Rick Lathrop

Rutgers Center for Remote Sensing & Spatial Analysis

Michelle Stuart

Environmental Analysis & Communications Group

2025 COASTAL ECOLOGICAL RESTORATION TECHNICAL WORKSHOP

NJ Restoration Tool Organization Suite (ResTOrS)

A diverse coalition of state agency, non-governmental organization and academic partners has been collaborating on the development of a Coastal Ecological Restoration and Adaptation Plan (CERAP) for New Jersey's coastal marshes, estuaries and back-bays. To support this effort, this same coalition has been building the **NJ Restoration Tool Organization Suite (NJResTOrS)** to provide a more seamless integration of web-based decision support tools so that users can work directly from project scoping through evaluation. The NResTOrS work flow proceeds from the statewide perspective of the CERAP tool to a landscape scale evaluation of the marsh landscape with the Marsh Explorer and Living Shorelines Explorer tools to more detailed site level assessment and guidance provided by the Wetlands Assessment Tool for Condition & Health (WATCH) and the Living Shoreline Feasibility Model (LSFM).

NJResTOrS is one component of a larger strategy to equip coastal municipal planners and non-profit partners with the resources to plan, coordinate and implement coastal restoration projects that support community resilience, ecosystem health and carbon sequestration.

NJResTOrS: Project partners

njrestors.rutgers.edu

RUTGERS UNIVERSITY
Center for Remote Sensing and Spatial Analysis
School of Environmental and Biological Sciences

RUTGERS–NEW BRUNSWICK
Edward J. Bloustein School of Planning and Public Policy
Environmental Analysis & Communications Group

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Jacques Cousteau National Estuarine Research Reserve

STOCKTON UNIVERSITY
AN ENVIRONMENT FOR EXCELLENCE

STEVENS INSTITUTE of TECHNOLOGY
THE INNOVATION UNIVERSITY®

MONMOUTH UNIVERSITY
URBAN COAST INSTITUTE

PARTNERSHIP FOR THE DELAWARE ESTUARY INC.

AMERICAN LITTORAL SOCIETY
Coastal Conservation

BARNEGAT BAY PARTNERSHIP
RESEARCH · EDUCATE · RESTORE

The Nature Conservancy

NY/NJ BAYKEEPER
Protect Preserve Restore

NJ Restoration Tool Organization Suite (ResTOrS) Work Flow

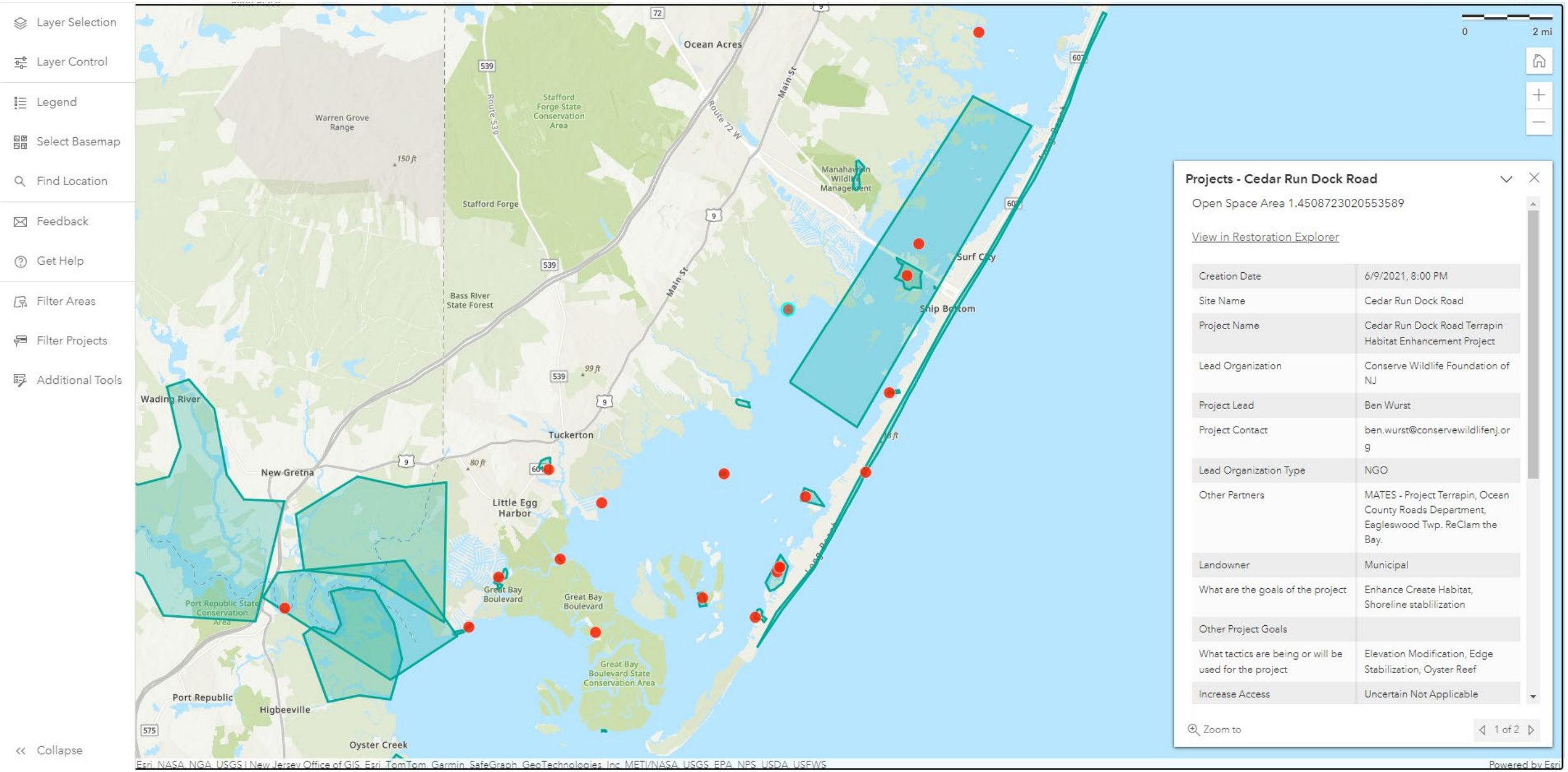
1. Where to Work?	2. Issue Identification	3. Restoration Approach
Coastal Ecological Restoration and Adaptation Planning (CERAP) Explorer Includes nominated sites catalog	1. Marsh Explorer - Marsh condition metrics along with CERAP Issues of Concern 2. WATCH -Marsh condition assessment relative to vertical and horizontal position, biology, hydrology, soils, and sediment	3a. Living Shoreline Explorer: Approach recommendations based on high-level physical conditions 3b. Marsh Futures Mapper (in development): Explore different coastal marsh future scenarios 3c. Feasibility Model: Team building and installation logistics

Coastal Ecological Restoration and Adaptation Planning Tool

The NJ Coastal Restoration and Adaptation Planning Tool's goal is to identify areas and projects for future ecological projects that have value in increasing community resilience, ecosystem health, and carbon

Coastal Ecological Restoration and Adaptation Planning (CERAP) Explorer

njrestors.rutgers.edu/nj-cerap/



Coastal Ecological Restoration and Adaptation Planning (CERAP) Explorer

- Layer Selection
- Layer Control
- Legend
- Select Basemap
- Find Location
- Feedback
- Get Help
- Filter Areas
- Filter Projects
- Additional Tools
- Collapse

Filter Areas

If you choose an option and then choose another option from the same dropdown, the filter statement at the bottom includes both items. Choose as many as you would like. To close this panel, click on Filter Areas in the action bar.

Query Condition:

- Data should meet ALL of the filters
- Data should meet ANY of the filters

Reset Filters

Currently being filtered by: SaltMarsh = 'Yes' AND landowner_ = 'Federal'

Filter By Habitat

Select a filter

Filter By Landowner

Select a filter

Filter By Overall IOC Score

Select a filter

Filter By IOC

Select a filter

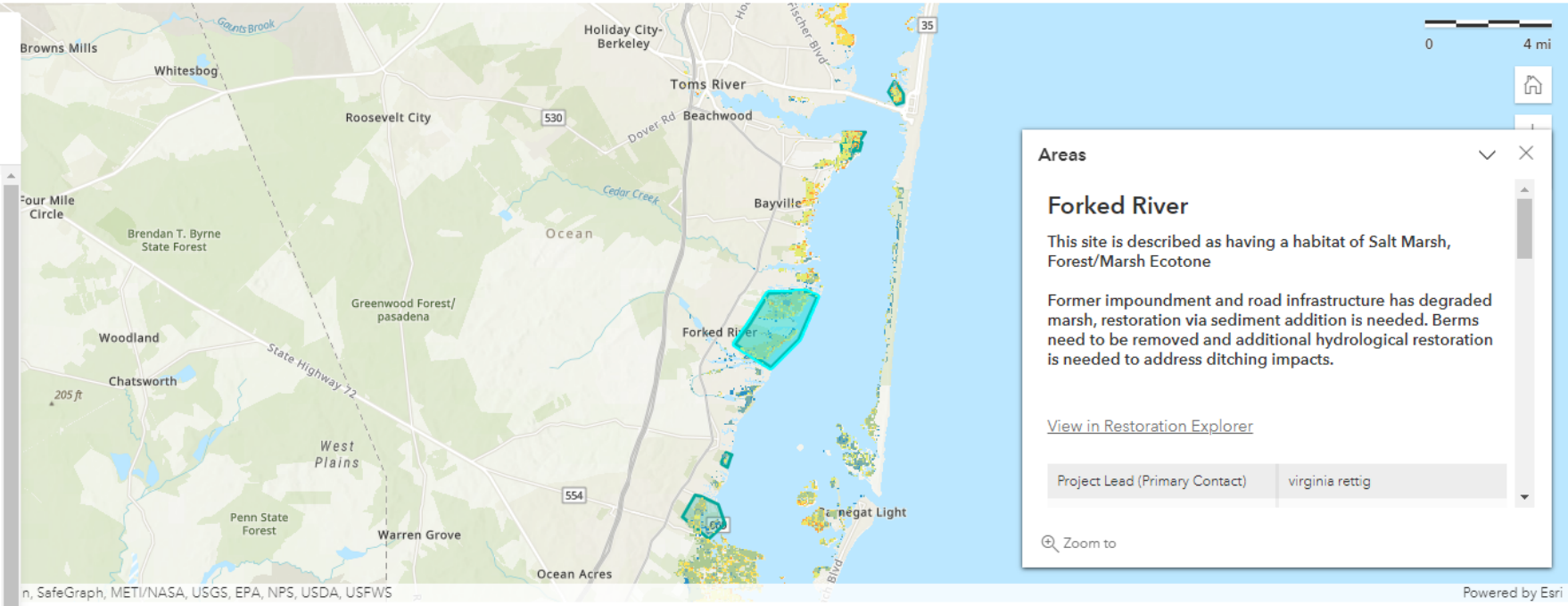
Filter By score

Select a filter

Currently being filtered by: SaltMarsh = 'Yes' AND landowner_ = 'Federal'

