



# A Prioritization Framework for Natural and Nature-Based Resilience

Patty Doerr, Director of Coastal & Marine Programs

# South Cape May Meadows Preserve



West Cape May

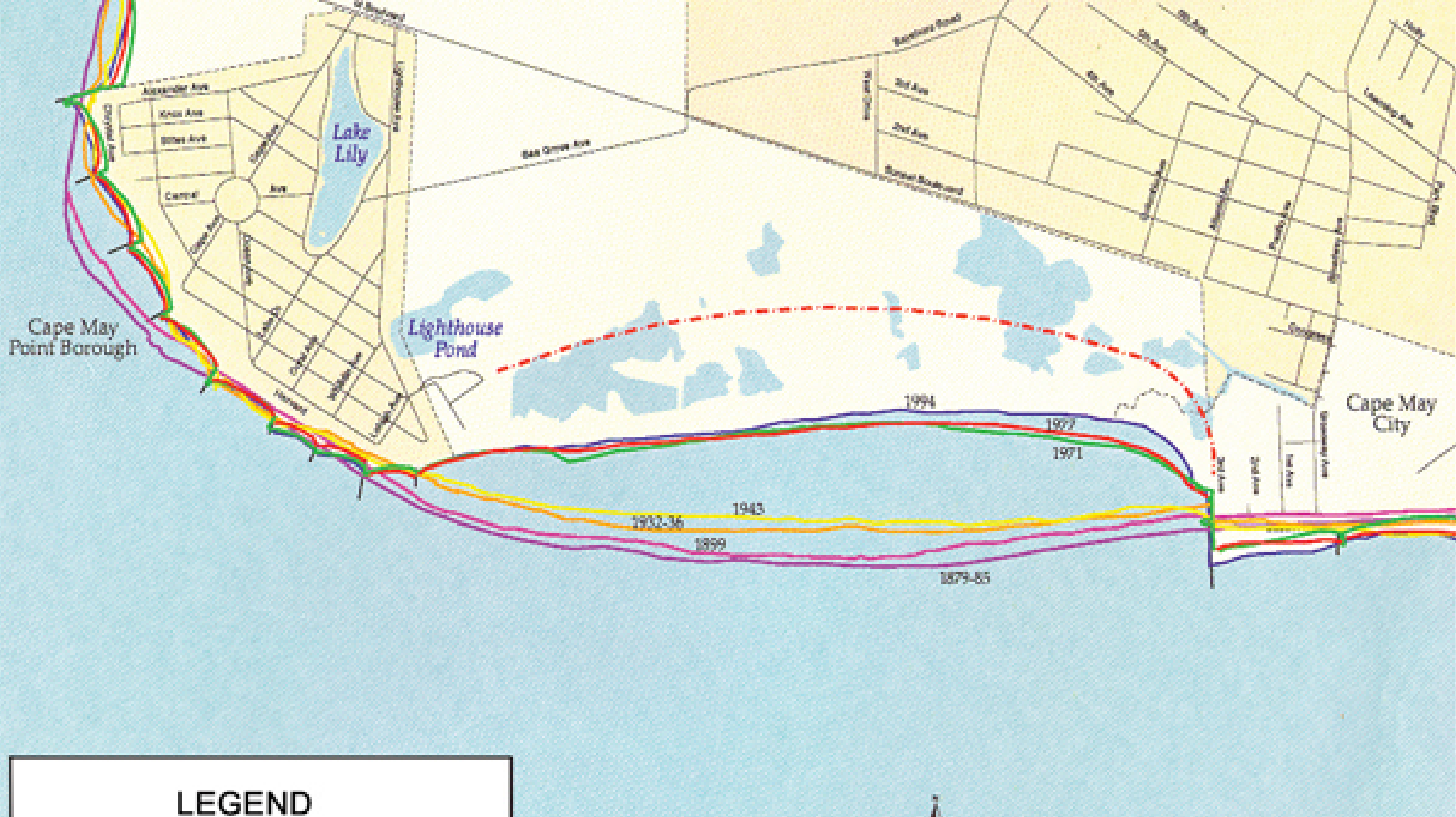
City of Cape May

Cape May Point

Photo credit: Ted Kingston, Strathmere, NJ

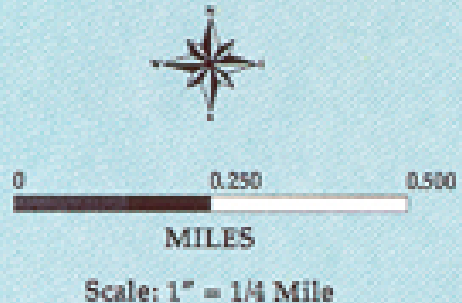


The last of South Cape May after the storm of 1944.  
Photo from *Summer City by the Sea*.



**LEGEND**

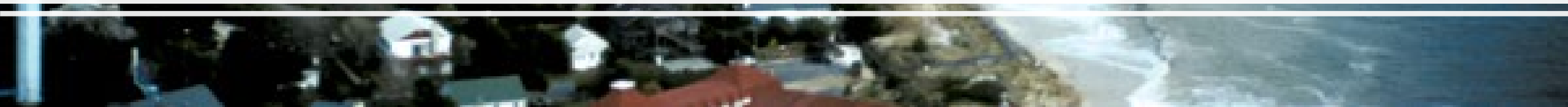
1879-85	1971
1899	1977
1932-36	1994
1943	2050 (Projected)



Lower Cape May Meadows - Cape May Point Historic Shorelines and Projected Erosion  
 U.S. Army Corps of Engineers Philadelphia District  
 Figure 2.10.2

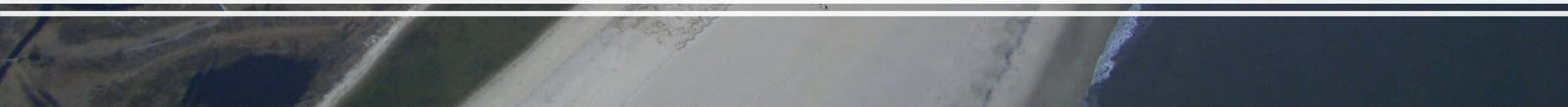


**Before Restoration**





After Restoration





# After Superstorm Sandy

10 inches of rain fall – highest since 1985

3<sup>rd</sup> highest storm surge since 1985



- Average of \$9.6 million in avoided damages over next 50 years
- \$313 million total impacts from birders
  - \$200 million of which is change from restoration



