

Chesapeake Bay Sentinel Site Cooperative

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October 22, 2015

Presentation to the CBP STAR



CHESAPEAKE
BAY



Outline

- National Sentinel Site Program and the CBSSC
- What is a Sentinel Site? What is a Cooperative?
- Our partners and Cooperative Components
- CBSSC Monitoring Efforts and Infrastructure
- CBSSC Partner Efforts
- Next Steps

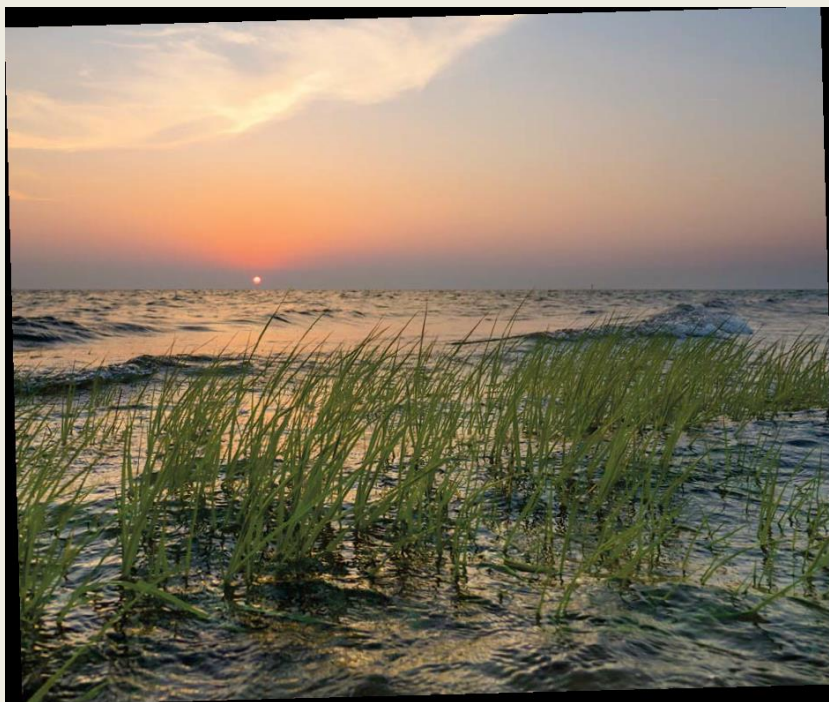
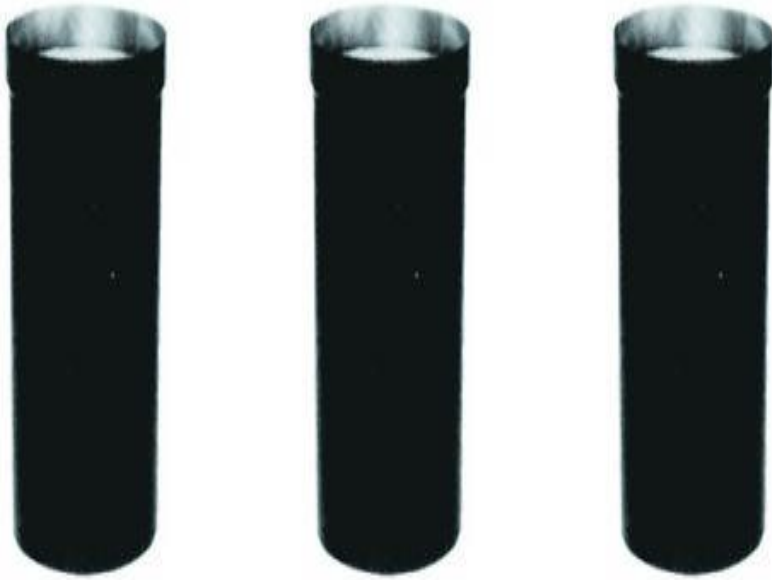