Hide Areas Table

Export CSV



	Site Name	Submitter Name	Submitter Email	Primary Contact	Primary Contact Af...	Primary Contact E...	Other Affili
	Supawna Meadows Natio...	Heidi Hanlon	heidi_hanlon@fws.gov	Heidi Hanlon	US Fish and Wildlife Service	heidi_hanlon@fws.gov	Ducks Unlin
	Brick Township	joseph smith	joseph_smith@fws.gov	Virginia Rettig	USFWS	virginia_rettig@fws.gov	
	Harbor Island	joseph smith	joseph_smith@fws.gov	Virginia Rettig	USFWS	virginia_rettig@fws.gov	
	Good Luck Point	joseph smith	joseph_smith@fws.gov	Virginia Rettig	USFWS	virginia_rettig@fws.gov	
	Forked River	joseph smith	joseph_smith@fws.gov	virginia rettig	USFWS	virginia_rettig@fws.gov	
	Westcott ave	joseph smith	joseph_smith@fws.gov	Rettig, Virginia	USFWS	virginia_rettig@fws.gov	OC Mosqui
	Barnegat impoundments	joseph smith	joseph_smith@fws.gov	Rettig, Virginia	USFWS	virginia_rettig@fws.gov	
	Oak Island	joseph smith	joseph_smith@fws.gov	Rettig, Virginia	USFWS	virginia_rettig@fws.gov	
96	5/13/2021, 8:00 PM	HQ impoundments	joseph smith	joseph_smith@fws.gov	Rettig, Virginia	USFWS	virginia_rettig@fws.gov	
97	5/13/2021, 8:00 PM	Motts Creek Wilderness	joseph smith	joseph_smith@fws.gov	Rettig, Virginia	USFWS	virginia_rettig@fws.gov	
99	5/13/2021, 8:00 PM	GoodLuckPoint1	Capt. Al Modieski	alek@littoralsociety.org	Capt. Al Modieski	American Littoral Society	alek@littoralsociety.org	NJDEP, NO

Restoration Explorer

The Nature Conservancy New Jersey

Partnership for the Delaware Estuary

Rutgers

- Select Location
- Marsh Explorer Tool
- Living Shorelines Tool
- Marsh Futures
- Map Controls
- Measure
- Basemap
- Guides & Resources
- Feedback
- Print
- CERAP
- More
- Collapse

Marsh Explorer Tool

Click on Marsh Explorer Tool in the toolbar to close this panel.

Data Selection

Marsh Explorer Data Layers

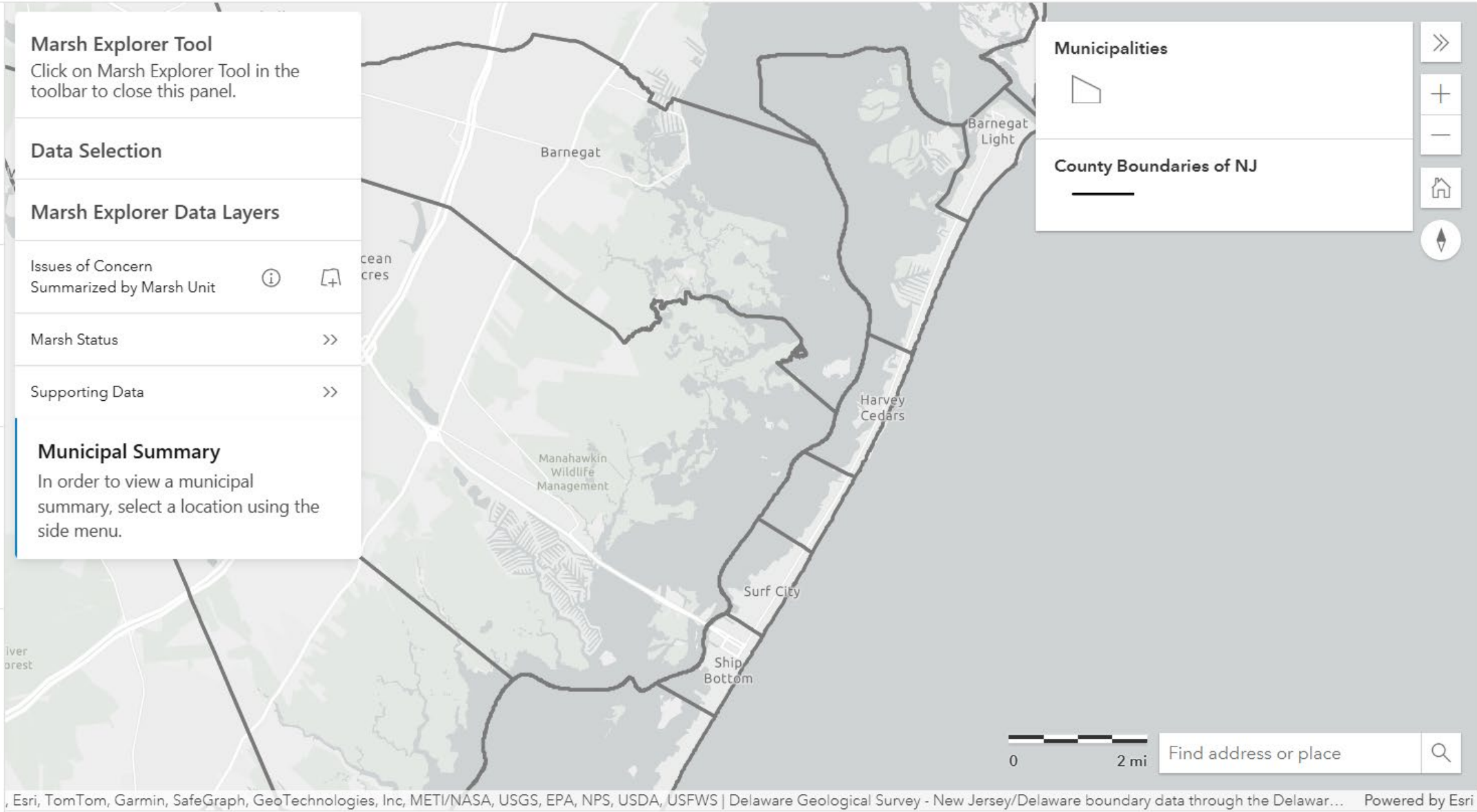
Issues of Concern Summarized by Marsh Unit

Marsh Status

Supporting Data

Municipal Summary

In order to view a municipal summary, select a location using the side menu.

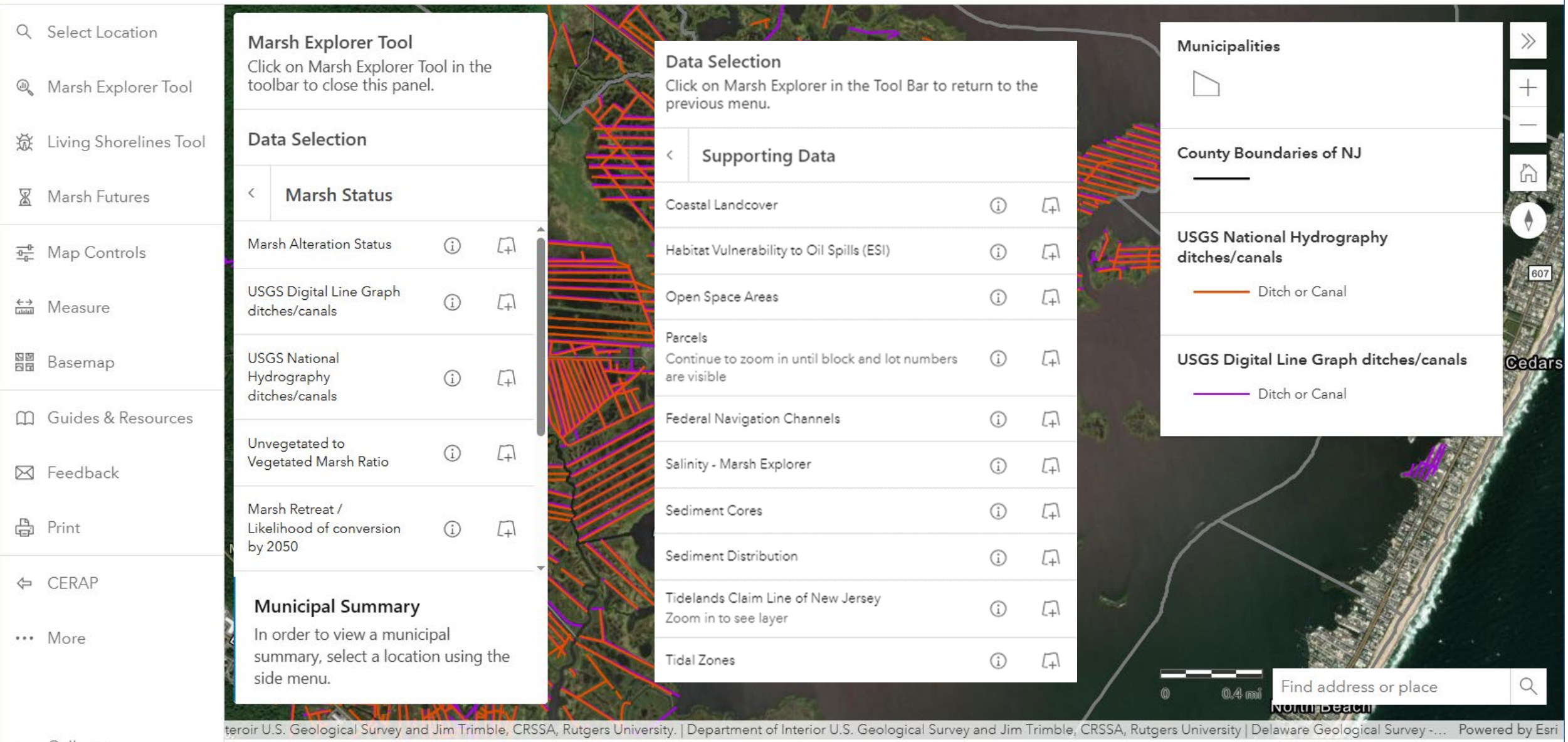


Restoration Explorer

The Nature Conservancy New Jersey

Partnership for the Delaware Estuary

Rutgers



Restoration Explorer

The Nature Conservancy New Jersey

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Marsh Explorer Tool

Click on Marsh Explorer Tool in the toolbar to close this panel.

