



Coastal Resiliency at the Virginia Coast Reserve

Jill Bieri, Director

What is the Virginia Coast Reserve?



- **Nearly 45,000 acres owned and protected by TNC on Eastern Shore of Virginia**
- **14 of 18 barrier islands**
- **Brownsville Preserve (1250 acres)**
- **Salt marshes, tidal mudflats, shallow bays, forested uplands**
- **Critical migratory bird habitat**

Programs of the Virginia Coast Reserve



- **Land Protection**
- **Marine Restoration**
- **Protecting, Managing and Monitoring Birds**
- **Community Outreach**
- **Coastal Resiliency**

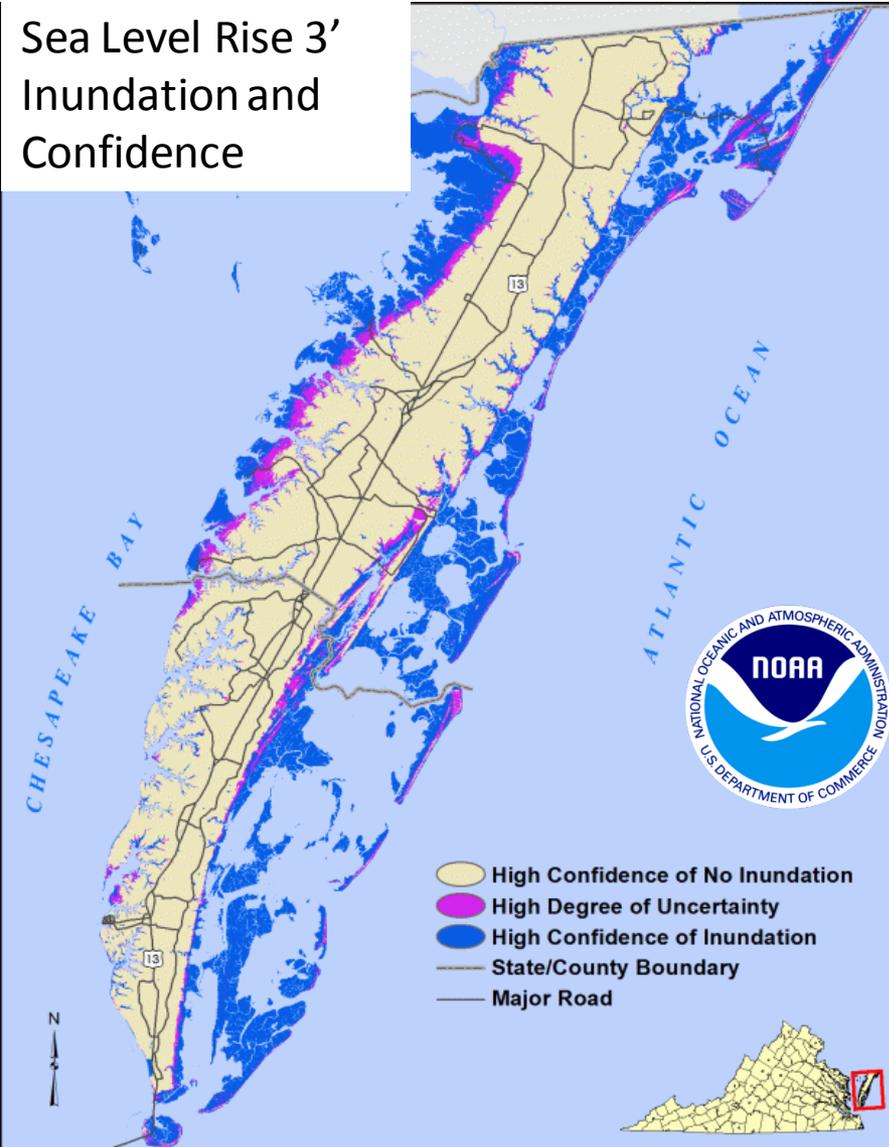
Eastern Shore is the Coastal Resiliency Laboratory for the Atlantic