Photo credit: MD Sea Grant; Tal Elzer ODU



THE CHALLENGE

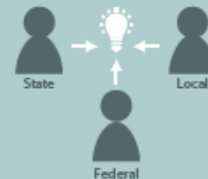


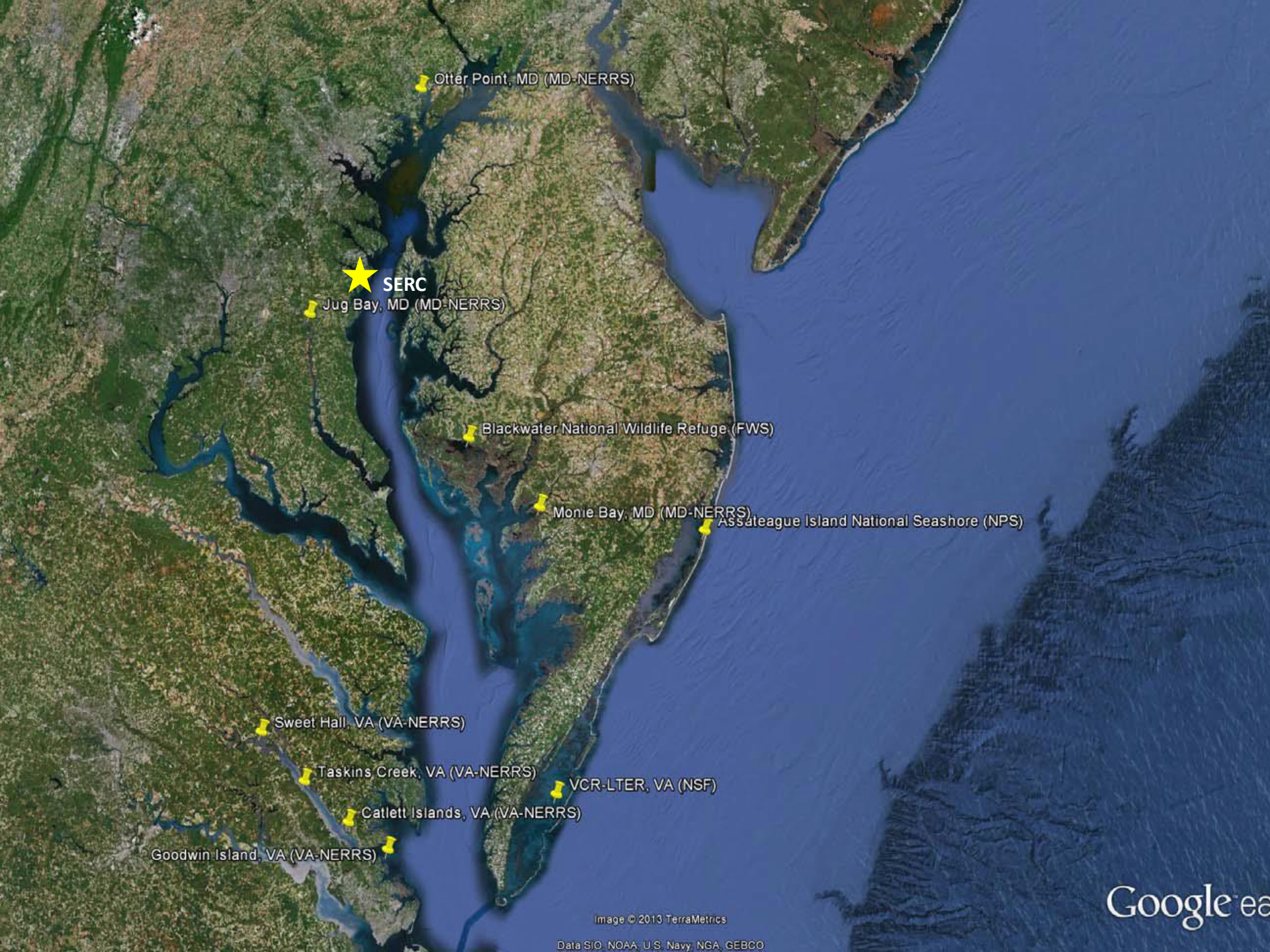
Traditional Stove-pipe structure



Collaborative structure

NOAA Sentinel Site Program





SERC

Otter Point, MD (MD-NERRS)

Jug Bay, MD (MD-NERRS)

Blackwater National Wildlife Refuge (FWS)

Monie Bay, MD (MD-NERRS)

Assateague Island National Seashore (NPS)

Sweet Hall, VA (VA-NERRS)

Taskins Creek, VA (VA-NERRS)

VCR-LTER, VA (NSF)

Callett Islands, VA (VA-NERRS)

Goodwin Island, VA (VA-NERRS)

Image © 2013 TerraMetrics

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google ea

A Sentinel site is like a...



