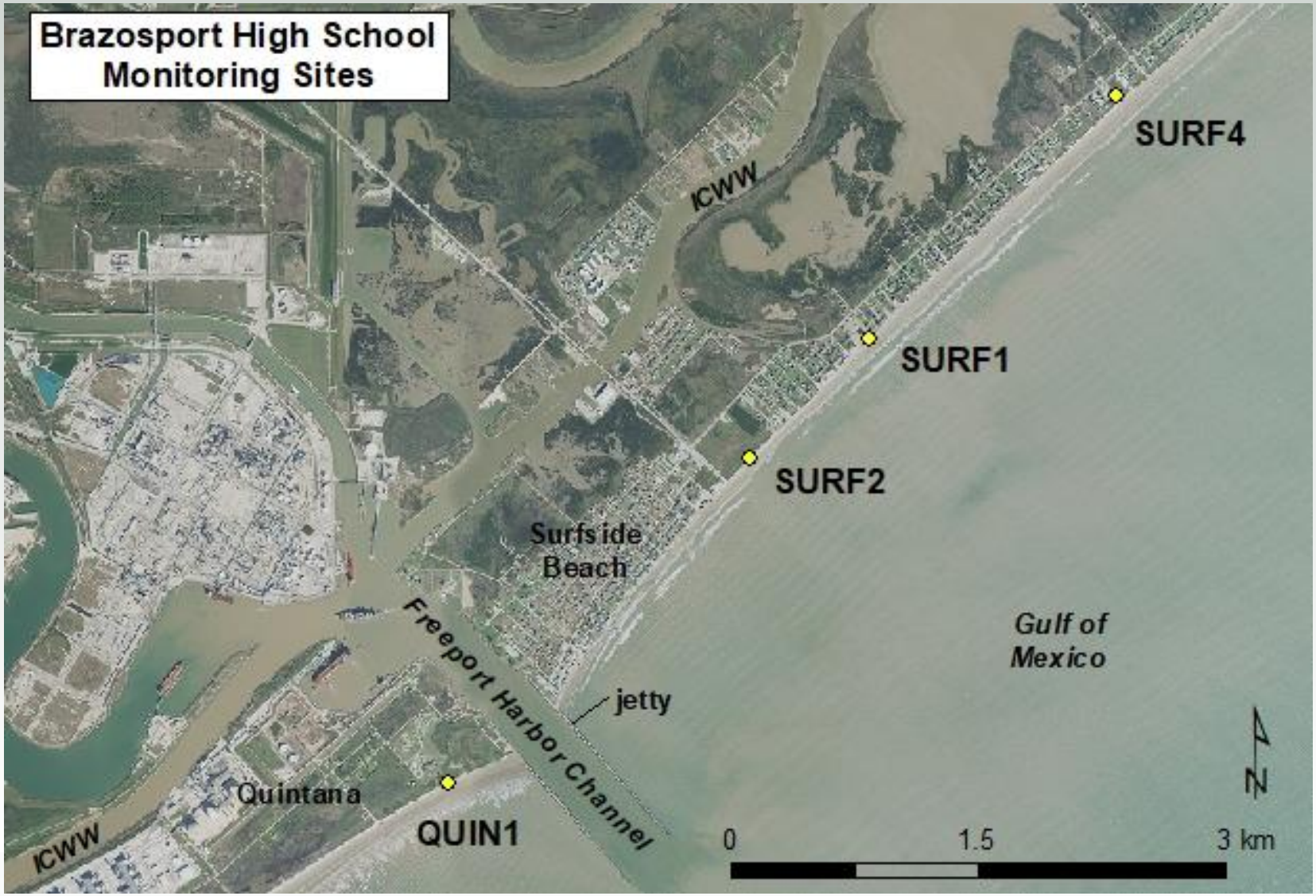
Student Collected Data

- 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

Surfside & Quintana Study Sites



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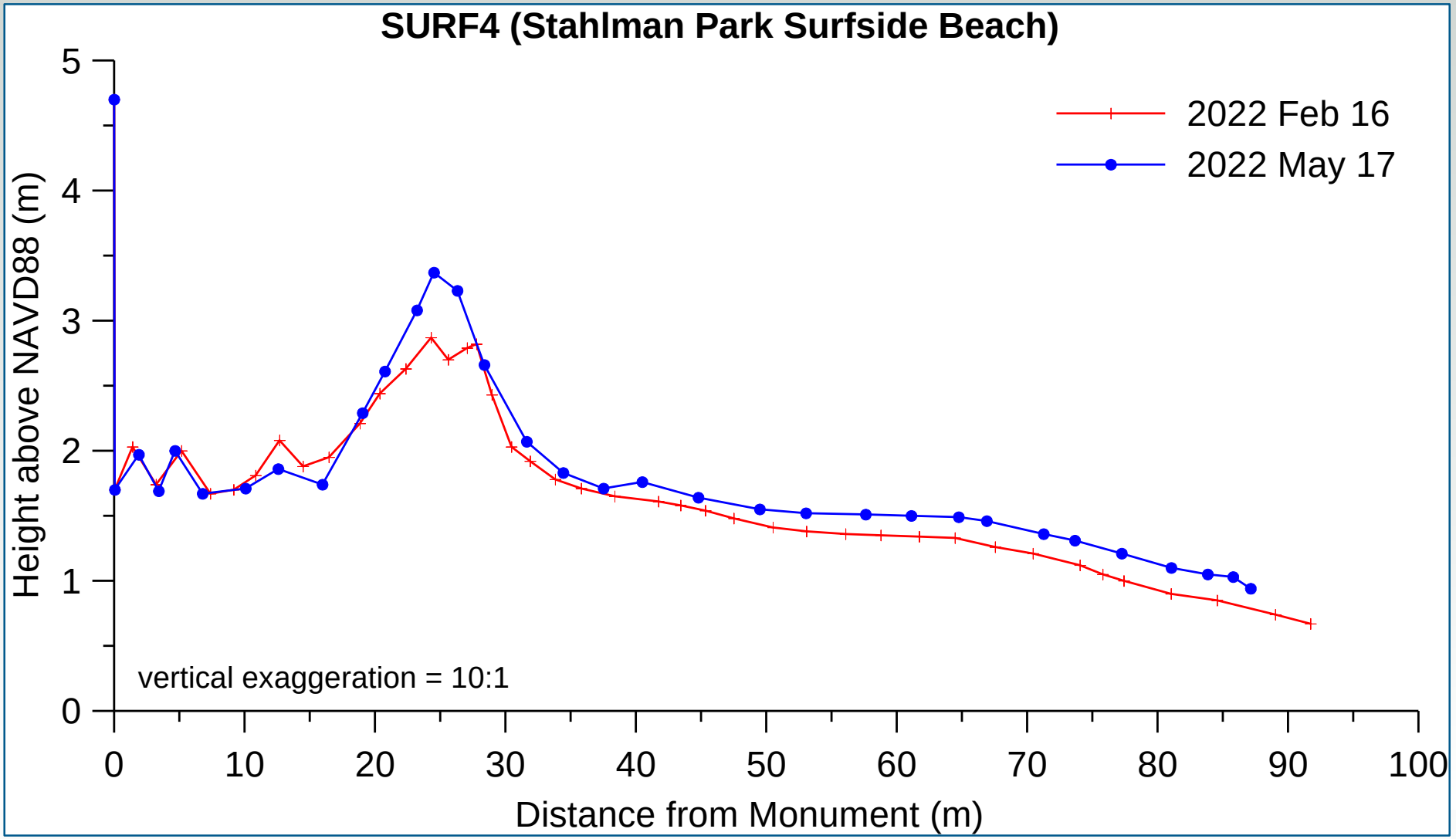
2021-2022 field trips