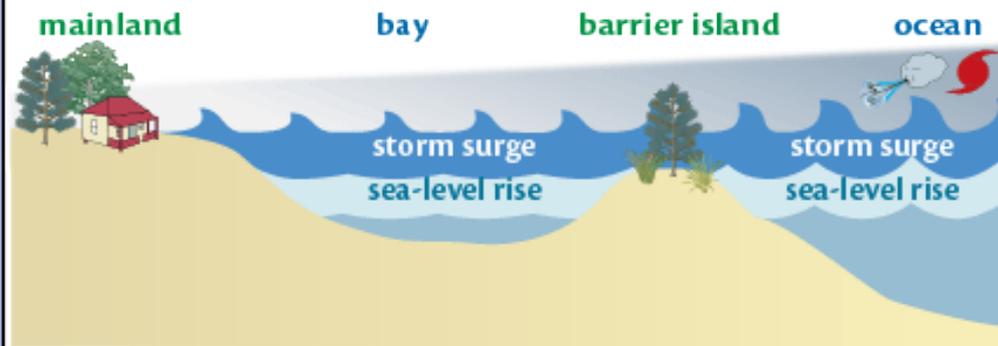
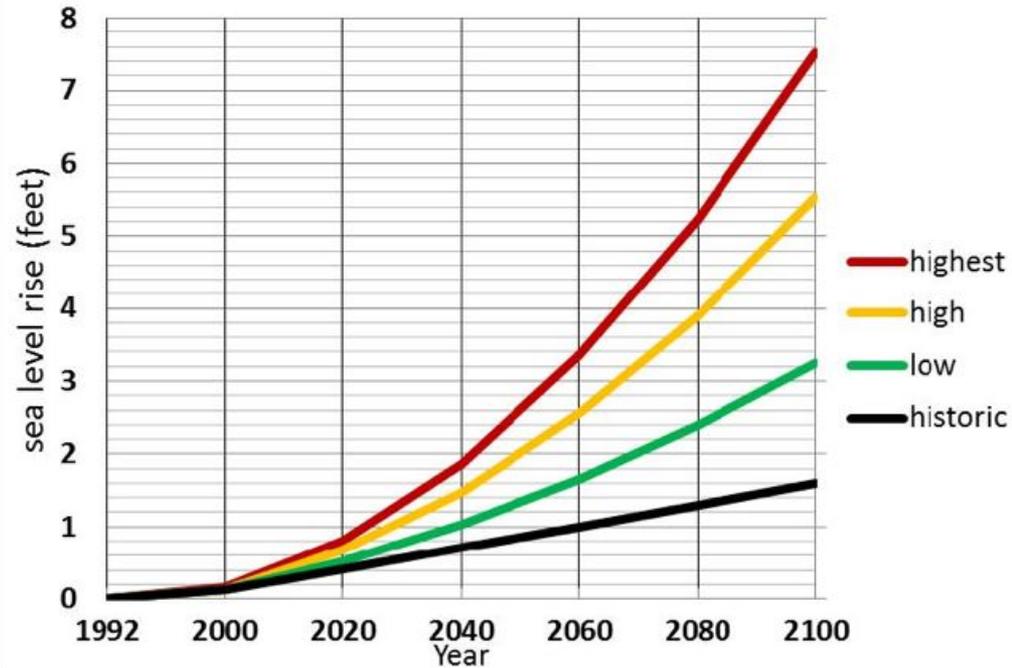


Accelerated Sea-Level Rise plus Storm Surge = Coastal Hazards

Sea Level Rise 3' Inundation and Confidence



SE Virginia sea level rise scenarios



Coastal Resilience and Risk Reduction: A Global Priority



Bring science and action together to sustain resilient coasts where nature is part of the **solution** to reduce risk from flooding, sea-level rise, and storm surge.

Coastal Resiliency and Risk Reduction Conservation Outcomes



Communities are made safer and more resilient to natural hazards.