Data Selection

Marsh Status

- Marsh Alteration Status
- USGS Digital Line Graph ditches/canals
- USGS National Hydrography ditches/canals
- Unvegetated to Vegetated Marsh Ratio
- Marsh Retreat / Likelihood of conversion by 2050

Municipal Summary

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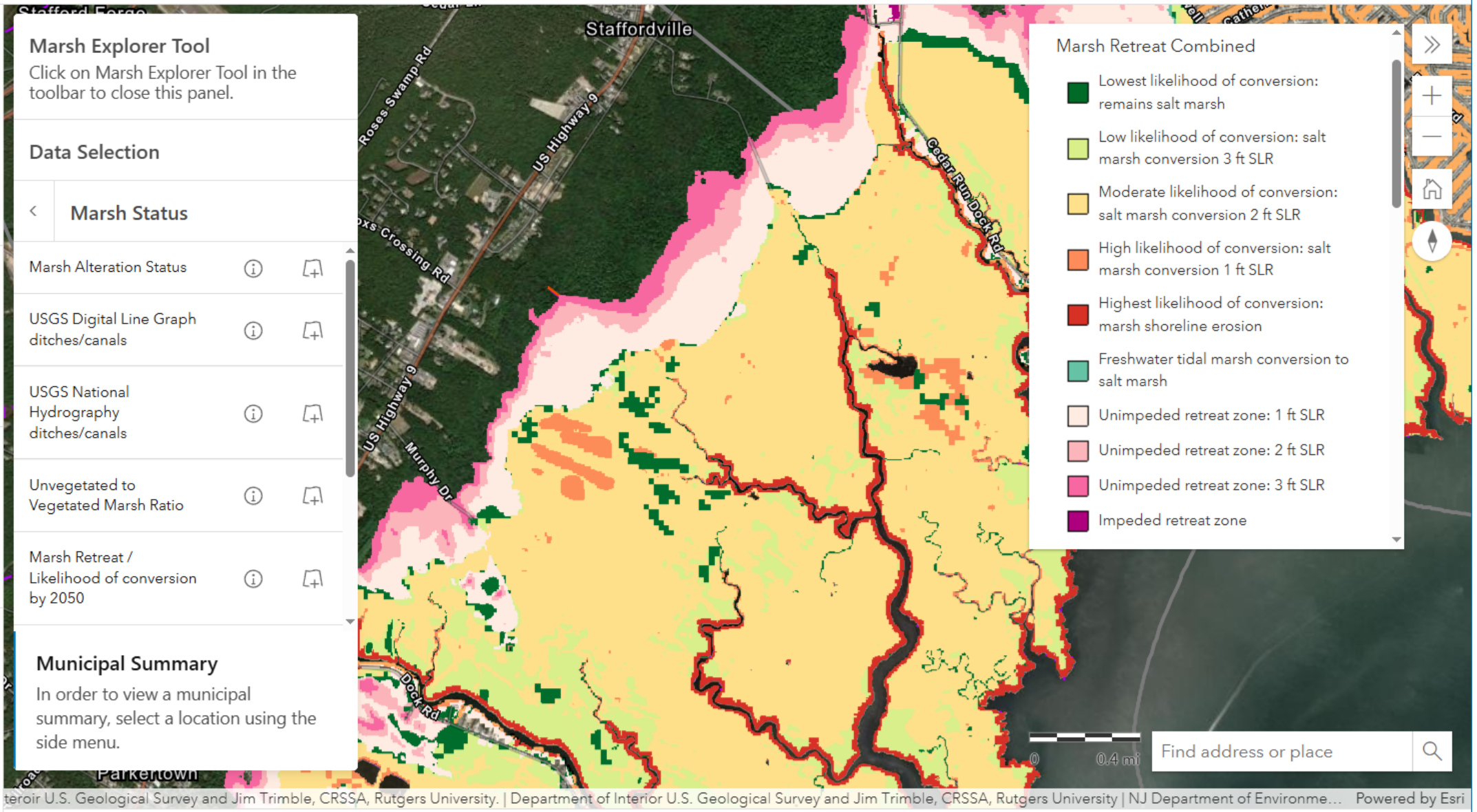
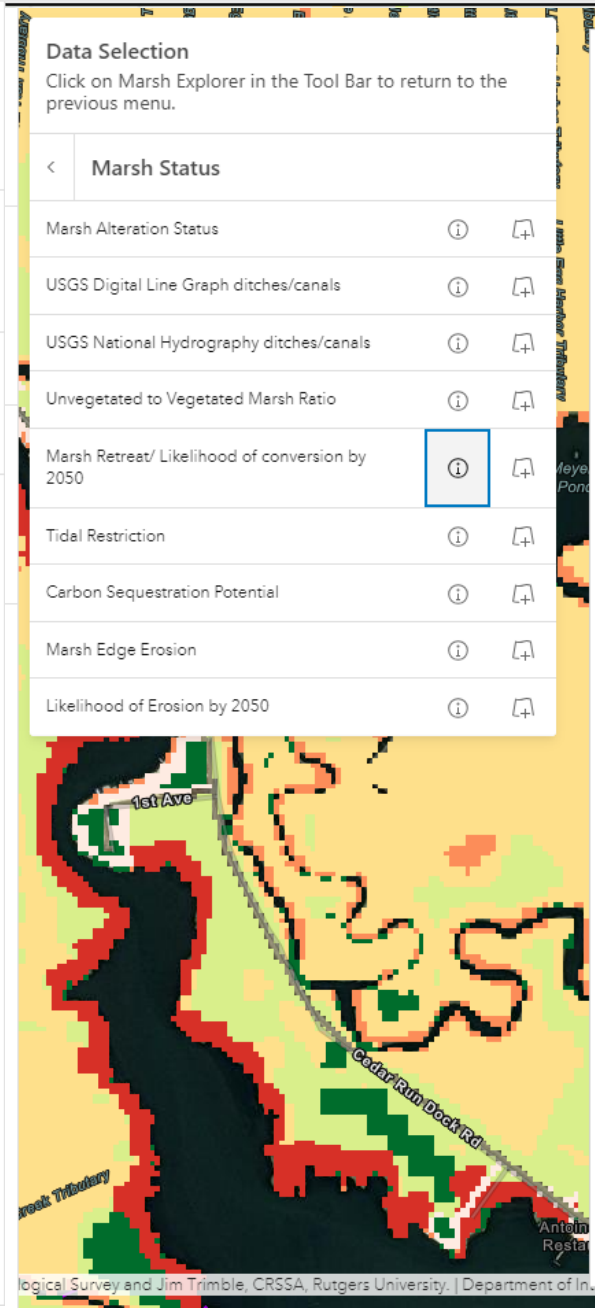


Data Selection

Click on Marsh Explorer in the Tool Bar to return to the previous menu.

Marsh Status

- Marsh Alteration Status
- USGS Digital Line Graph ditches/canals
- USGS National Hydrography ditches/canals
- Unvegetated to Vegetated Marsh Ratio
- Marsh Retreat/ Likelihood of conversion by 2050
- Tidal Restriction
- Carbon Sequestration Potential
- Marsh Edge Erosion
- Likelihood of Erosion by 2050



Marsh Retreat/ Likelihood of conversion by 2050

Map Service

To project future marsh change under projected sea level rise (SLR), a marsh change data product provided by the NOAA Office for Coastal Management that was developed for the US Digital Coast Sea Level Rise Viewer (https://coast.noaa.gov/digitalcoast/tools/slr.html) was employed. The NOAA marsh change product, based on Sea Level Affecting Marshes Model (SLAMM), identifies coastal marsh areas (includes estuarine and brackish marsh areas dominated by *Spartina alterniflora, Spartina patens* and *Phragmites australis*) that may be vulnerable for conversion to either non-vegetated or open water. The NOAA implementation employs a "modified bathtub" approach that incorporates local and regional tidal variation of mean higher high water (MHHW). Marsh areas that are predicted to be submerged below Mean Tide Level are classed as converting to tidal flats (i.e., non-vegetated mud/peat/sand unconsolidated shore and/or tidal flat). When the marsh elevation dips below the Mean Low Water threshold, the marsh is classed as converting to open water. Further upstream along tidal rivers and creeks existing tidal brackish/freshwater marsh may convert to salt marsh when submerged below MHHW.

ArcGIS REST Services Directory Login | Get Token

Home > services > Environment > MarshRetreat (MapServer) Help | API Reference

JSON | SOAP

Environment/MarshRetreat (MapServer)

View In: ArcGIS JavaScript ArcGIS Online Map Viewer ArcGIS Earth ArcMap ArcGIS Explorer

View Footprint In: ArcGIS Online Map Viewer

Service Description: To project future marsh change under projected sea level rise (SLR), a marsh change data product provided by the NOAA Office for Coastal Management that was developed for the US Digital Coast Sea Level Rise Viewer (https://coast.noaa.gov/digitalcoast/tools/slr.html) was employed. The NOAA marsh change product, based on Sea Level Affecting Marshes Model (SLAMM), identifies coastal marsh areas (includes estuarine and brackish marsh areas dominated by *Spartina alterniflora, Spartina patens* and *Phragmites australis*) that may be vulnerable for conversion to either non-vegetated or open water. The NOAA implementation employs a "modified bathtub" approach that incorporates local and regional tidal variation of mean higher high water (MHHW). Marsh areas that are predicted to be submerged below Mean Tide Level are classed as converting to tidal flats (i.e., non-vegetated mud/peat/sand unconsolidated shore and/or tidal flat). When the marsh elevation dips below the Mean Low Water threshold, the marsh is classed as converting to open water. Further upstream along tidal rivers and creeks existing tidal brackish/freshwater marsh may convert to salt marsh when submerged below MHHW.

Based on the consensus sea level rise (SLR) estimates determined for New Jersey of 1', 2' and 3' of SLR at 2050 were used. A "moderate" vertical accretion rate of 4mm yr^{-1} (i.e., 4mm yr^{-1} over a 50yr time frame from 2000 to 2050) was chosen based on best available information as to present rates of marsh accretion over the broader MidAtlantic region. As the NOAA-predicted marsh change product does not explicitly model marsh shoreline edge erosion, estimated past shoreline erosion rates to project future shoreline location. Shoreline erosion rates were determined by comparing the shoreline position changes between a baseline year during the 1970s and a contemporary year in the 2010s. The baseline shoreline was defined by the 1977 New Jersey Tidelands Claimed line. This composite future marsh change data product was developed by the Rutgers University Center for Remote Sensing in 2020.