February 16, 2022

May 17, 2022

SURF4: new 2022



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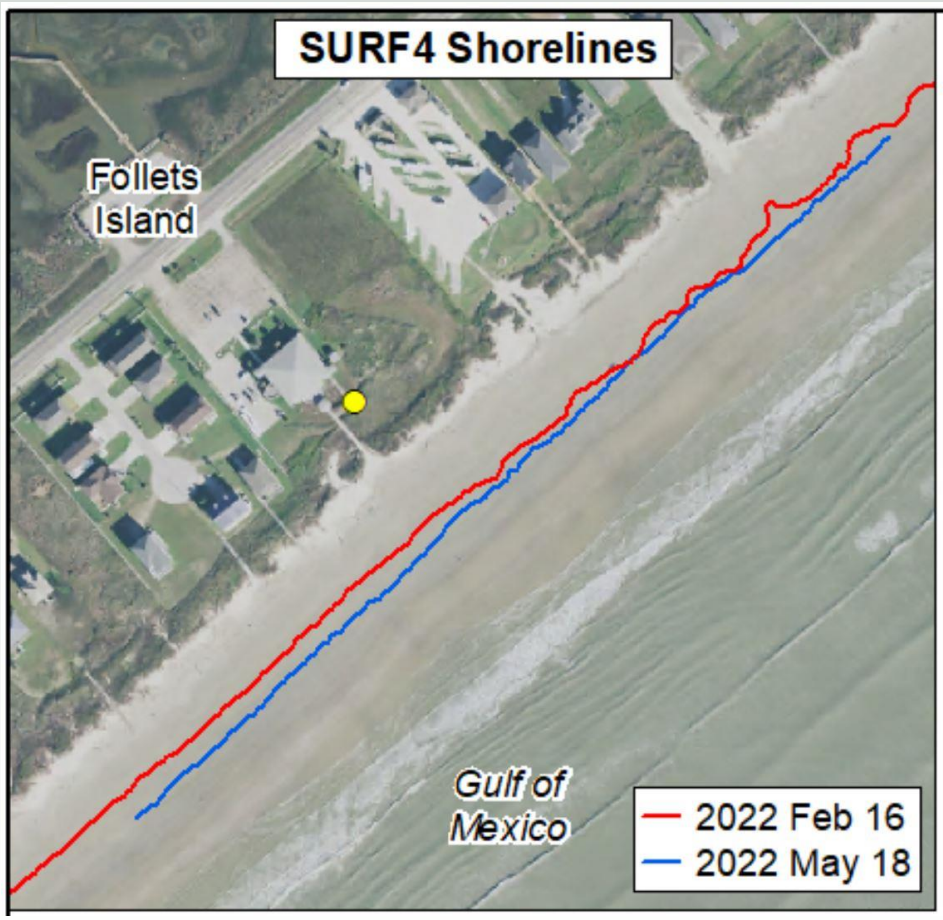
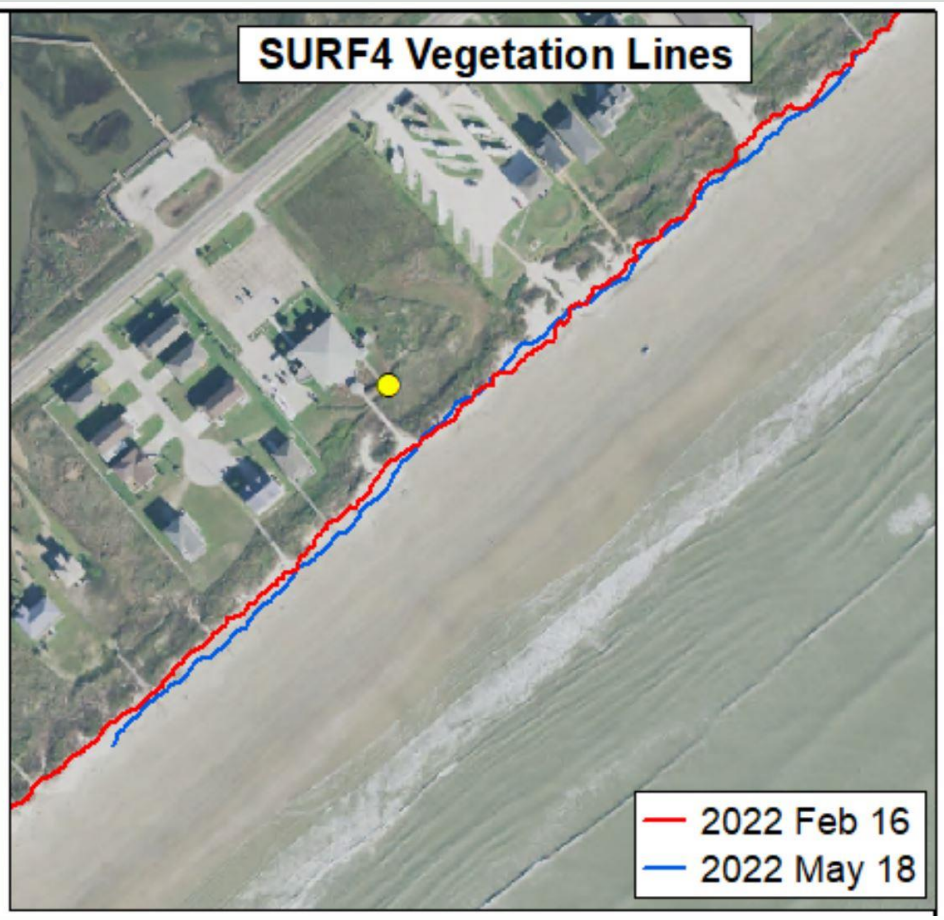
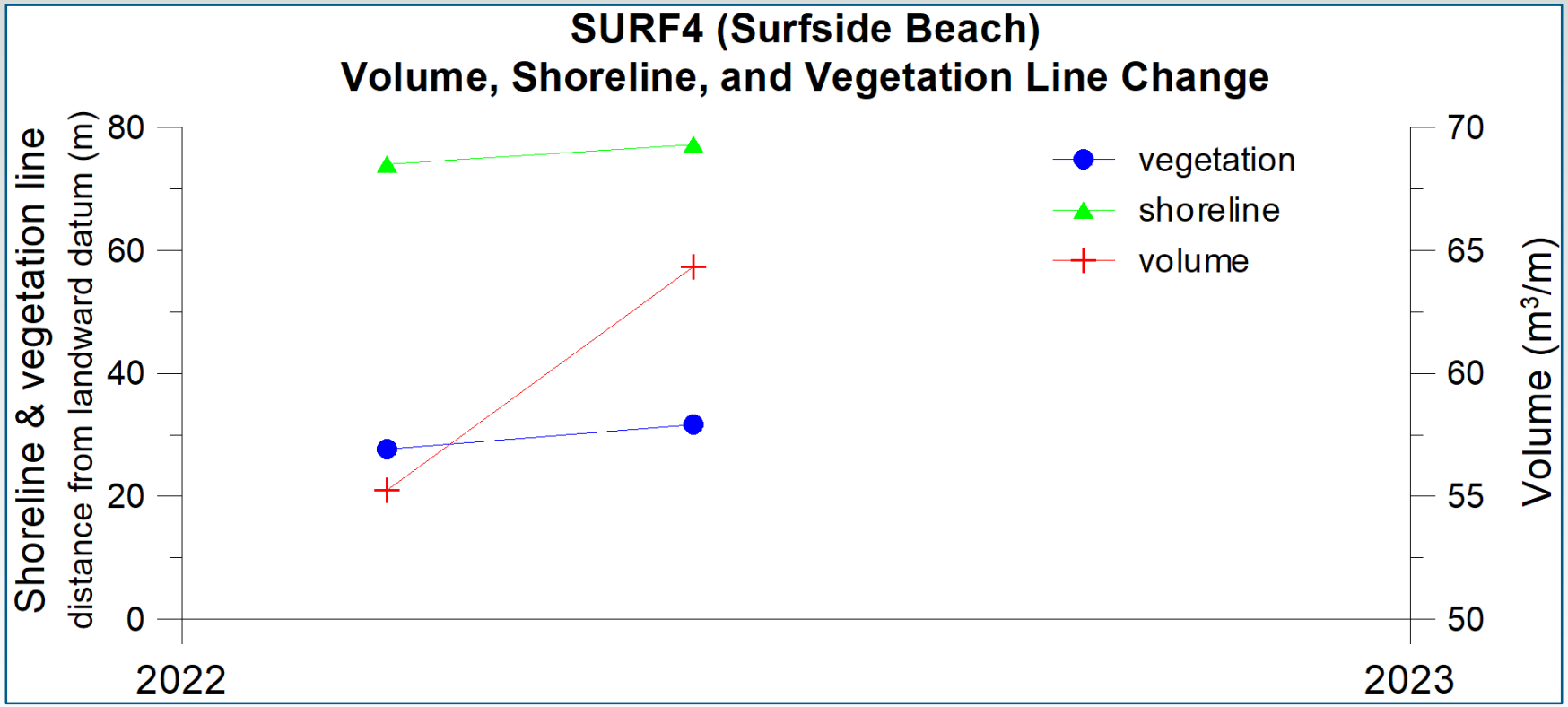
SURF4 shore and vegetation line positions