# Ventnor, NJ

Photo credit: Jim Wright/TNC/LightHawk



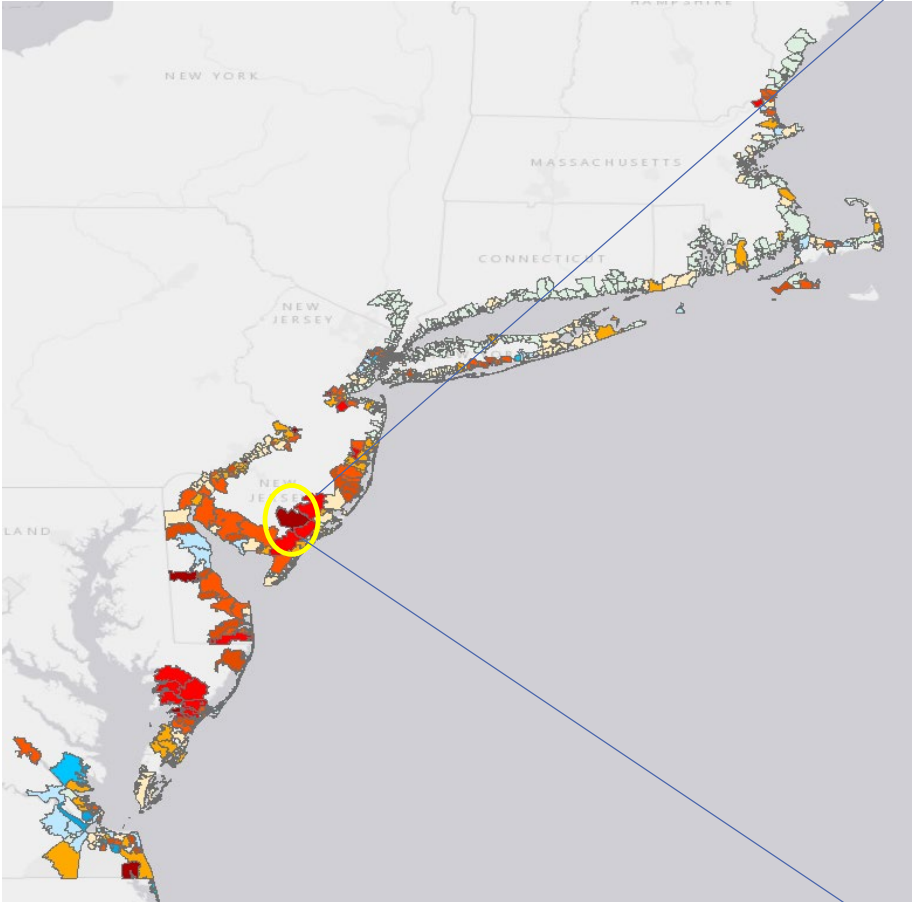
# Gandy's Beach & Linwood, NJ

Photo credit: Jim Wright/TNC/LightHawk

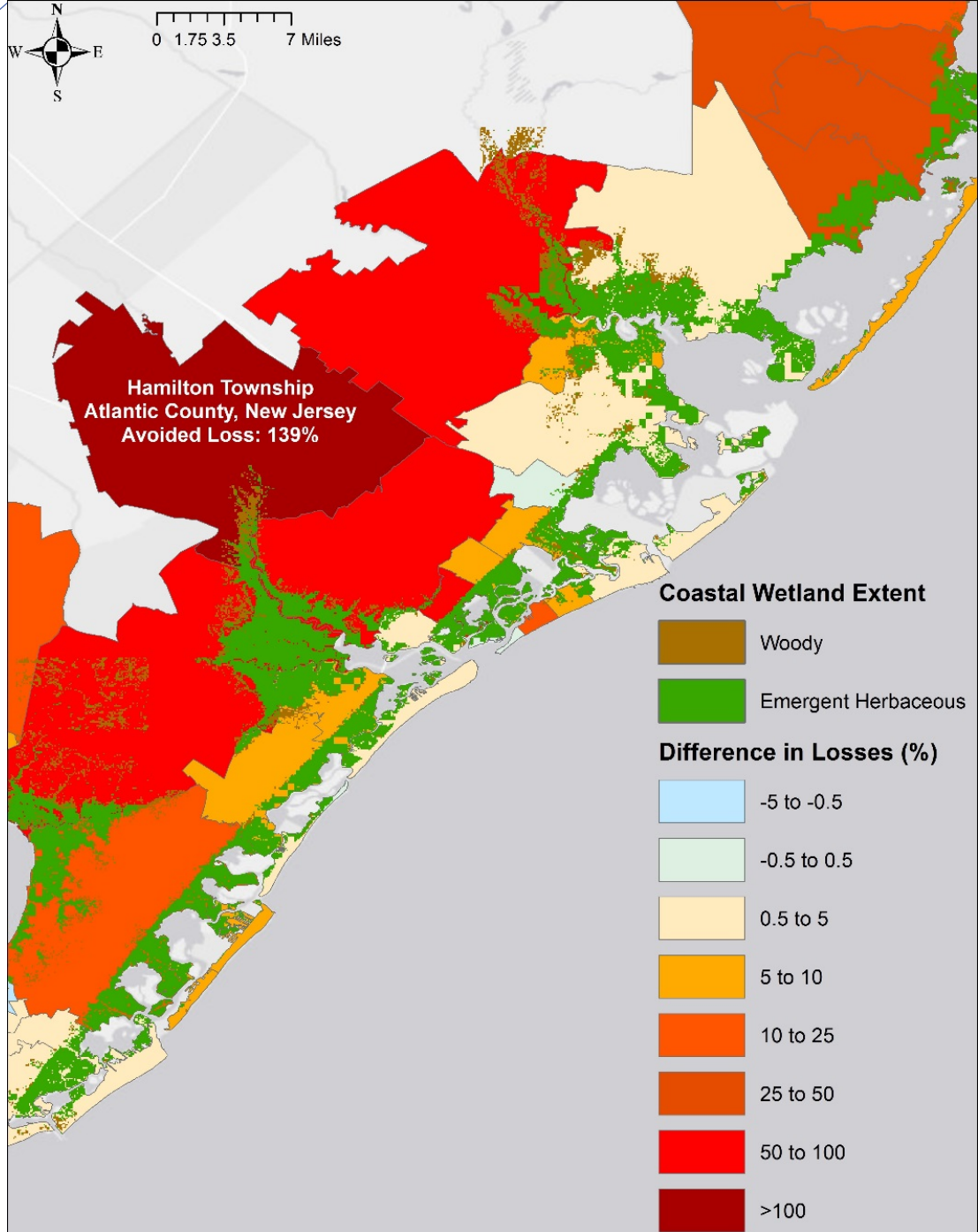
\$425 million in damage savings



# Landscape-scale effects upstream (Hamilton Township, NJ)



<http://www.lloyds.com/coastalresilience>



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



## Nature & Nature-Based Features

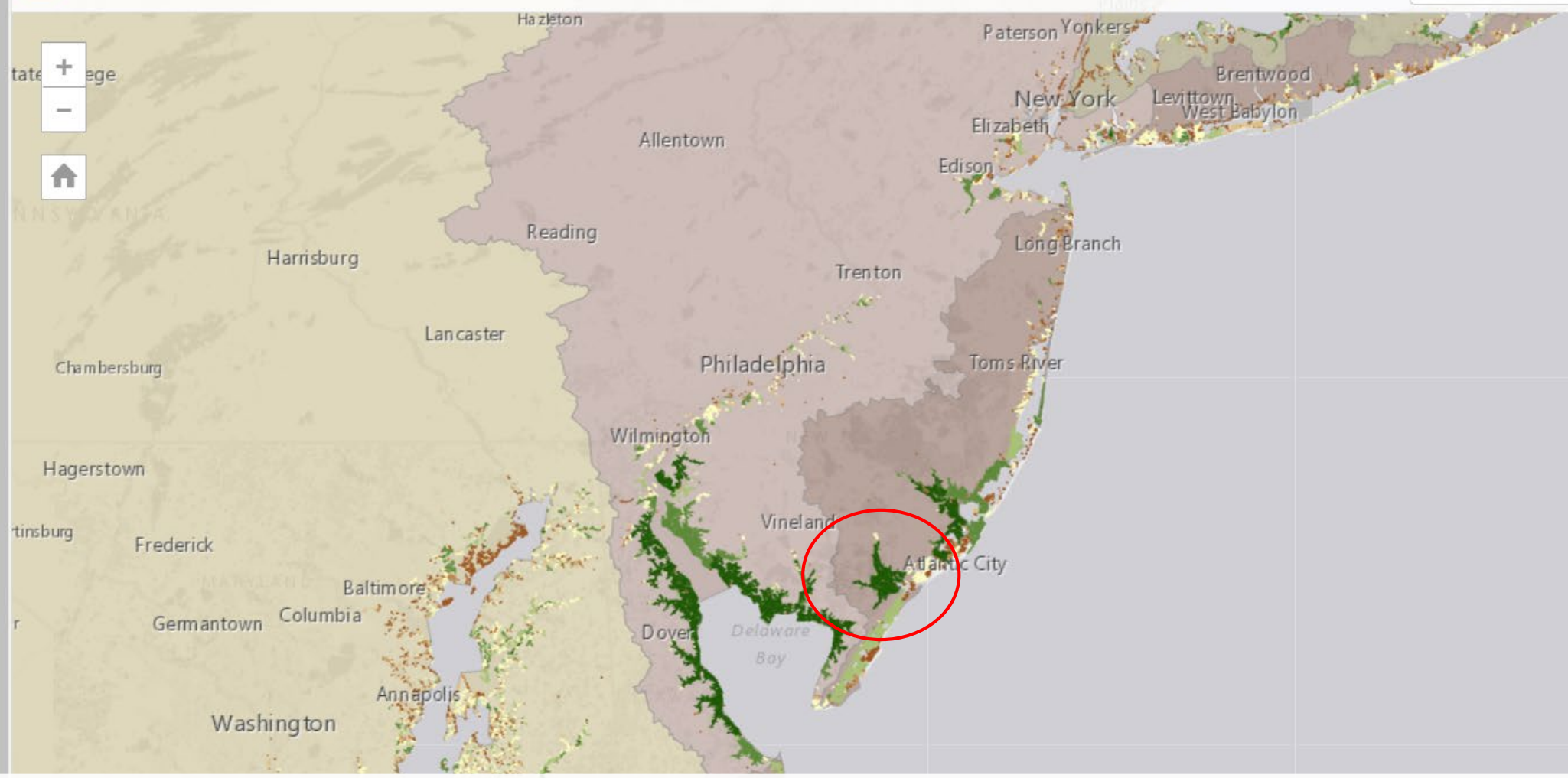
Legend

Resilience Score (6-foot scenario w trend)

- Far Above Average
- Above Average
- Slightly Above Average
- Average
- Slightly Below Average
- Below Average