Map Name: Layers

Legend

All Layers and Tables

Dynamic Legend

Dynamic All Layers

Layers:

- Marsh Retreat Combined (0)
- Marsh Retreat SLR 3 ft (1)
- Marsh Retreat SLR 2 ft (2)
- Marsh Retreat SLR 1 ft (3)
- Tidal Marsh (4)

Description:

Copyright Text:

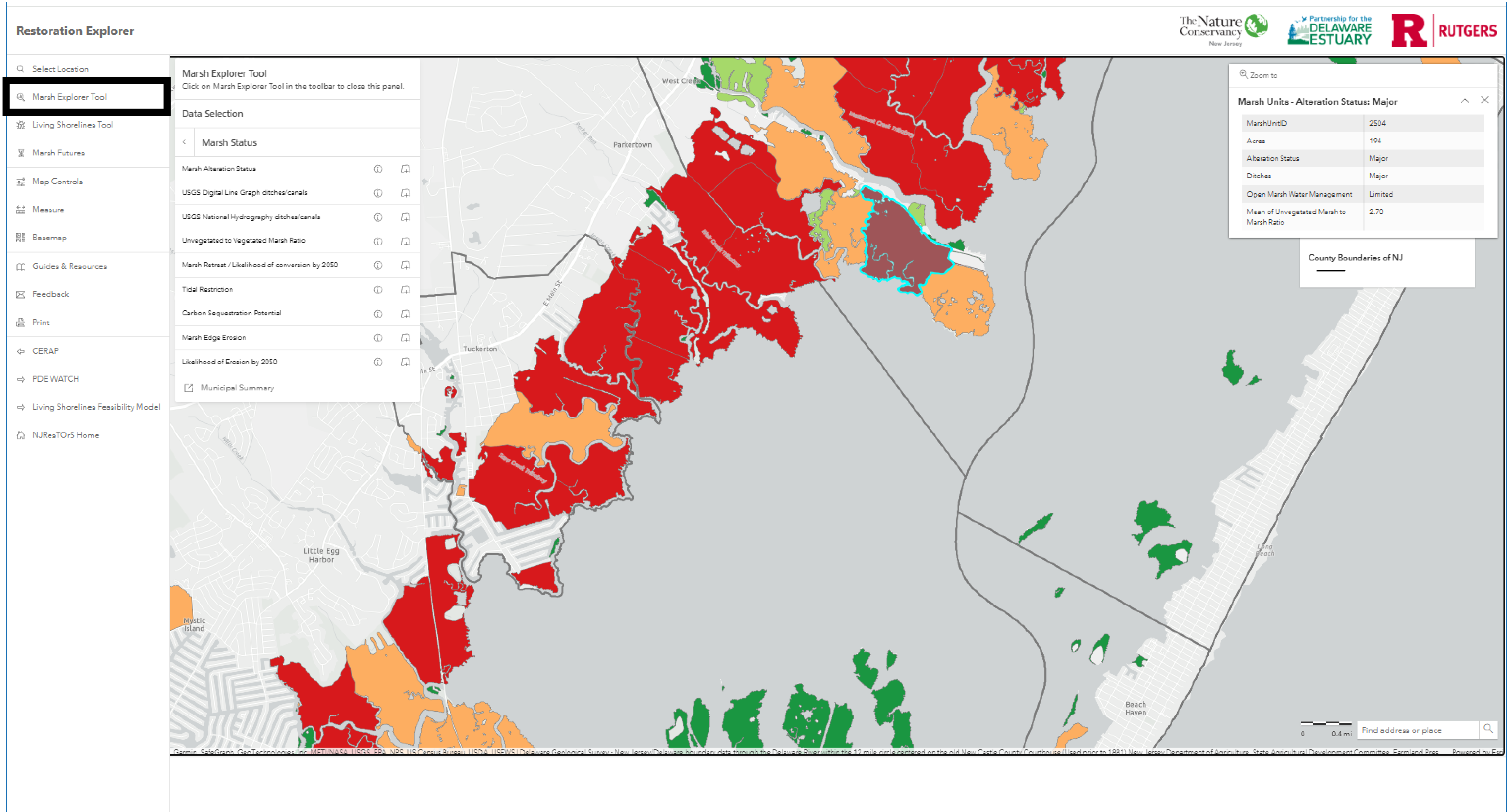
Spatial Reference: 102100 (3857)

Single Fused Map Cache: false

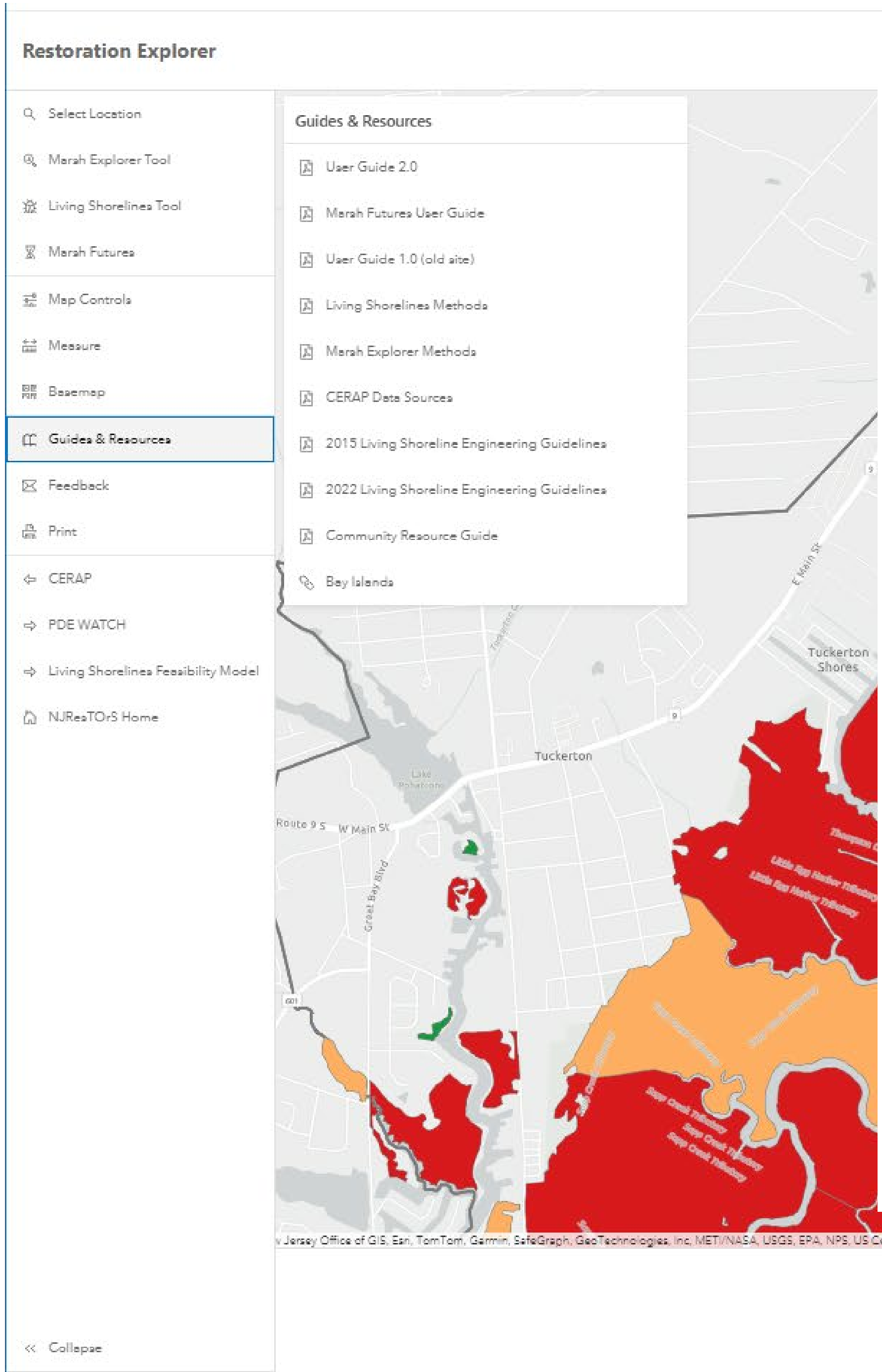
Initial Extent:

XMin: -8513700.248755192
YMin: 4825612.860754434
XMax: -8124631.991712938
YMax: 5084048.503007956
Spatial Reference: 102100 (3857)

Full Extent:

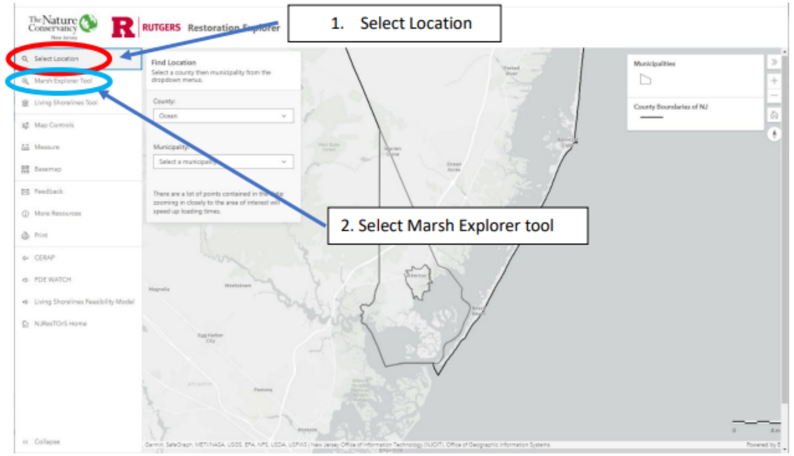


Restoration Explorer
The Nature Conservancy
New Jersey
Partnership for the Delaware Estuary
RUTGERS
Select Location
Marsh Explorer Tool
Living Shorelines Tool
Marsh Futures
Map Controls
Measure
Basemap
Guides & Resources
Feedback
Print
CERAP
PDE WATCH
Living Shorelines Feasibility Model
NJReaTOrS Home
Marsh Explorer Tool
Click on Marsh Explorer Tool in the toolbar to close this panel.
Data Selection
Marsh Status
Marsh Alteration Status
USGS Digital Line Graph ditches/canals
USGS National Hydrography ditches/canals
Unvegetated to Vegetated Marsh Ratio
Marsh Retreat / Likelihood of conversion by 2050
Tidal Restriction
Carbon Sequestration Potential
Marsh Edge Erosion
Likelihood of Erosion by 2050
Municipal Summary
Zoom to
Marsh Units - Alteration Status: Major
MarshUnitID 2504
Acres 194
Alteration Status Major
Ditches Major
Open Marsh Water Management Limited
Mean of Unvegetated Marsh to Marsh Ratio 2.70
County Boundaries of NJ
West Creek
Parkertown
Tuckerton
Little Egg Harbor
Mystic Island
Beach Haven
Find address or place
0 0.4 mi



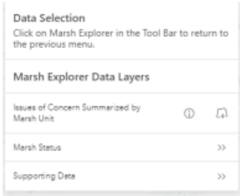
Marsh Explorer

When you enter the Restoration Explorer application, the first thing one should do is to Select the Location: Select the county then municipality from the dropdown menus. The boundary for the selected municipality should appear in the map window. Next select the Marsh Explorer Tool.

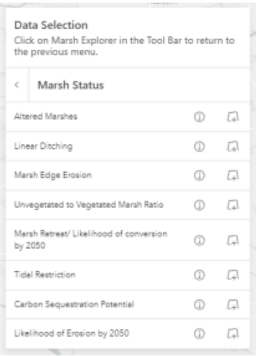


The user can also select to display a wide variety of mapped data sets related to coastal marsh status. In the Data Selection box, click on the >> to access the list of map layers. Click on the Add Layer icon to display the layer in the map display window. One can open multiple layers at the same time.