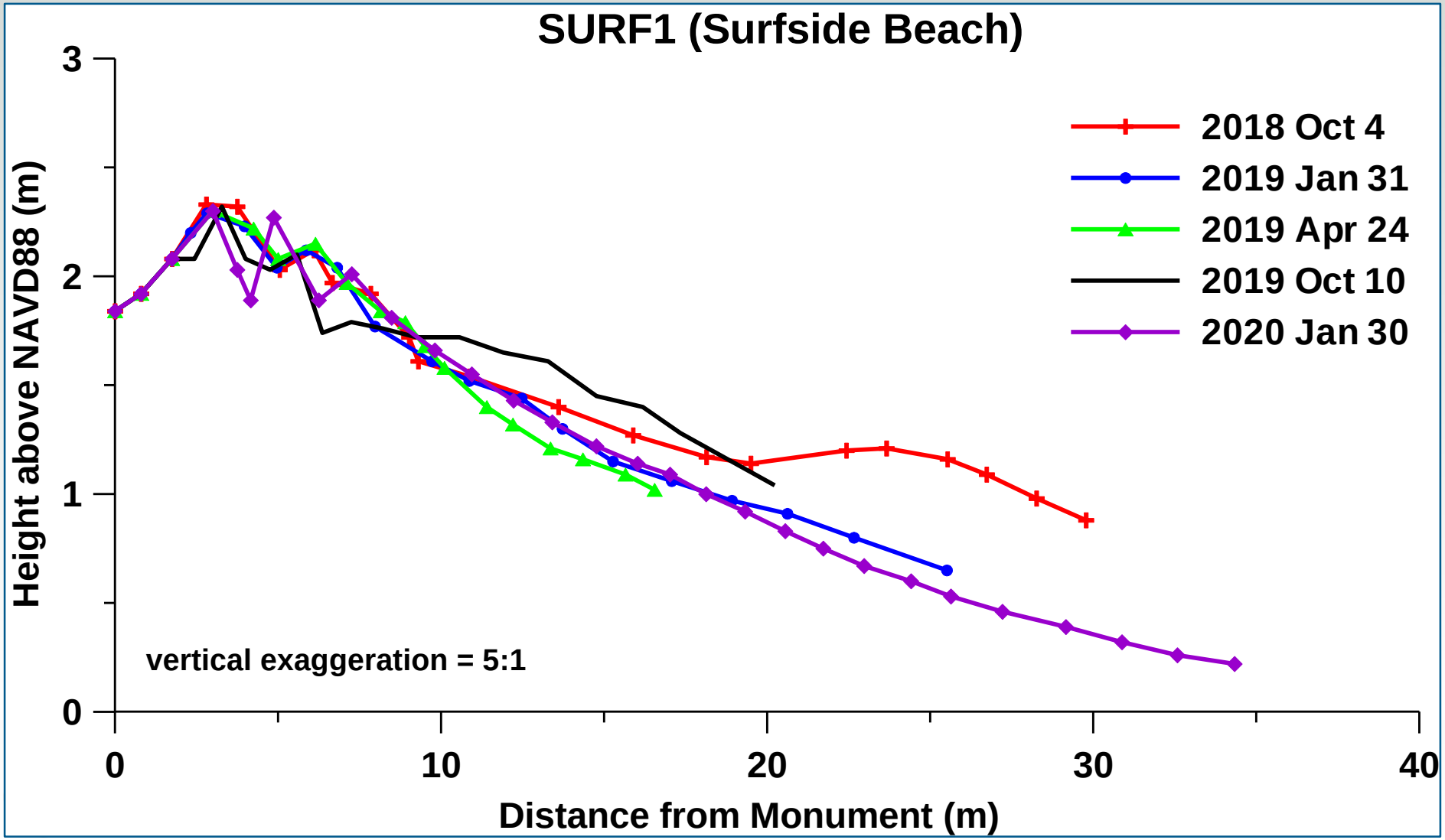


SURF4: shoreline, vegetation line, and volume changes

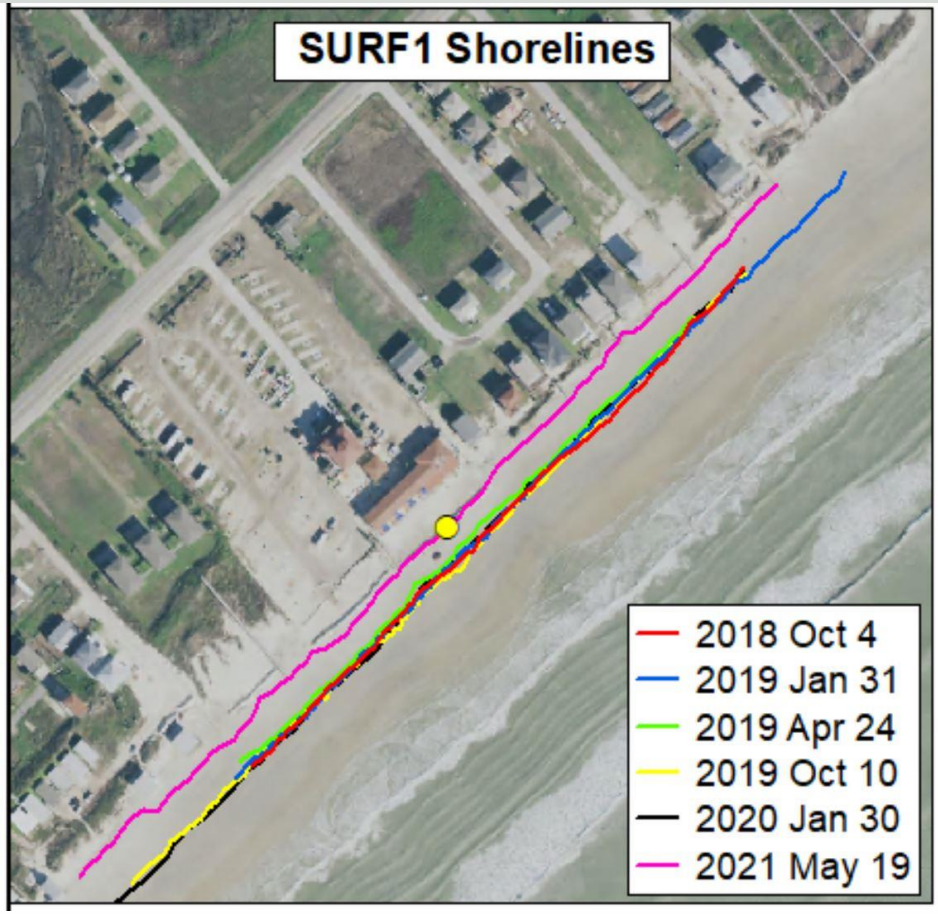


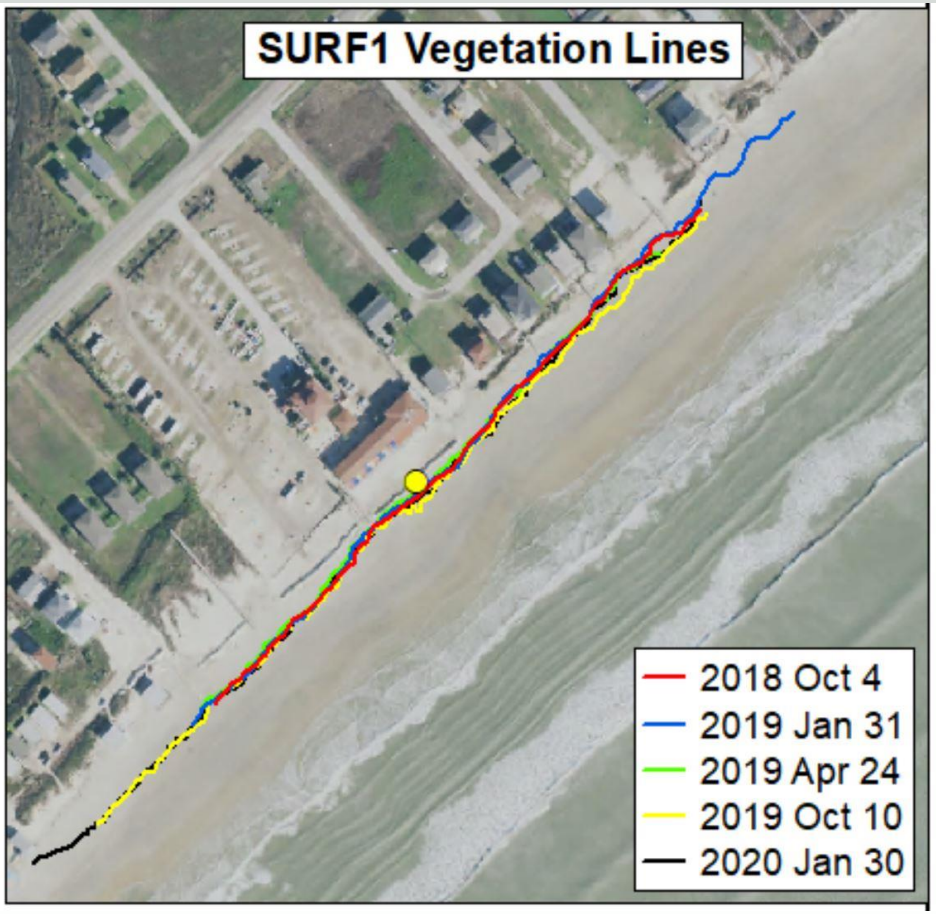
Sediment volume was calculated above 1 meter NAVD88.