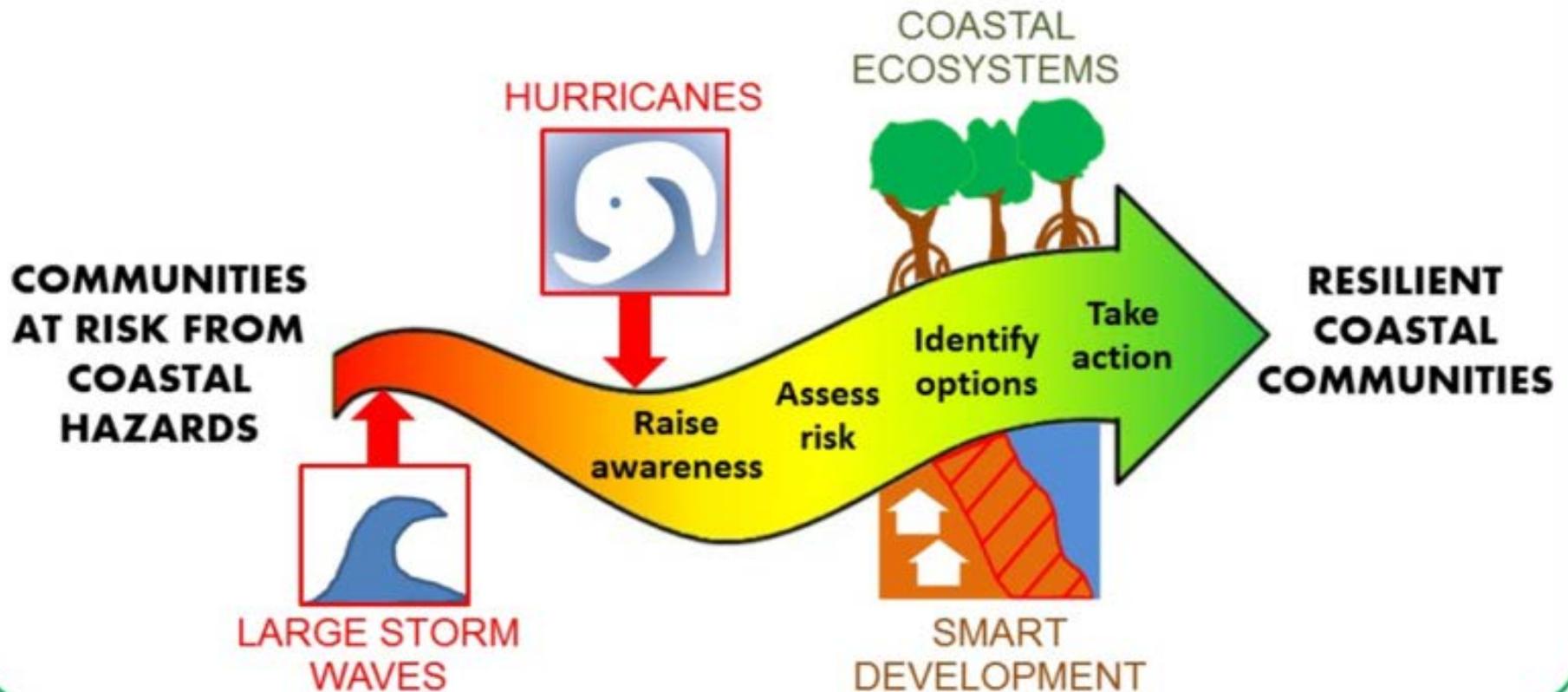
Ecosystem health and functionality are restored to benefit both humans and nature.



The benefits of natural solutions are well documented and embraced while damages from disasters and climate change are reduced.

Coastal Resilience Approach

TNC's Coastal Resilience Approach

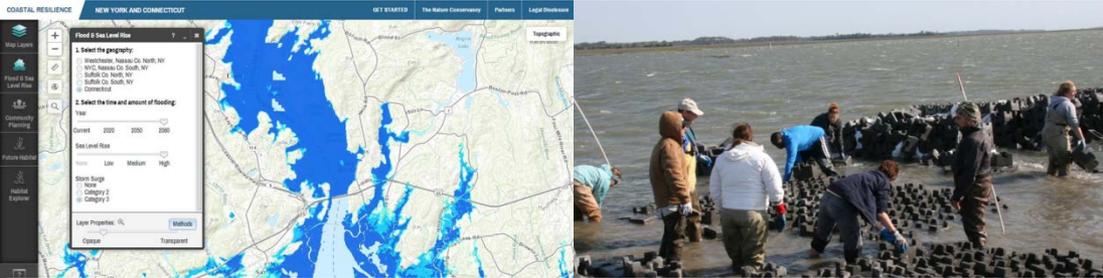


Enhancing Coastal Resilience on Virginia's Eastern Shore

Hurricane Sandy Coastal Resiliency Competitive Grant Program



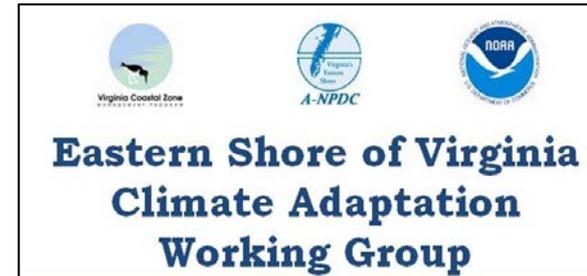
The Hurricane Sandy Coastal Resiliency Competitive Grant