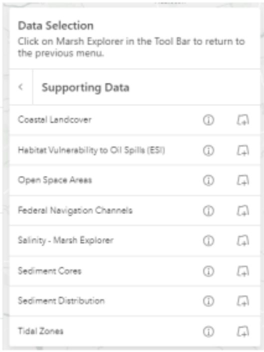
Marsh Explorer Data Layers

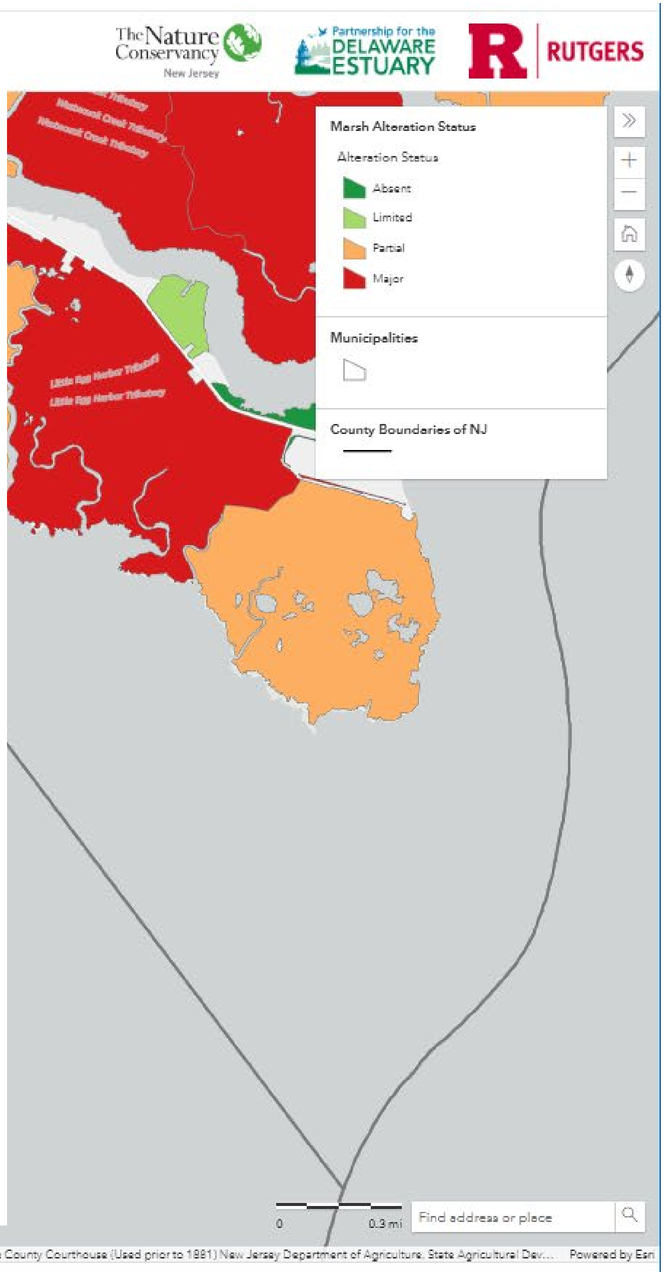


Marsh Status

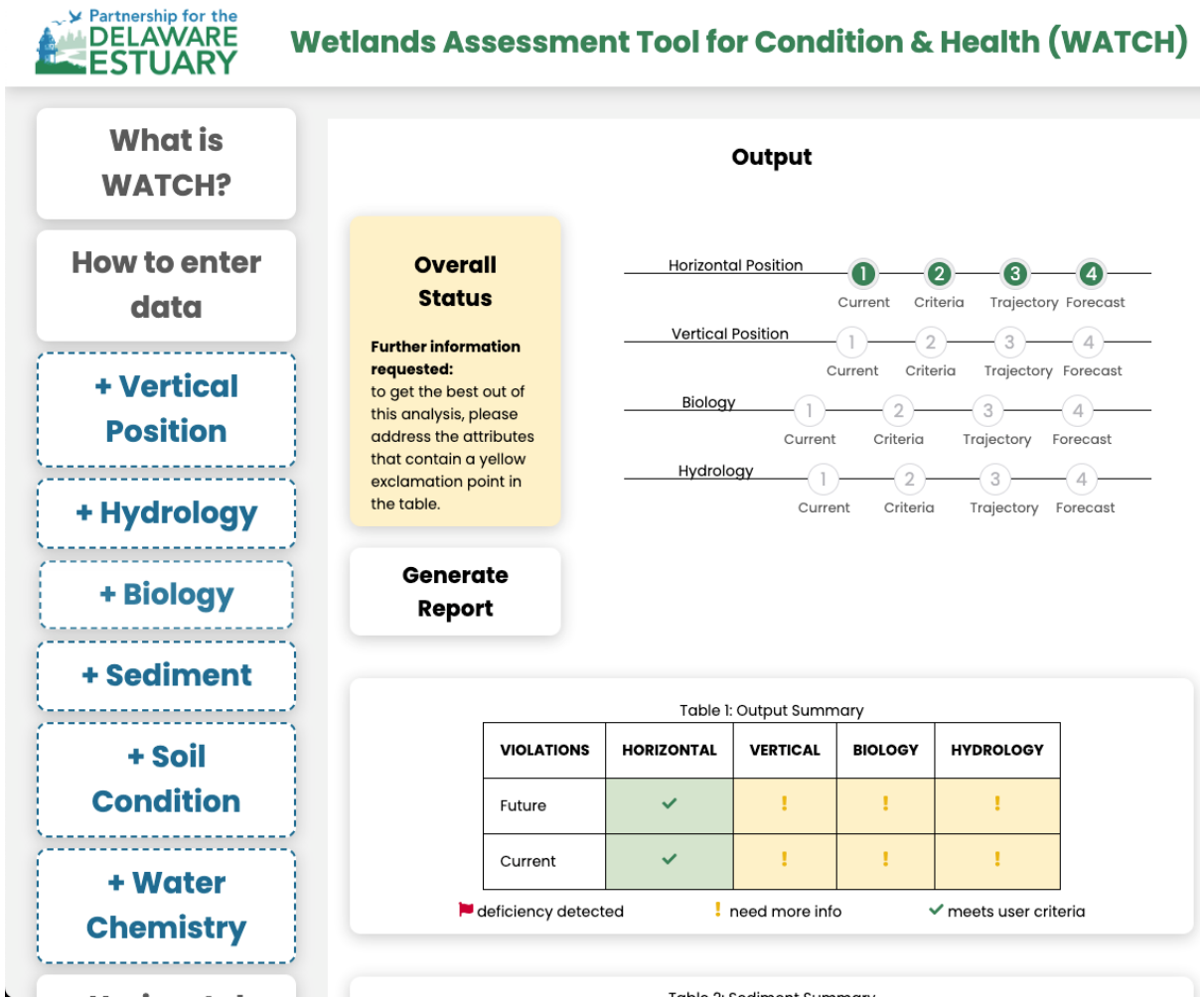


Supporting Data

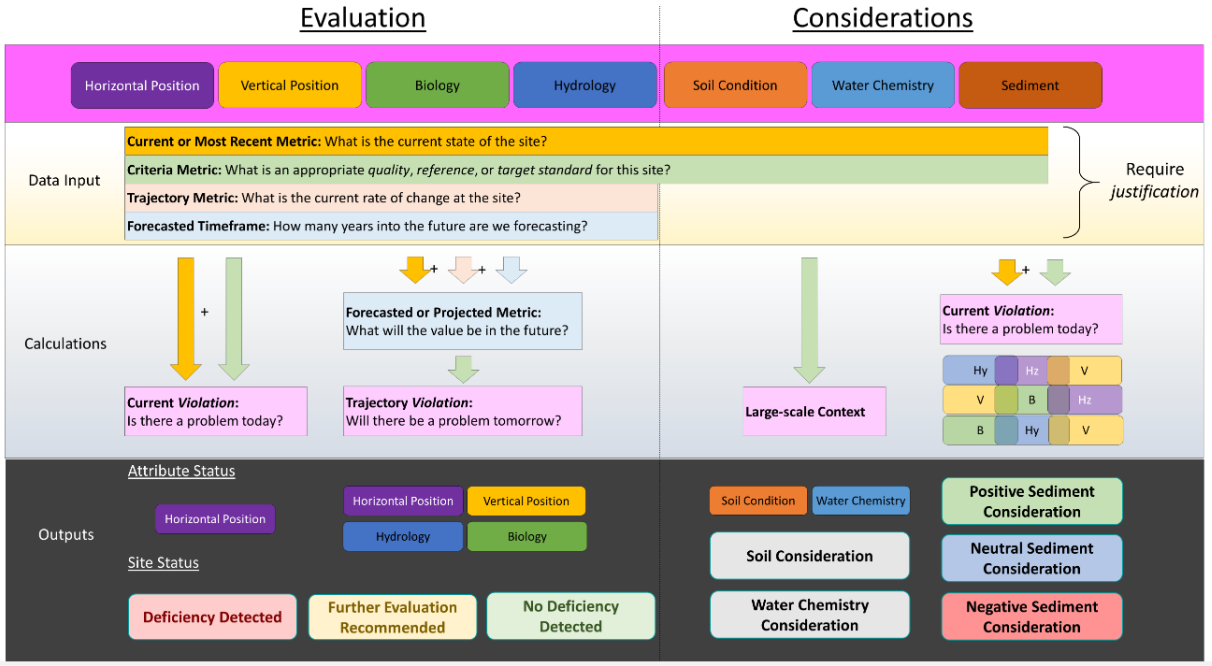


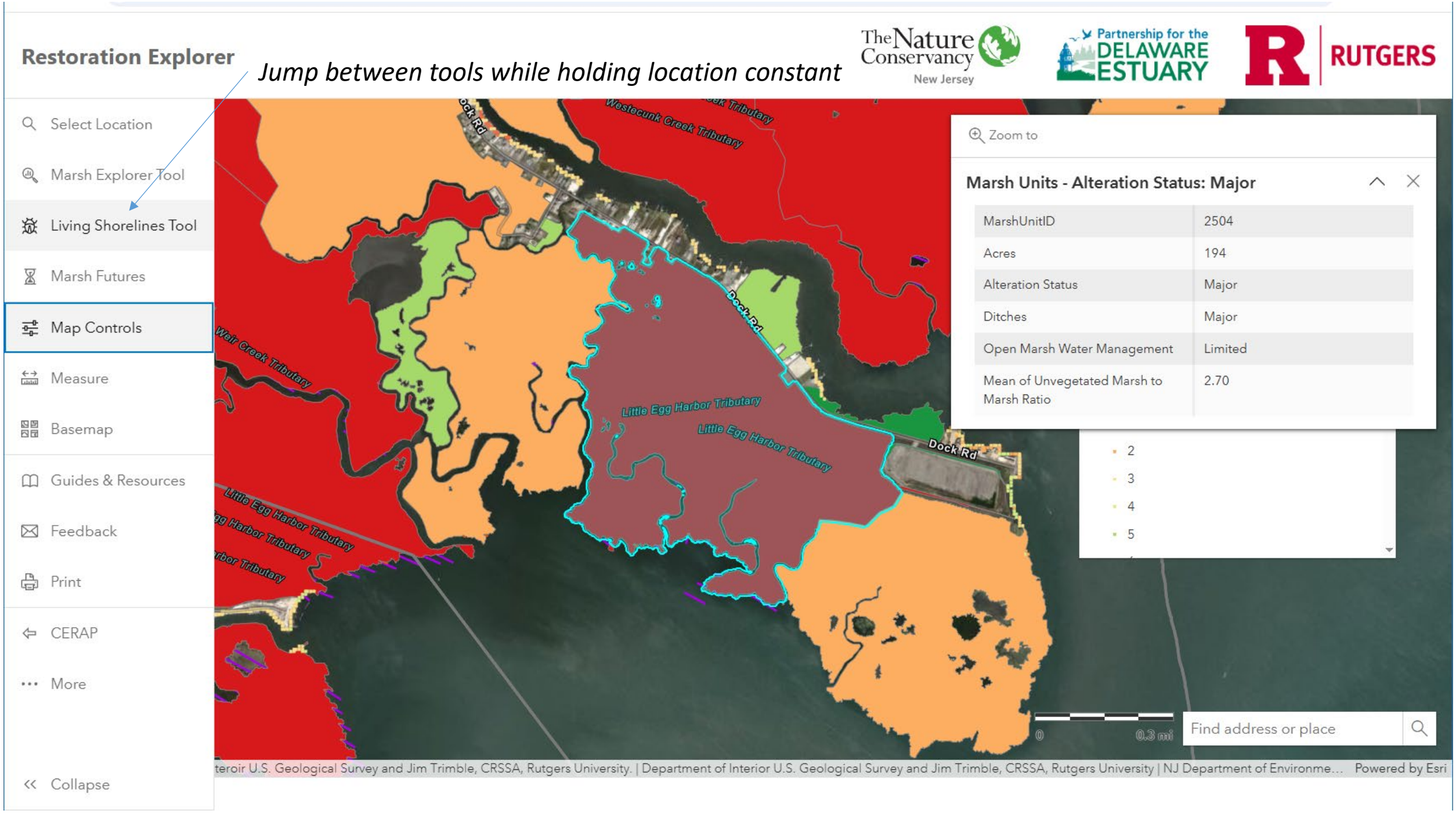


Issues Identification – WATCH



WATCH enables onsite data to be used to evaluate current condition and trajectory of wetland. WATCH utilizes a hierarchical structure to guide the user.




Restoration Explorer
Jump between tools while holding location constant
The Nature Conservancy New Jersey
Partnership for the DELAWARE ESTUARY
RUTGERS
Select Location
Marsh Explorer Tool
Living Shorelines Tool
Marsh Futures
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More
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Zoom to
Marsh Units - Alteration Status: Major
MarshUnitID 2504
Acres 194
Alteration Status Major
Ditches Major
Open Marsh Water Management Limited
Mean of Unvegetated Marsh to Marsh Ratio 2.70
2
3
4
5
Dock Rd
Westecunk Creek Tributary
Wair Creek Tributary
Little Egg Harbor Tributary
0
0.3 mi
Find address or place
Department of Interior U.S. Geological Survey and Jim Trimble, CRSSA, Rutgers University | NJ Department of Environme…
Powered by Esri

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RUTGERS

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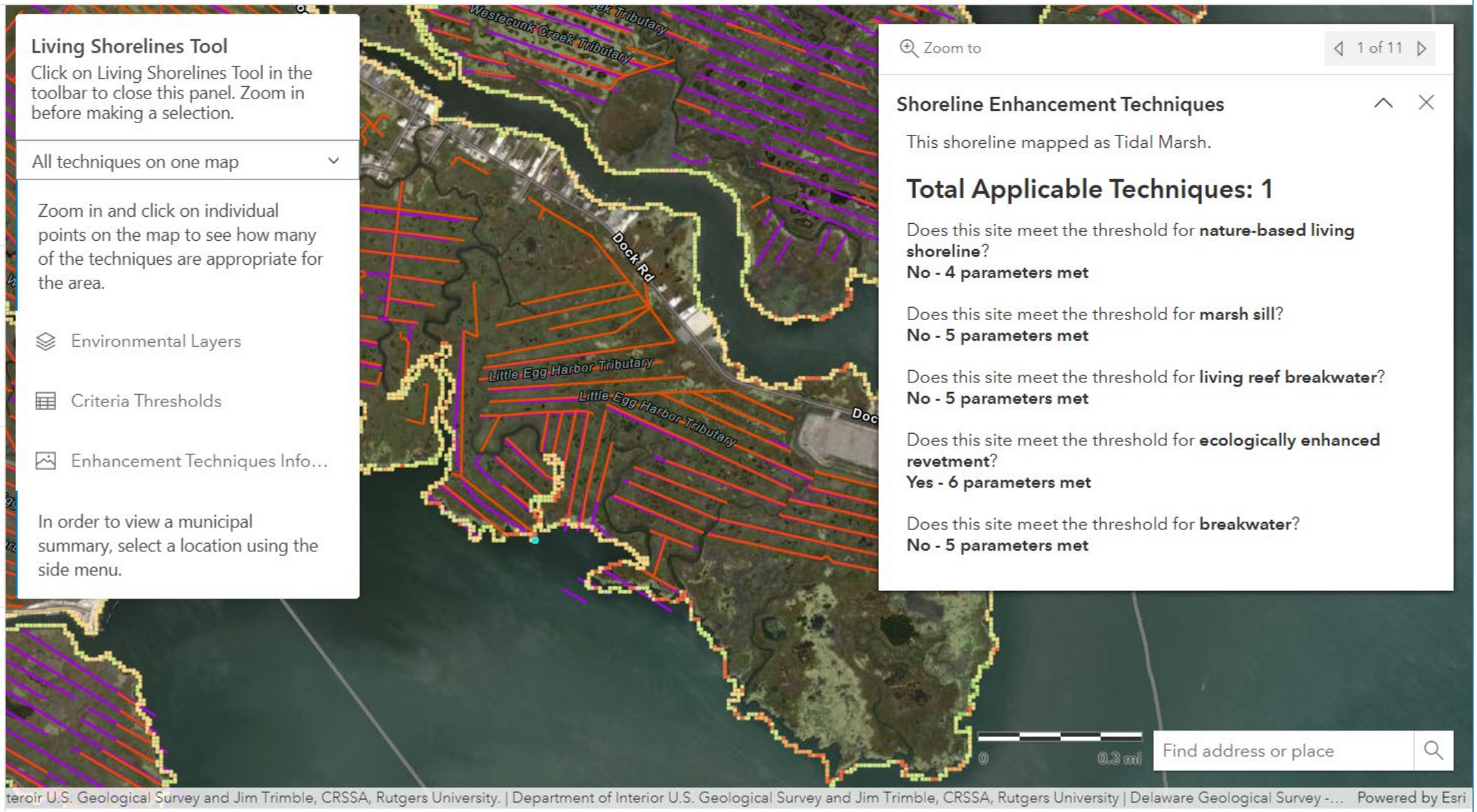


Living Shorelines Tool

Click on Living Shorelines Tool in the toolbar to close this panel. Zoom in before making a selection.

All techniques on one map

Zoom in and click on individual points on the map to see how many of the techniques are appropriate for the area.

- Environmental Layers
- Criteria Thresholds
- Enhancement Techniques Info...

In order to view a municipal summary, select a location using the side menu.

Zoom to

1 of 11

Shoreline Enhancement Techniques

This shoreline mapped as Tidal Marsh.

Total Applicable Techniques: 1

Does this site meet the threshold for **nature-based living shoreline**?
No - 4 parameters met

Does this site meet the threshold for **marsh sill**?
No - 5 parameters met

Does this site meet the threshold for **living reef breakwater**?
No - 5 parameters met

Does this site meet the threshold for **ecologically enhanced revetment**?
Yes - 6 parameters met

Does this site meet the threshold for **breakwater**?
No - 5 parameters met

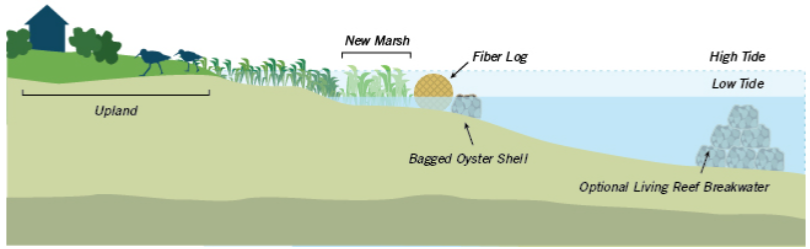
Shoreline Enhancement Techniques

Click on the topics below to learn more about each technique.

Nature-based Living Shoreline | Living Reef Breakwater | Marsh Sill | Breakwater | Ecologically Enhanced Revetment | Beach Restoration