- Far Below Average

Coastal Shoreline Unit-Shore Type

- Chesapeake Bay and Piedmont River Dominated
- Maine Drowned River Valleys and Island-Bay Complexes
- Mid Atlantic Coastal Lagoon
- Northeast River Dominated
- Southern New England Coastal Embayment



# Coastal Strongholds

2014 Secured Areas of the Eastern U.S.





Get Started

### New Jersey Shore

Coastal Resilience.org is a decision support tool that incorporates the best available science and local data to enable communities and conservation practitioners to identify nature-based solutions for enhancing resilience and reducing risk where possible. For additional project information, visit the [New Jersey home page](#).

### Restoration Explorer Apps

**Marsh Explorer**

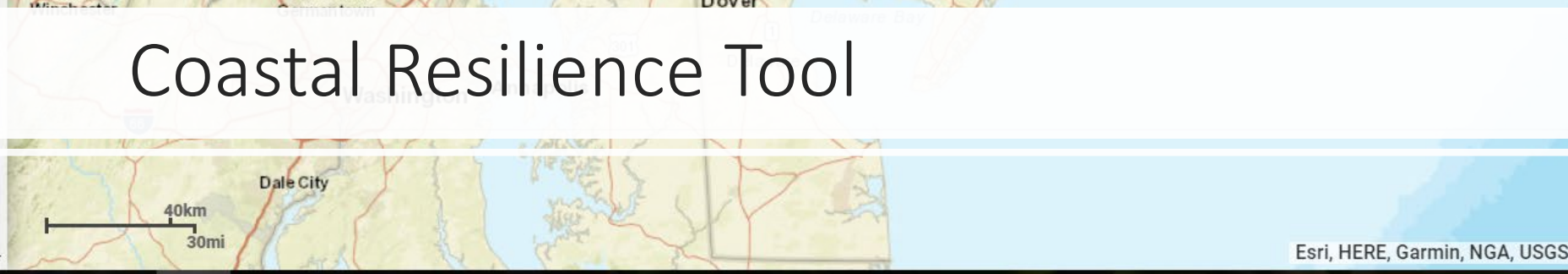
Focused on salt marshes across New Jersey's Atlantic coast, this app shows the need for tidal marsh restoration across New Jersey's ocean coast based on the amount and size of linear ditches, marsh edge erosion, unvegetated marsh, and unused dredged lagoons.

**Living Shorelines**

This app shows which of 6 living shoreline techniques could be selected, at a user identified site, to reduce erosion based on engineering and ecological criteria.



# Coastal Resilience Tool





Thank You.