A Cooperative is...

...owned and run by its members

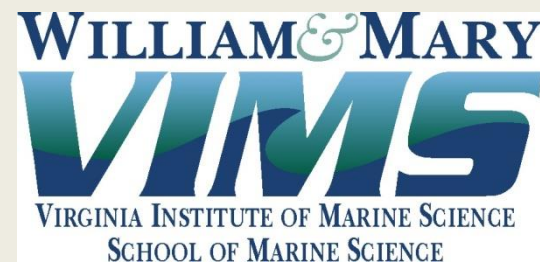
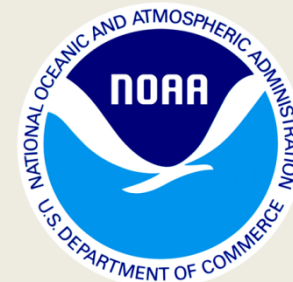
...all parties share in the benefits of collaboration



**Mutual
benefits**



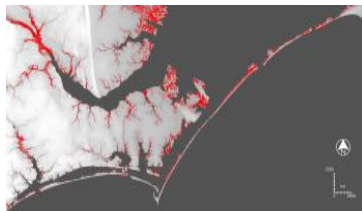
Smithsonian Environmental
Research Center



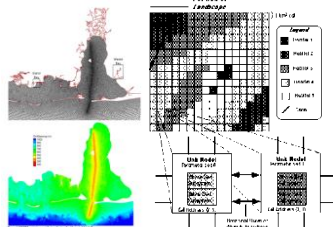
Components of a Sentinel Site Cooperative