Nature-based Living Shoreline

Nature-based living shorelines are best in low-energy areas. "Biological enhancements," like biodegradable fiber logs (which also provide habitat for ribbed mussels) or Christmas trees, are placed along the tidal marsh edge to provide a contained area for sediment to accumulate and marsh vegetation to grow. In more moderate energy areas, it might be possible to use a hybrid approach that pairs nature-based living shorelines with living reef breakwaters.



Download PDF | Back to map

Living Shoreline Snapshot

Stafford Township, Ocean County

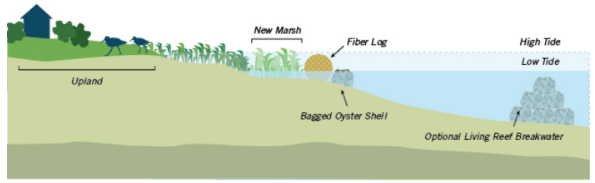
What is a living shoreline?

A living shoreline is a nature-based alternative to bulkheads to address coastal erosion by providing for the protection, restoration or enhancement of these habitats. As indicated by NJDEP, this is accomplished through the strategic placement of plants, stone, sand, or other structural and organic materials. Natural living shorelines include natural vegetation, submerged aquatic vegetation, fill, and biodegradable organic materials (see graphic below). Hybrid living shorelines incorporate natural vegetation, submerged aquatic vegetation, fill, biodegradable organic materials, and low-profile rock structures such as segmented sills, stone containment, and living breakwaters seeded with native shellfish. Structural living shorelines include, but are not limited to, revetments, break-waters, and groins. Additional information on different types of living shorelines can be found on the NJDEP webpage (PDF)(https://www.nj.gov/dep/cmp/docs/living-shorelines-engineering-guidelines-final.pdf)

DISCLAIMER: Living shoreline projects have a variety of ecological and engineering requirements and can often be mixed and match to tailor projects designs to local conditions. It is important to consult with ecologists and engineers to determine the specific design requirements for any proposed project. It is also important to consult with federal, state and local officials regarding permitting requirements. Resources are listed below.

Nature-Based Living Shoreline

Nature-based living shorelines are best in low-energy areas. "Biological enhancements," like biodegradable fiber logs (which also provide habitat for ribbed mussels) or Christmas trees, are placed along the tidal marsh edge to provide a contained area for sediment to accumulate and marsh vegetation to grow. In more moderate energy areas, it might be possible to use a hybrid approach that pairs nature-based living shorelines with living reef breakwaters.



Criteria Thresholds

Click on the topics below to learn more about each engineering criterion.