SURF1: fall 2018-winter 2020

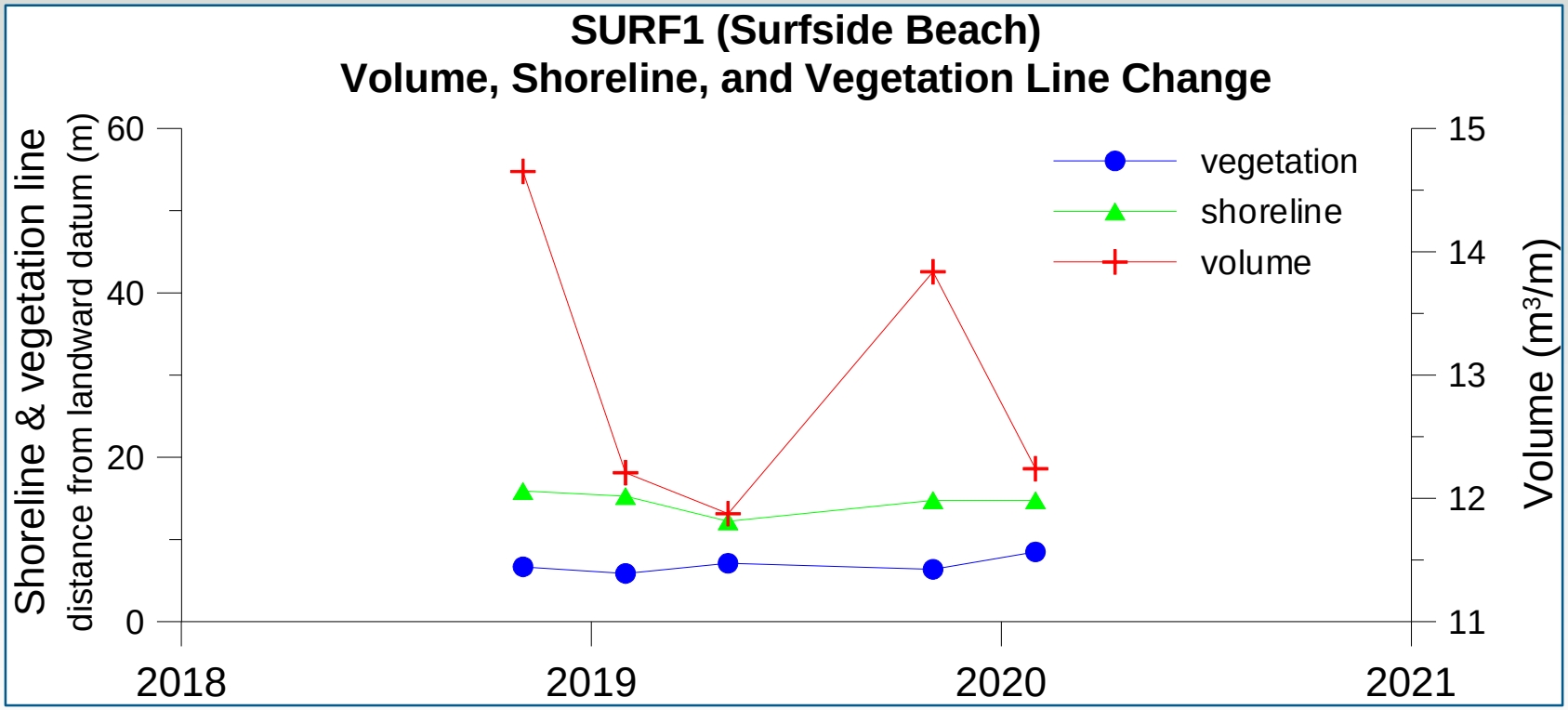


SURF1 shore and vegetation line positions



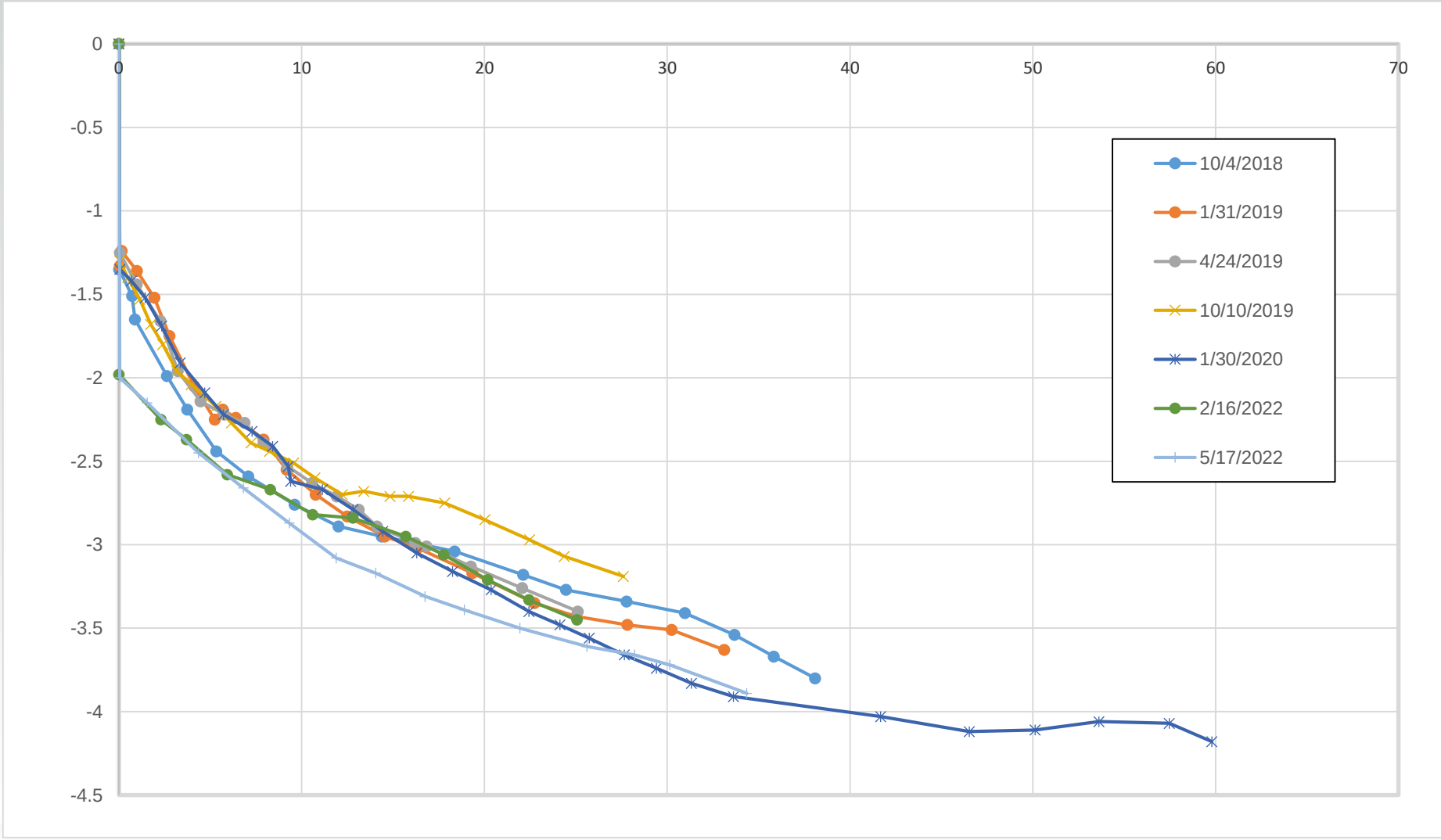


SURF1: shoreline, vegetation line, and volume changes



Sediment volume was calculated above 1 meter NAVD88.