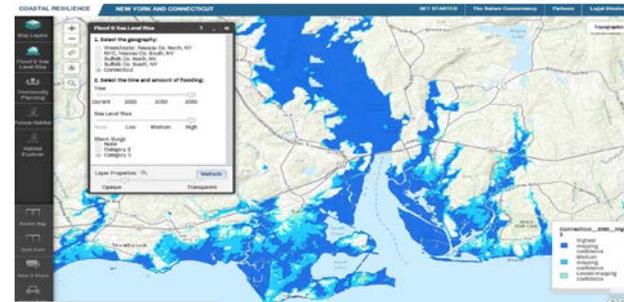
Project cost
\$1.76 million

Project Goals and Outcomes

1. Collaborative Stakeholder Engagement in Coastal Resilience Process



2. Creation of Coastal Resilience Decision Support Tool: SLR, Storm Surge, Marsh Migration, Barrier Island Migration



3. Design and Build Oyster Reef Demo Projects and Create Wave Attenuation Model



Collaborative Stakeholder Engagement

Engage Stakeholders:

- **WHO:** Northampton and Accomack Counties, towns and villages
- **WHEN:** Before, During and After Resiliency Tool is Created
- **WHAT:** Determine, with communities, what they need and will use
- **WHY:** Engage these communities so tools are utilized
- **HOW:** Input, Workshops, Community Train-the-Trainer



Coastal Resilience Network

Get Involved • Contact Us • Connect On Twitter

Coastal Resilience

OUR WORK OUR APPROACH RESOURCES TEAM & PARTNERS



LAUNCH MAPPING PORTAL

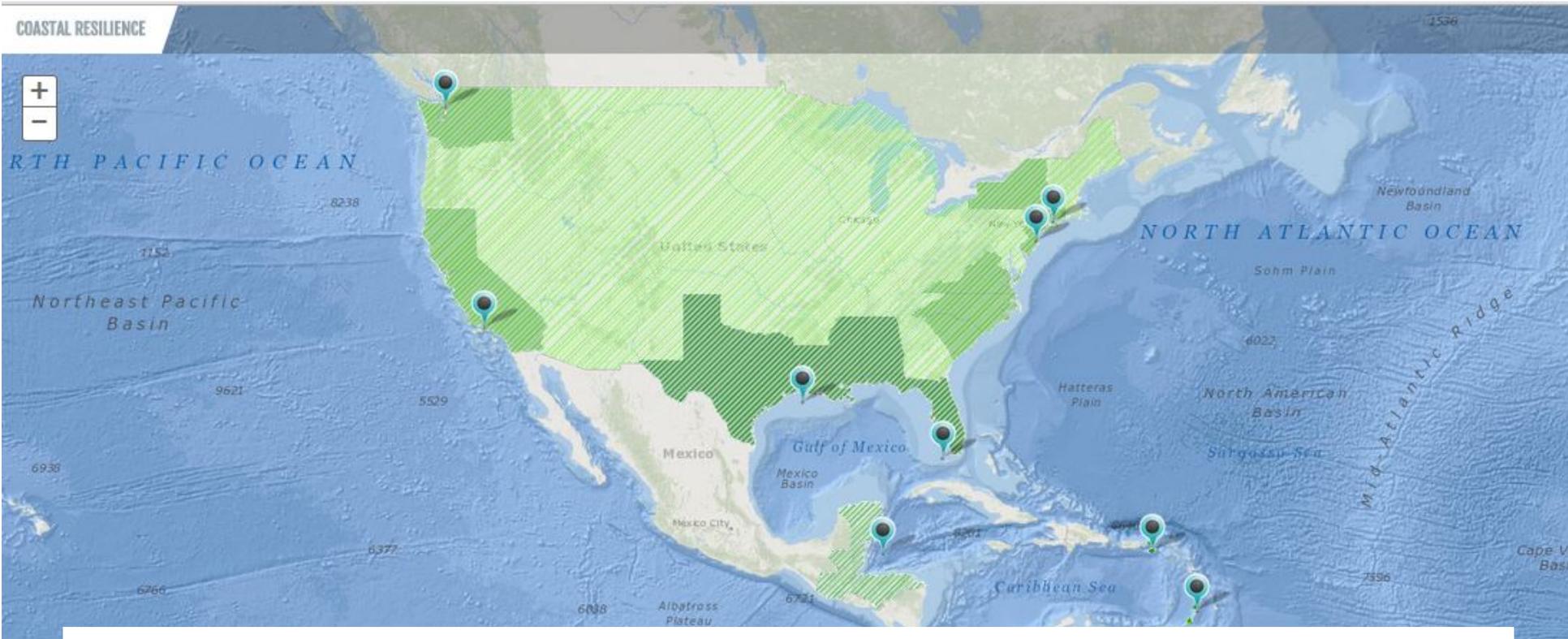
A global network dedicated to
enhancing human and natural
coastal communities

Explore Our Work



coastalresilience.org

Coastal Resilience Network



Coastal Resilience network supports a community of practitioners around the world who are applying spatial planning innovations to coastal hazard risk, resilience and adaptation issues. This is a global network providing access to peer practitioners, tools, information and training focused on nature-based solutions.