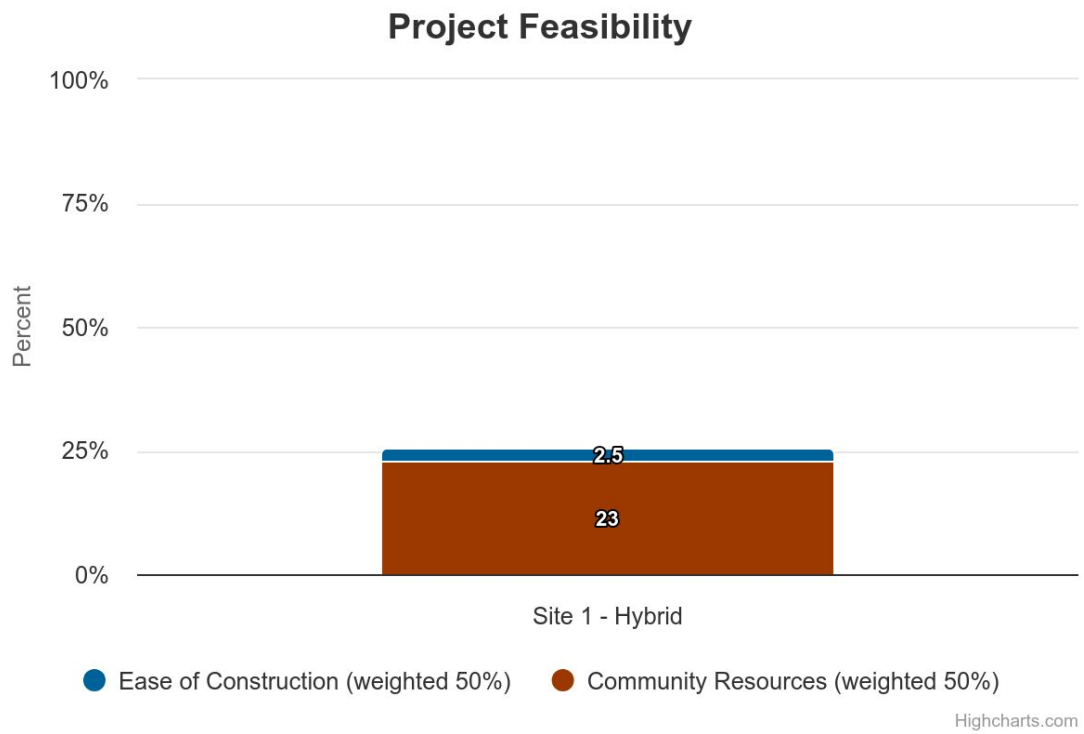
Tidal Range | Shoreline Change | Coastal Ice Cover | Wave Height | Shoreline Slope | Nearshore Slope | Salinity

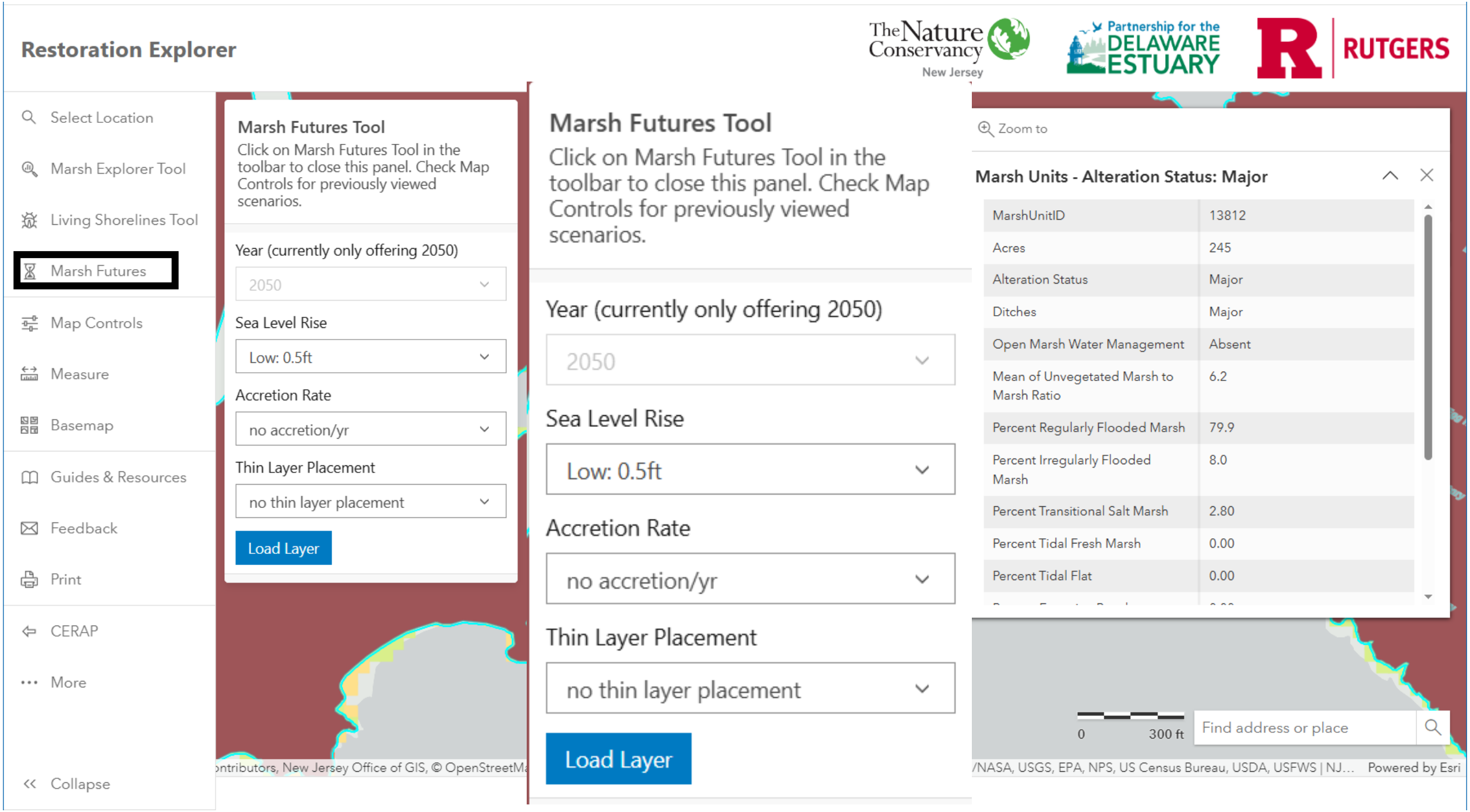
Thresholds	Nature-based Living Shoreline	Living Reef Breakwater	Marsh Sill	Breakwater	Ecologically Enhanced Revetment	Beach Restoration
0-2.0 ft	Yes	Yes	Yes	Yes	Yes	Yes
2.1-4.0 ft	Yes	Yes	Yes	Yes	Yes	Yes
4.1-6.0 ft	No	No	No	Yes	Yes	Yes
>6.0 ft	No	No	No	Yes	Yes	Yes

Living Shorelines Feasibility Model

Living Shorelines Feasibility Model calculates how achievable a project is based on a series of metrics. Metrics are measured via desktop analysis, field data collection or personal communications.

	A	B
1	**Metric**	**Site 1**
2		
3		
4	Water Body Energy	
5	Positional Energy	
6	Storm Event Energy	
7	Persistent Wave Energy	
8	Boat Wake Energy	
9	Nearshore Slope (Stevens guide)	
10	On-site Shoreline Condition	
11	Surrounding Shoreline Condition	
12	**Physical Score**	#N/A
13		
14	Percent Canopy Shading	
15	Intertidal Vegetation Community Status	
16	Intertidal Vegetation Substrate	
17	Subtidal Vegetation Community Status	
18	Subtidal Vegetation Substrate	
19	Upland Vegetation Community Status	
20	Upland Vegetation Substrate	
21	Shellfish Community	
22	**Ecological Score**	#N/A
23	**Physical + Biological Score**	#N/A
24		
25		
26	Material Delivery	
27	Landowner Agreement	
28	Personnel Access	
29	Working Window	
30	Regulatory Considerations	
31	**Site Access Score**	#N/A
32		
33	Public Outreach/Education Potential	
34	Community Stewardship	
35	Resource/Capital Availability	
36	Enthusiasm for Nature Based Infrastructure	
37	Community Protection	
38	Environmental Justice Leverage Potential	
39	**Community Resources Score**	#N/A
40	**MC&C and CS Score**	#N/A

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Collapse
Marsh Futures Tool
Click on Marsh Futures Tool in the toolbar to close this panel. Check Map Controls for previously viewed scenarios.
Year (currently only offering 2050)
2050
Sea Level Rise
Low: 0.5ft
Accretion Rate
no accretion/yr
Thin Layer Placement
no thin layer placement
Load Layer
Zoom to
Marsh Units - Alteration Status: Major
MarshUnitID 13812
Acres 245
Alteration Status Major
Ditches Major
Open Marsh Water Management Absent
Mean of Unvegetated Marsh to Marsh Ratio 6.2
Percent Regularly Flooded Marsh 79.9
Percent Irregularly Flooded Marsh 8.0
Percent Transitional Salt Marsh 2.80
Percent Tidal Fresh Marsh 0.00
Percent Tidal Flat 0.00
0
300 ft
Find address or place
ntributors, New Jersey Office of GIS, © OpenStreetMa
/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS | NJ...
Powered by Esri

SLAMM: Sea Level Affecting Marshes Model

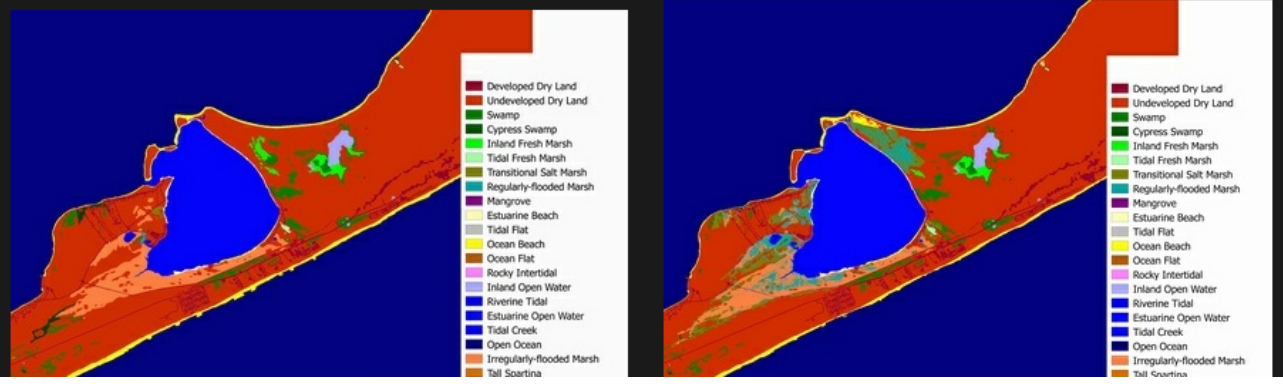
NOTE: WARREN PINNACLE CONSULTING, INC IS NO LONGER IN BUSINESS. THE MODELS AND DATA HERE WILL BE AVAILABLE THROUGH CALENDAR YEAR 2025 AT WHICH POINT ALL MODELS WILL BE FOUND ON GITHUB. THANKS!