SURF2: fall 2018-spring 2022



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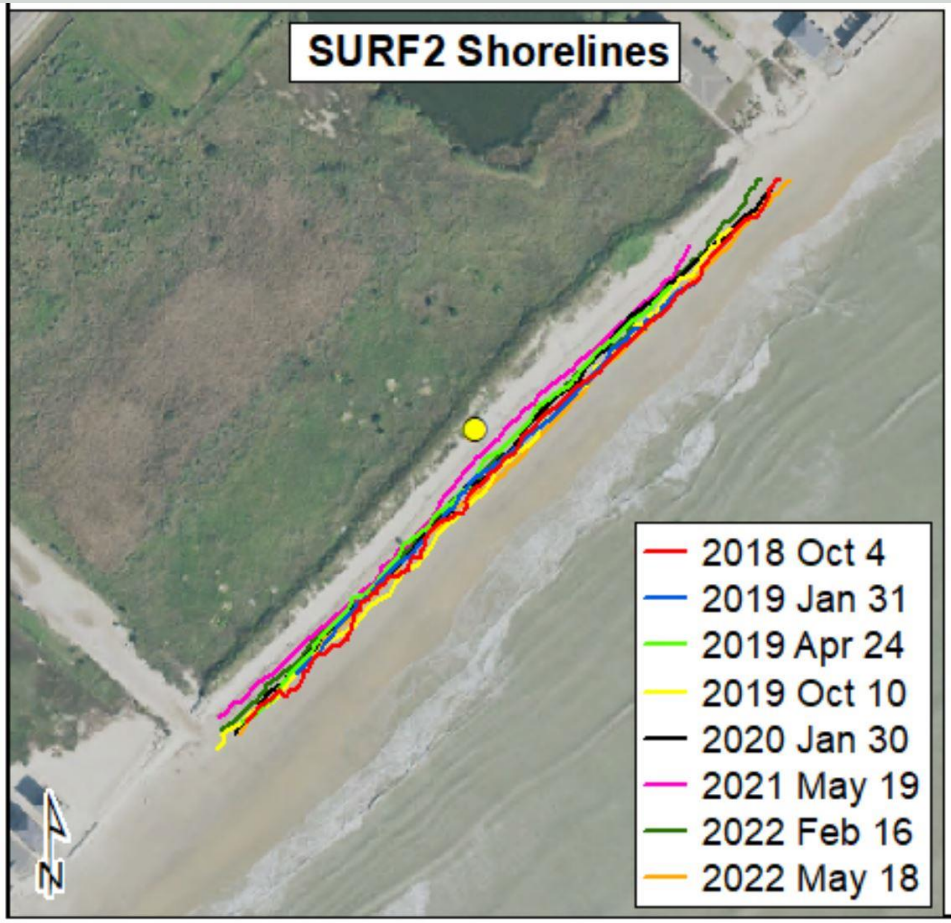
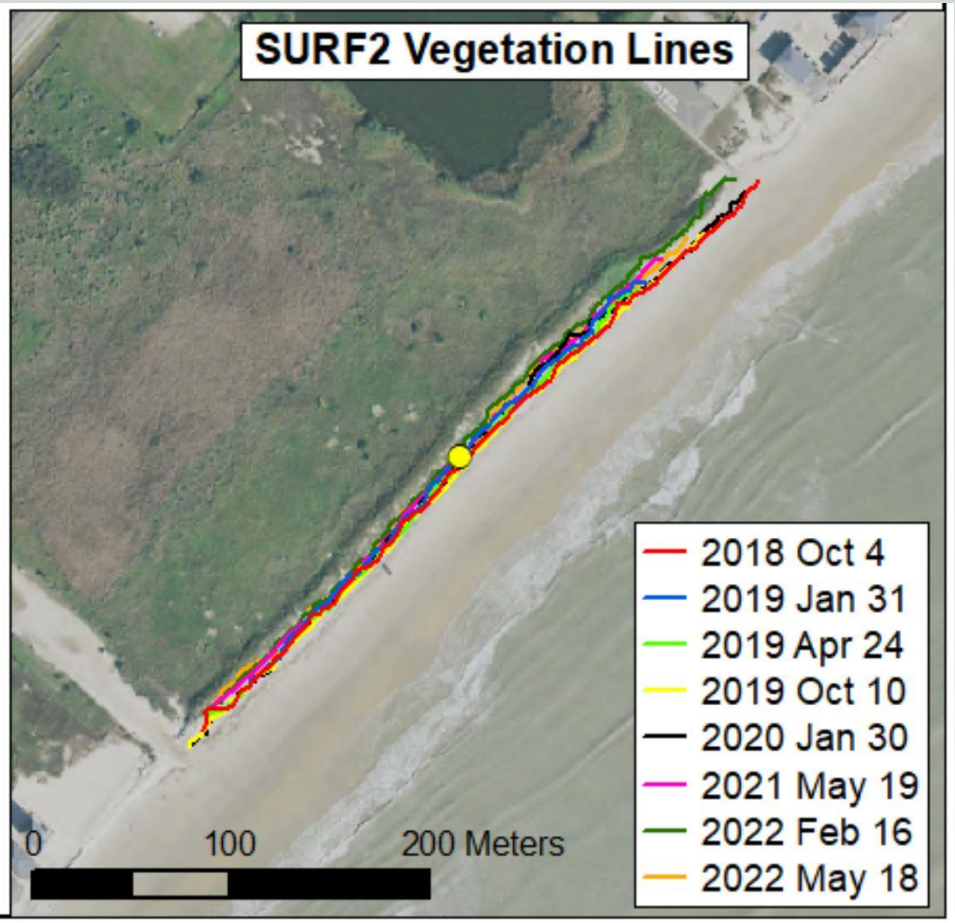
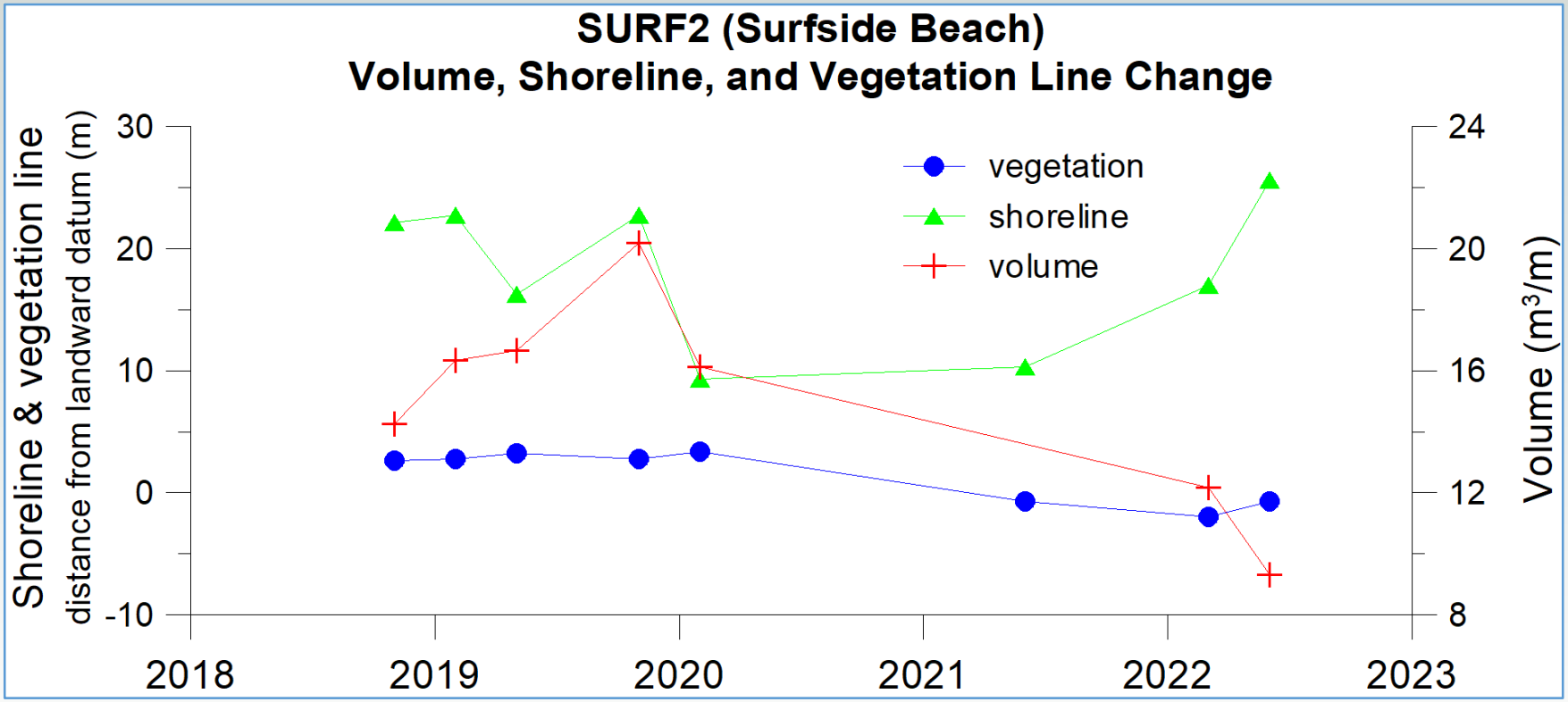