Flood and Sea Level Rise App



Oyster Reef Demonstration Projects

- Build oyster reefs along eroded shorelines to demonstrate storm protection benefits.
- Set up long-term experimental field studies to document the wave attenuation effects of oyster reefs; pilot an oyster reef wave attenuation model.



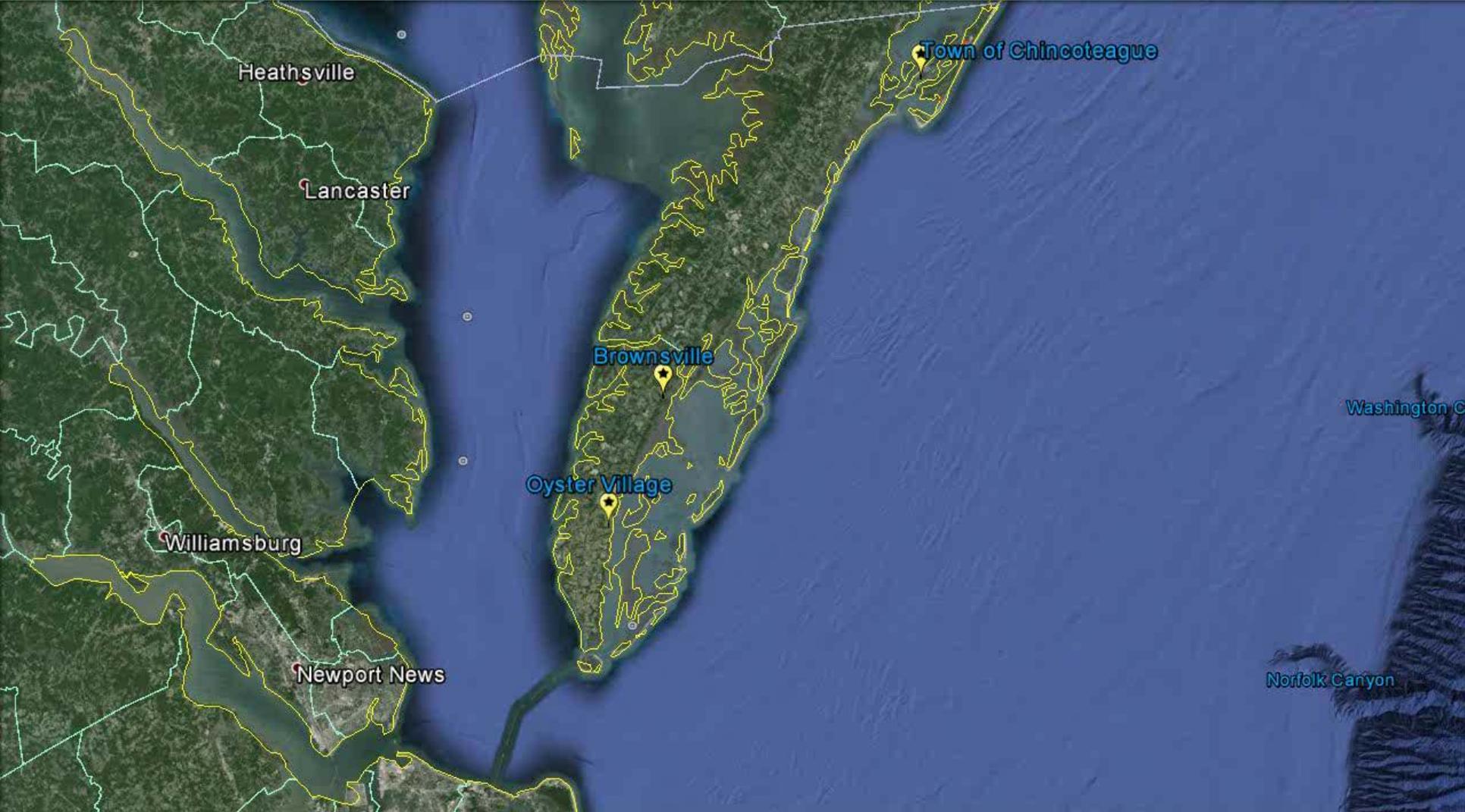
Oyster Castle Wall



At Deployment



3 Years Post-Deployment



Heathsville

Lancaster

Williamsburg

Newport News

Brownsville

Oyster Village

Town of Chincoteague

Washington C

Norfolk Canyon

Coastal Resilience Project Timeline