Observe & Monitor



Applied Research



Models & Predictions

Science

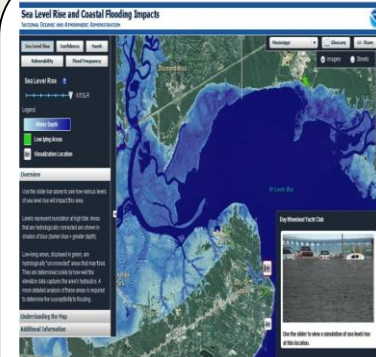


Spatial Analysis & Visualization



Information Transfer

Service



Management & Decision Making

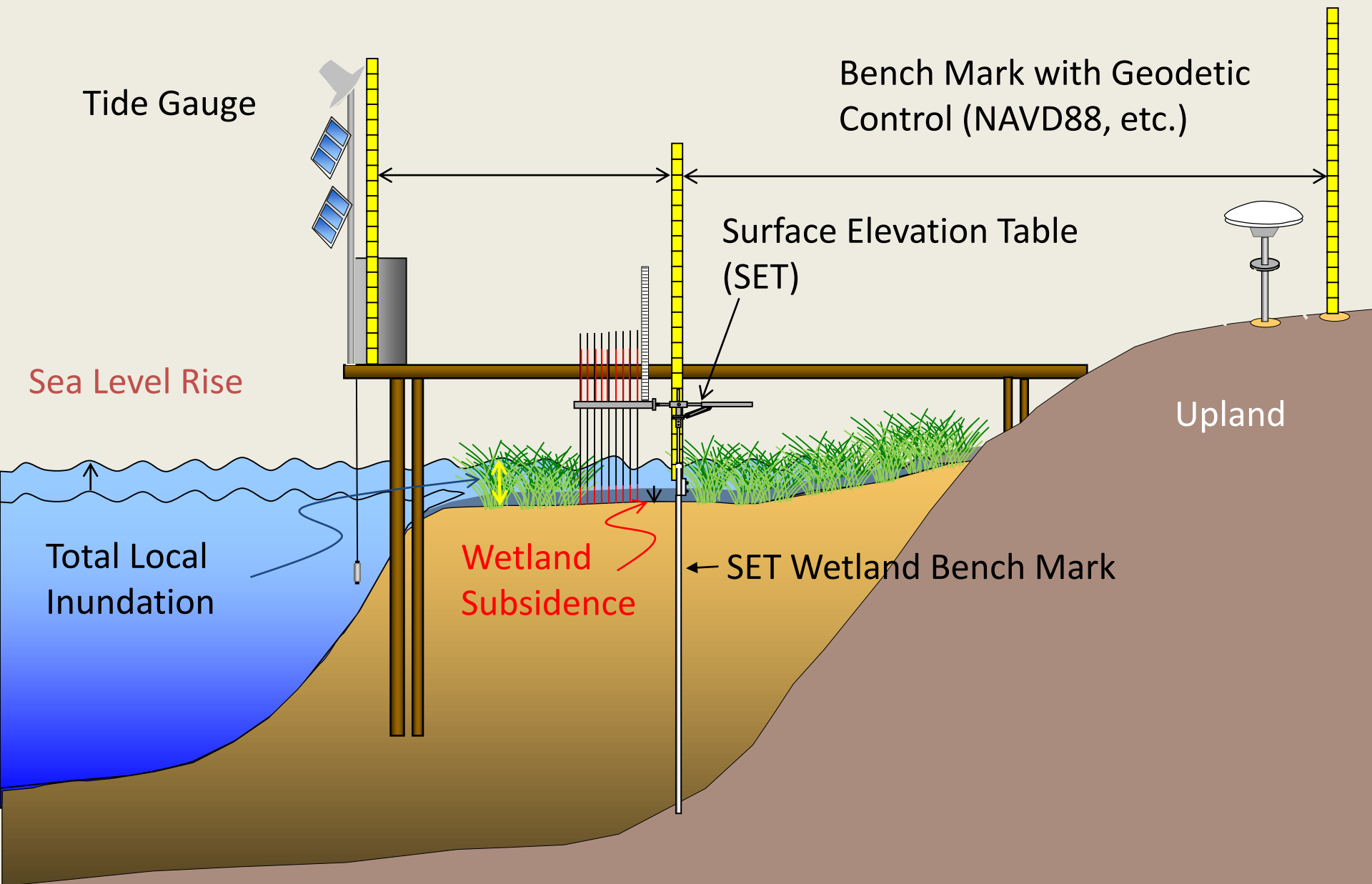


Education & Outreach

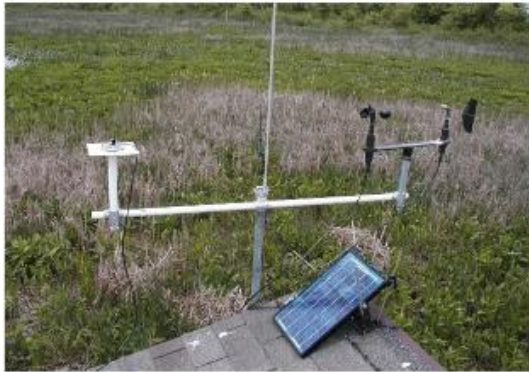
Stewardship

Monitoring Efforts and Infrastructure

- Water level gauges
- Wetland Surface Elevation Change (SETs)
- Local geodetic and tidal benchmarks
- Vegetation transects
- Submerged Aquatic Vegetation (SAV)
- Water quality data (real-time)
- Meteorological Data
- Groundwater dynamics
- Elective/Ancillary parameters (site-specific)



Sentinel Site Monitoring Infrastructure



Weather station instrumentation



Telemetry unit



**Continuous water quality
monitoring station**



Surface elevation Table (SET)