SURF2 shore and vegetation line positions





SURF2: shoreline, vegetation line, and volume changes



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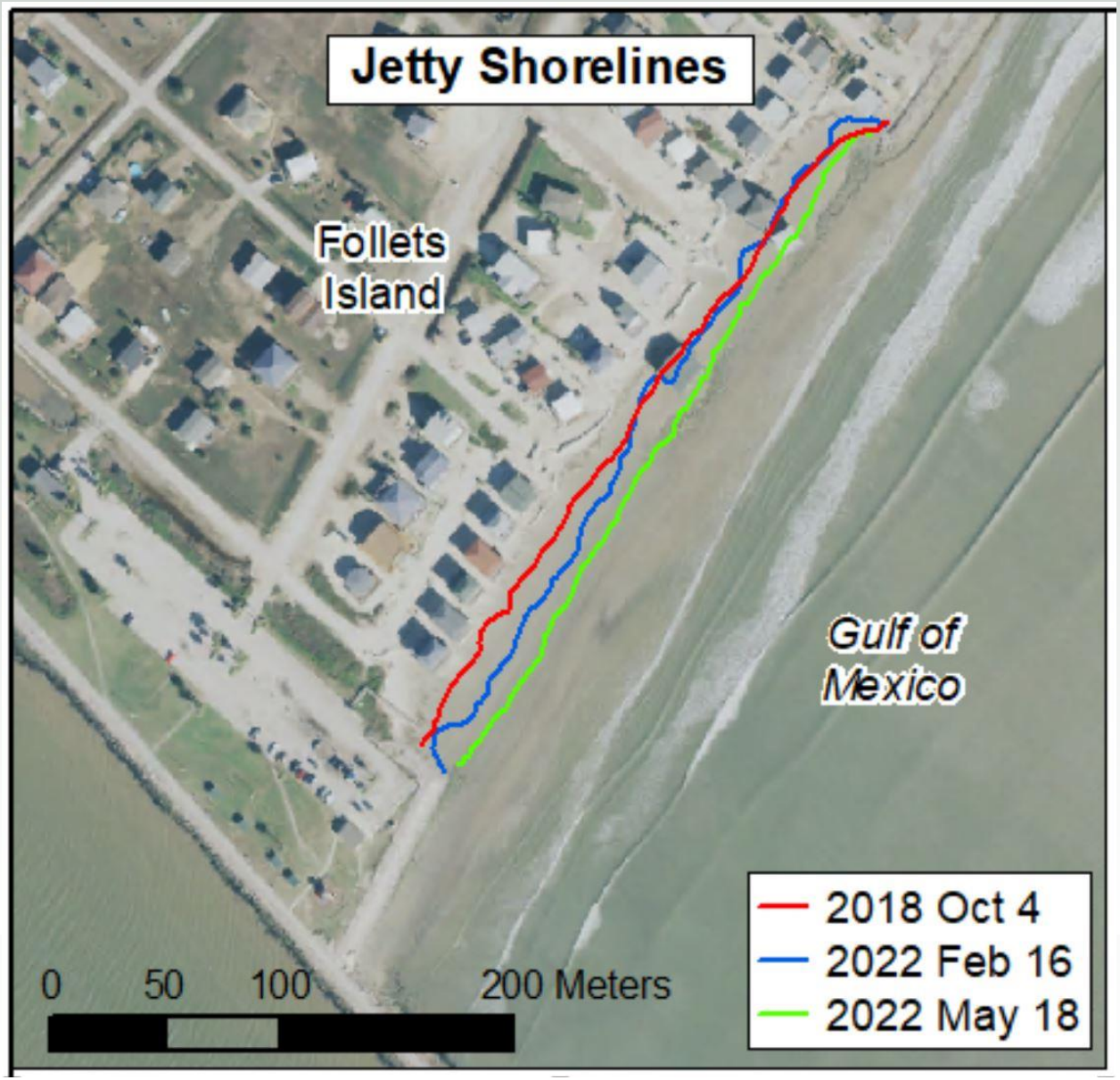
Jetty shoreline positions



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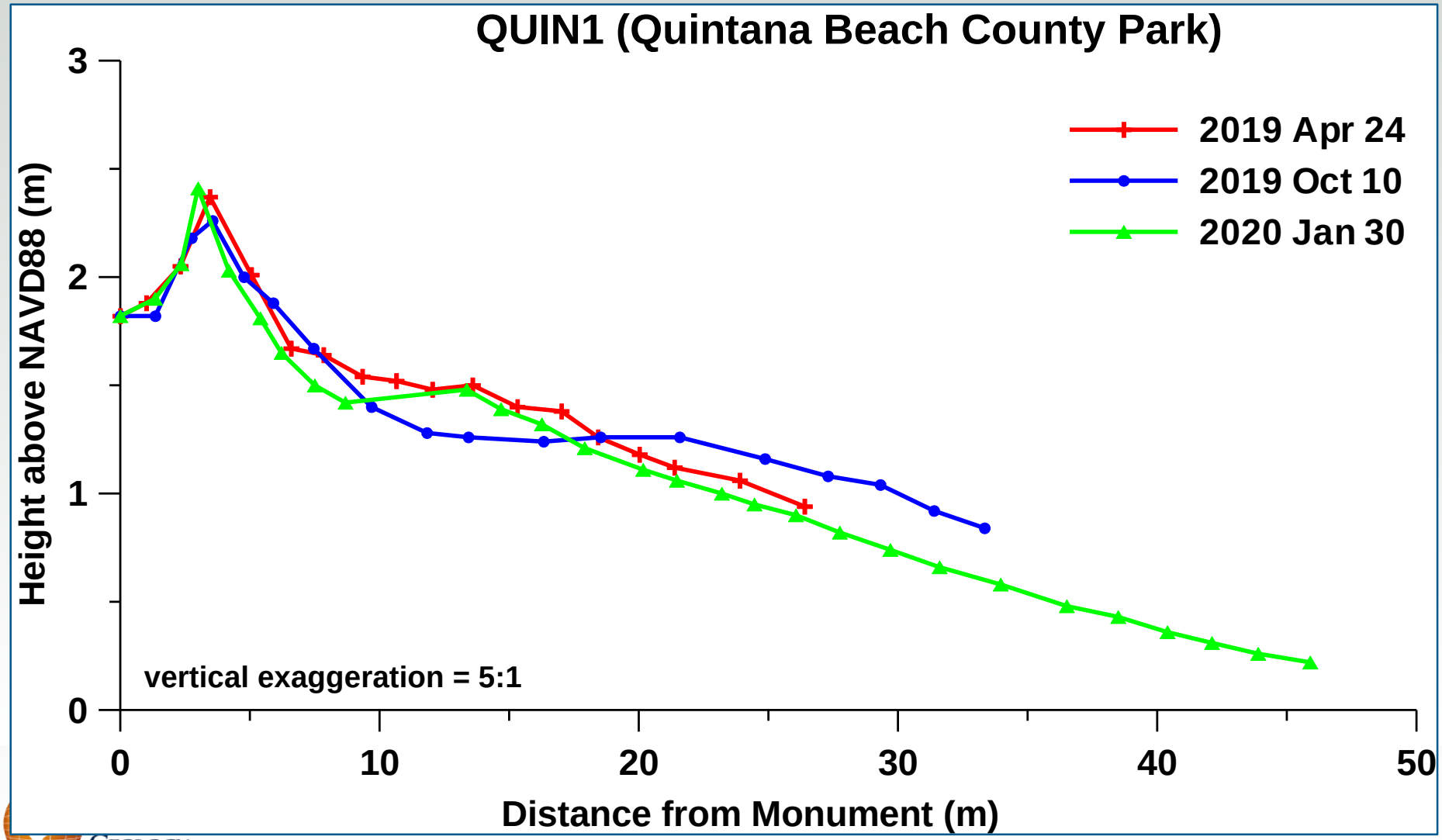
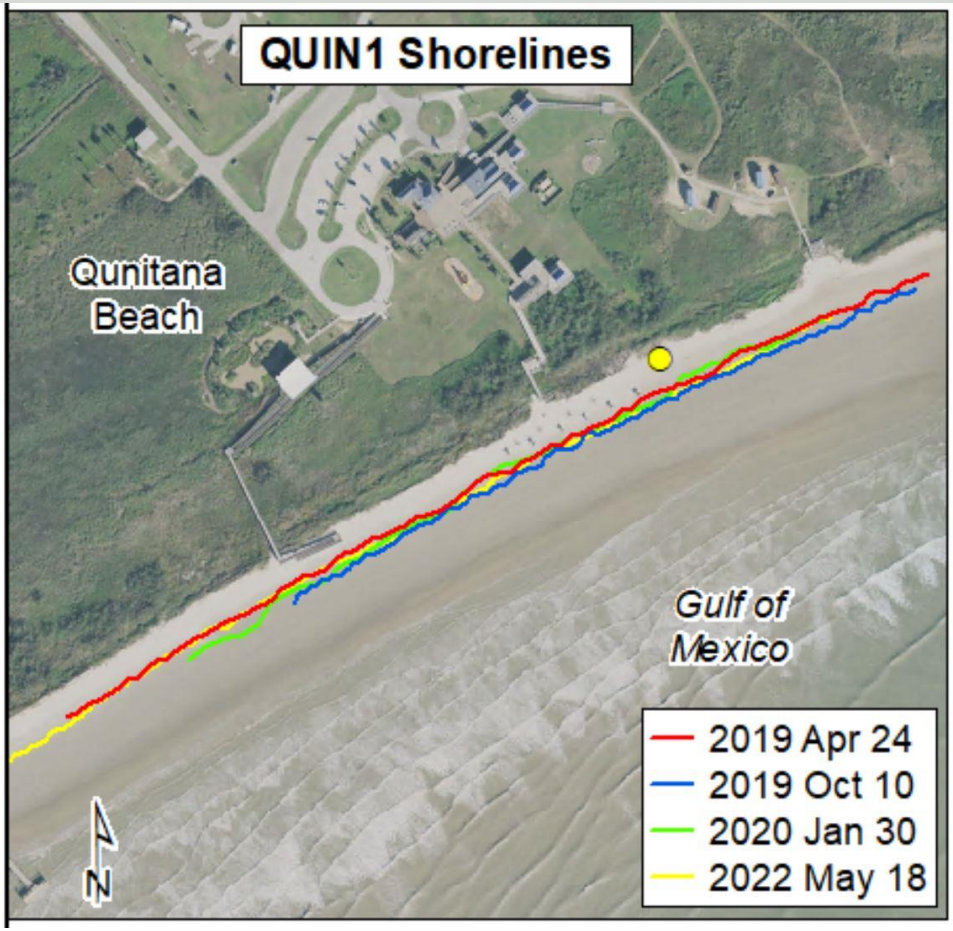
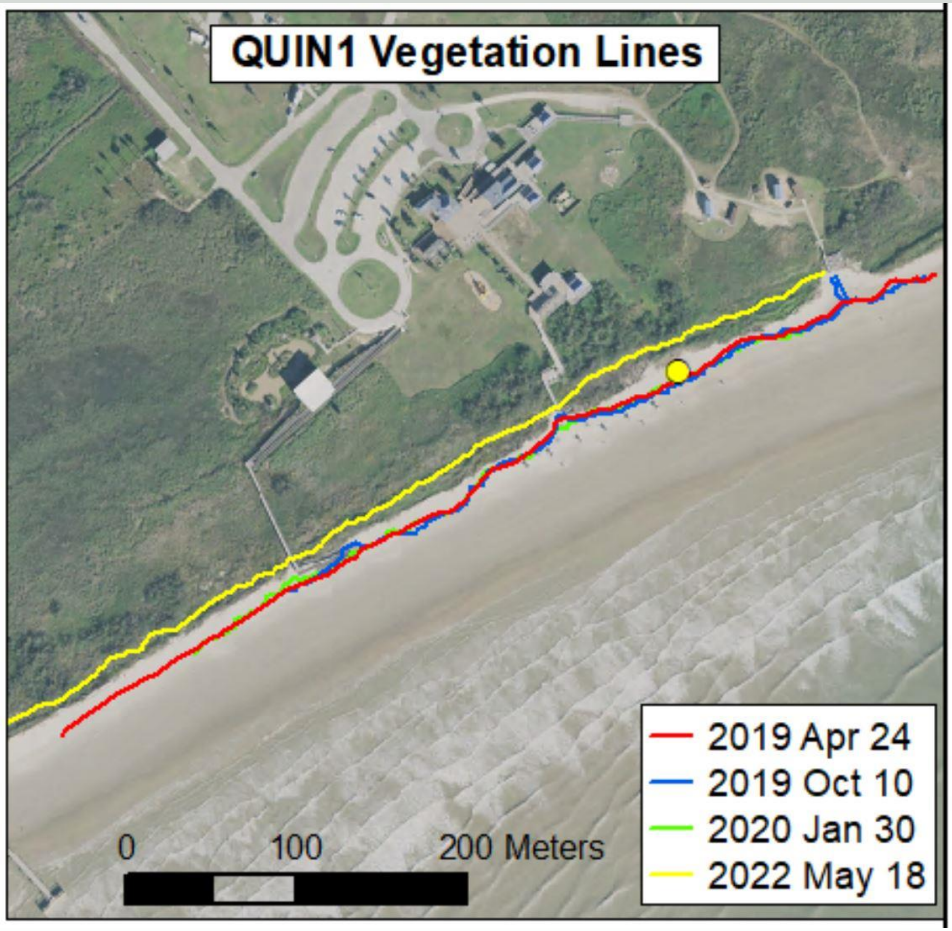
QUIN1: spring 2019-winter 2020