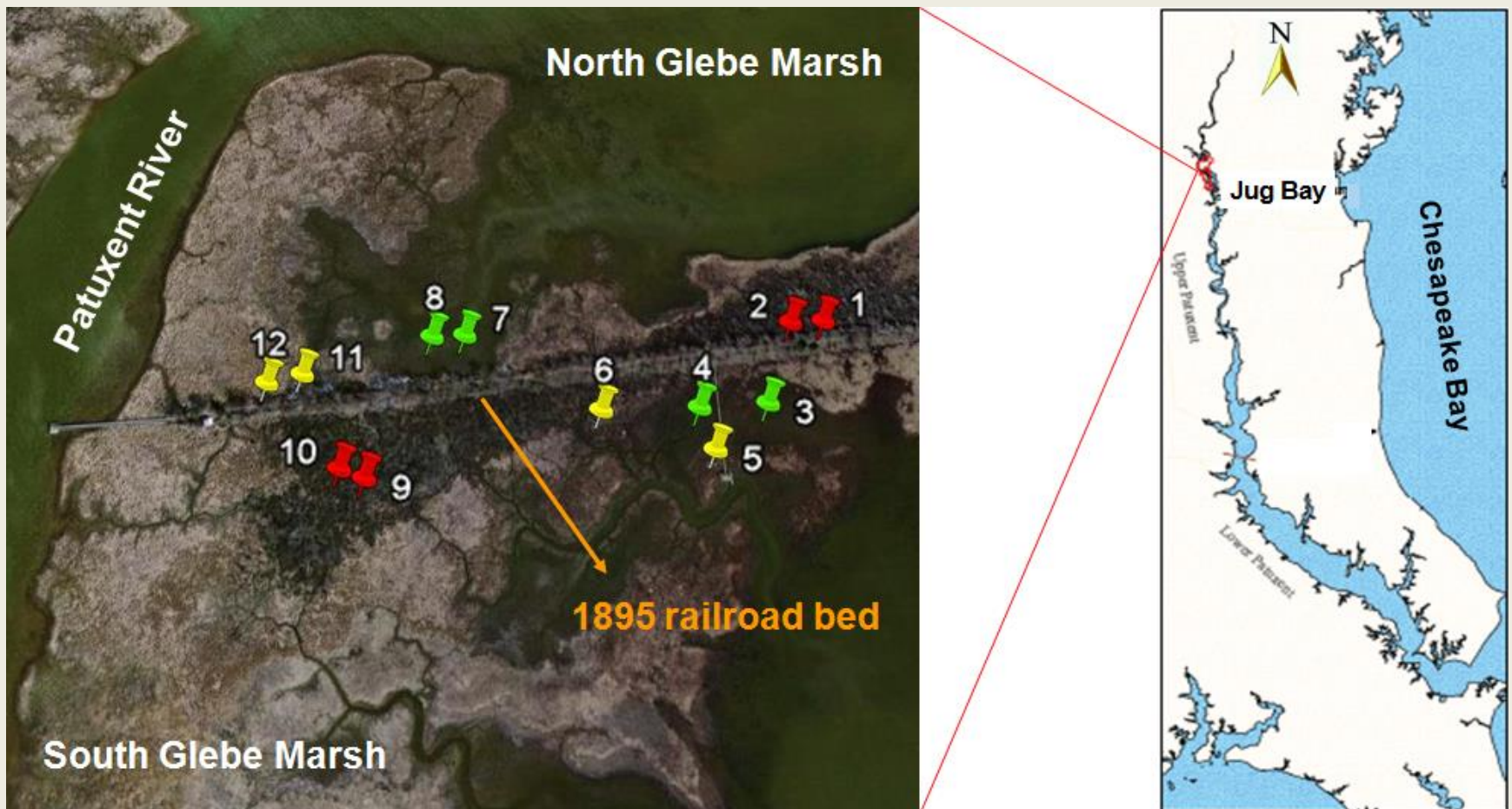


Marsh transects



CBSSC Partner Efforts

Surface Elevation Table Inventory



What's Next?

- Continue to conduct site-specific analyses of the data to understand sea level rise and wetland dynamics at the ecological sentinel sites
 - Use outcomes to inform management at sites
- Move towards a Cooperative-wide analysis of sea level rise trends and wetland dynamics: “Snapshot”
 - Actively engage with end users to adapt to their needs

Thank you!

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