QUIN1 shore and vegetation line positions





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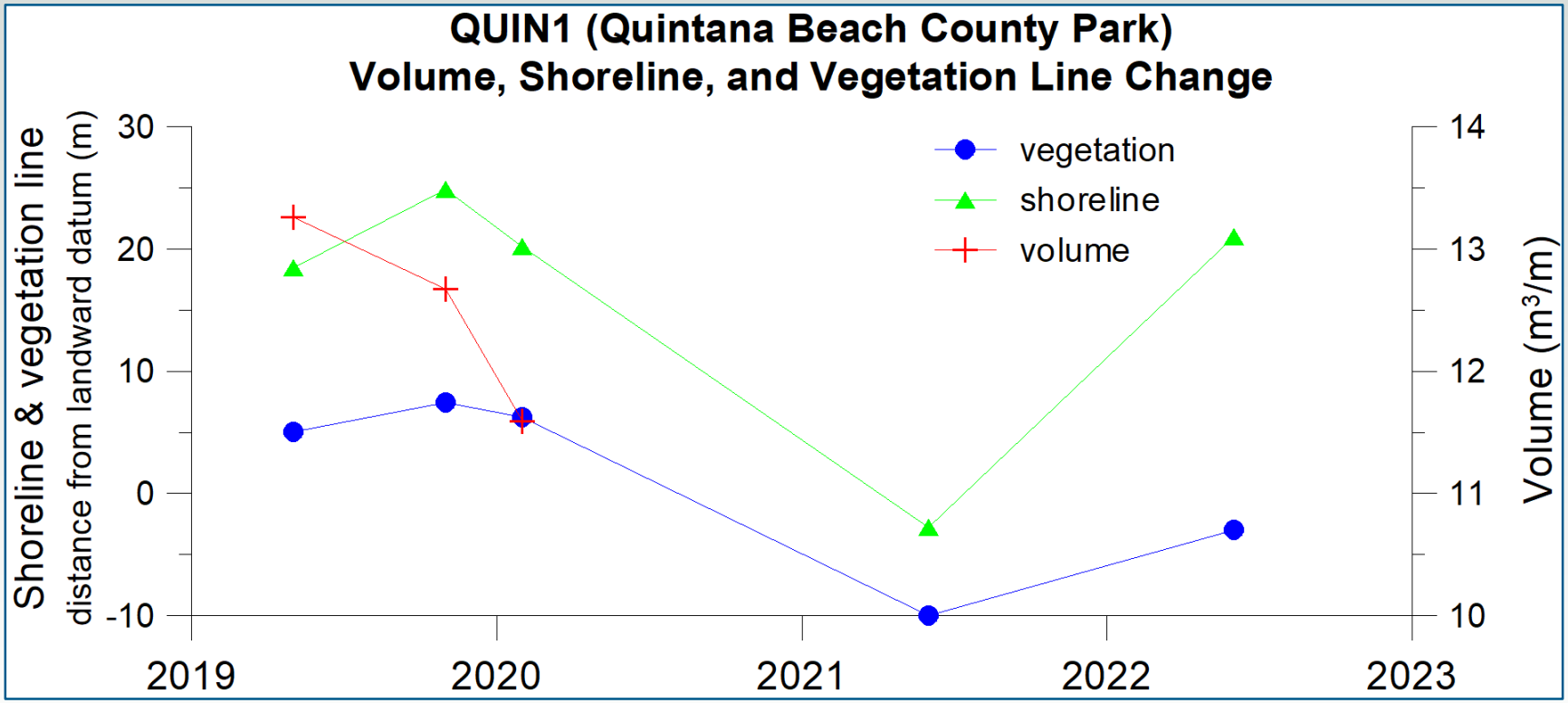
QUIN1: shoreline, vegetation line, and volume changes



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