The **Sea Level Affecting Marshes Model** (SLAMM) simulates the dominant processes involved in wetland conversions and shoreline modifications during long-term sea level rise. Map distributions of wetlands are predicted under conditions of accelerated sea level rise, and results are summarized in tabular and graphical form. The newest versions of SLAMM include a Roads module to investigate the inundation frequency of road infrastructure and a stochastic uncertainty analysis module for asessing the effects of input data uncertainty on model predictions. The uncertainty analysis module can be used to produce confidence intervals for model predictions and likelihood maps.

- Current and Recent Projects
- Developing Marsh Conservation Plans
- Interactive Marsh-Fate Viewer for New York State
- **Detail:** Dynamic Marsh Management Tool
- **Detail:** Roads and Infrastructure Simulations
- Download Latest SLAMM Versions and Documents
- **SLAMM Forum for updates, technical questions, feedback.**
- Versions of SLAMM
- SLAMM Bibliography
- SLAMM Uncertainty Modeling

Sample SLAMM output for Montauk, NY (project funded by NYSERDA)

Left panel shows the initial wetland conditions, the right panel presents the wetlands predicted by SLAMM at 2055 under a scenario of 1m of sea-level rise by 2100.



Restoration Explorer

The Nature Conservancy New Jersey

Partnership for the Delaware Estuary

Rutgers

- Select Location
- Marsh Explorer Tool
- Living Shorelines Tool
- Marsh Futures
- Map Controls
- Measure
- Basemap
- Guides & Resources
- Feedback
- Print
- CERAP
- More
- Collapse

Marsh Futures Tool

Click on Marsh Futures Tool in the toolbar to close this panel. Check Map Controls for previously viewed scenarios.

Year (currently only offering 2050)

2050

Sea Level Rise

High: 2ft

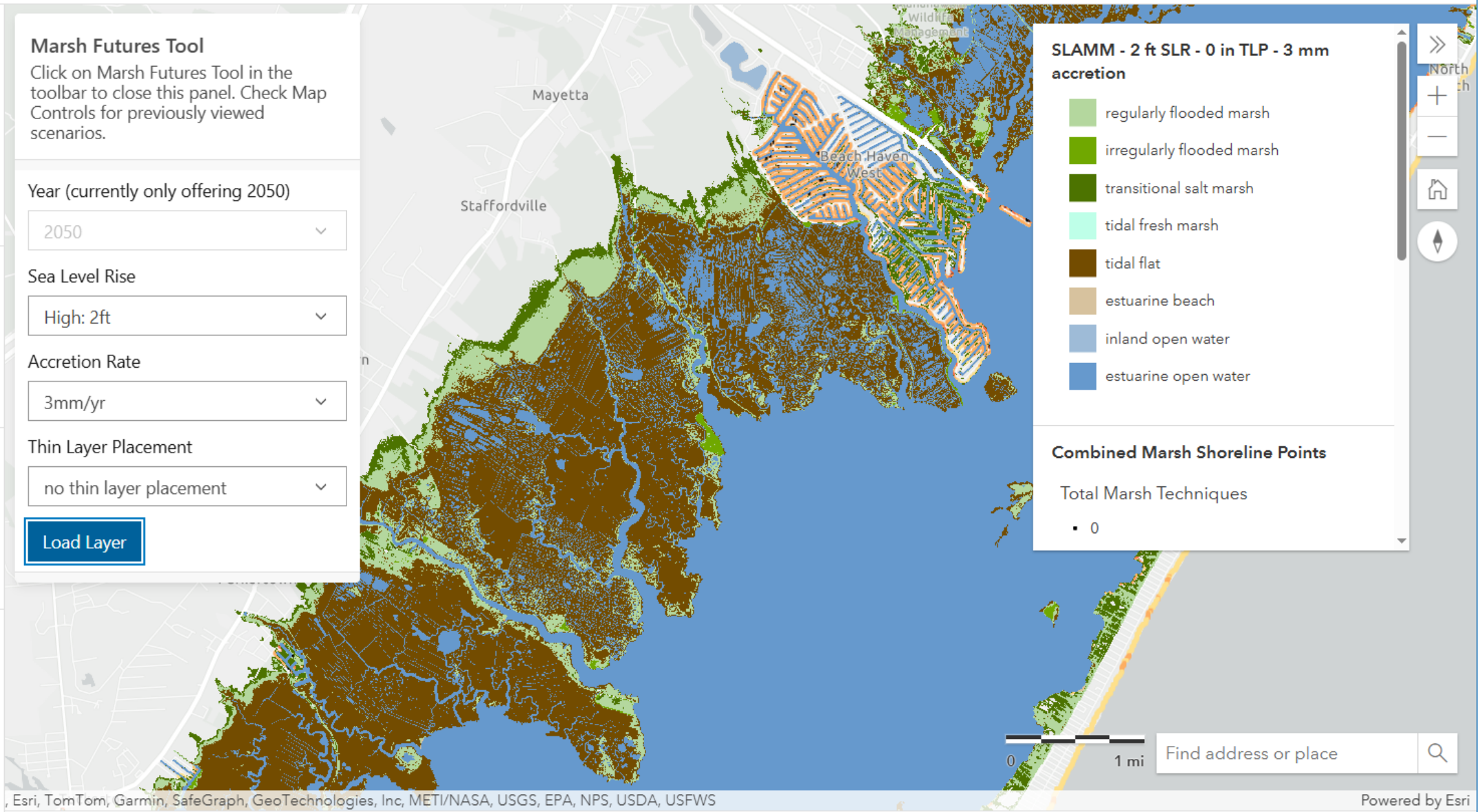
Accretion Rate

3mm/yr

Thin Layer Placement

no thin layer placement

Load Layer



Restoration Explorer

The Nature Conservancy New Jersey

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Rutgers

- Select Location
- Marsh Explorer Tool
- Living Shorelines Tool
- Marsh Futures
- Map Controls
- Measure
- Basemap
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- More
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Marsh Futures Tool

Click on Marsh Futures Tool in the toolbar to close this panel. Check Map Controls for previously viewed scenarios.

Year (currently only offering 2050)

2050

Sea Level Rise

Medium: 1ft

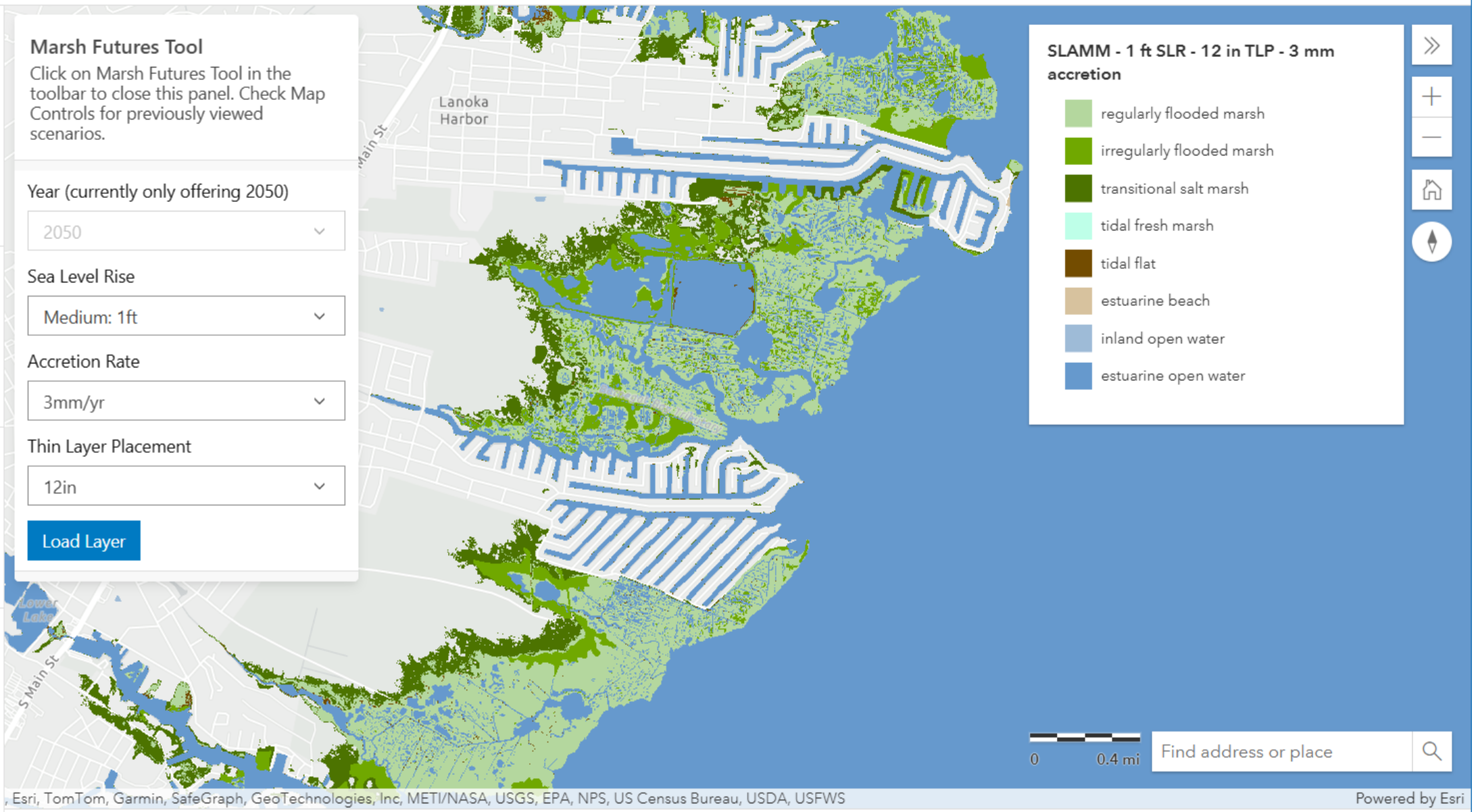
Accretion Rate

3mm/yr

Thin Layer Placement

12in

Load Layer



Restoration Explorer

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Rutgers

- Select Location
- Marsh Explorer Tool
- Living Shorelines Tool
- Marsh Futures
- Map Controls
- Measure
- Basemap
- Guides & Resources
- Feedback
- Print
- CERAP
- More
- Collapse

Map Controls

Click "Map Controls" in the tool bar to close this panel.

Remove Layer

SLAMM - 1 ft SLR - 6 in TLP - 3 mm accretion

Show/Hide Layer

Hidden Visible

Opacity of Layer

Remove Layer

SLAMM - 1 ft SLR - 3 in TLP - 3 mm accretion

Show/Hide Layer

Hidden Visible

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Rutgers

- Select Location
- Marsh Explorer Tool
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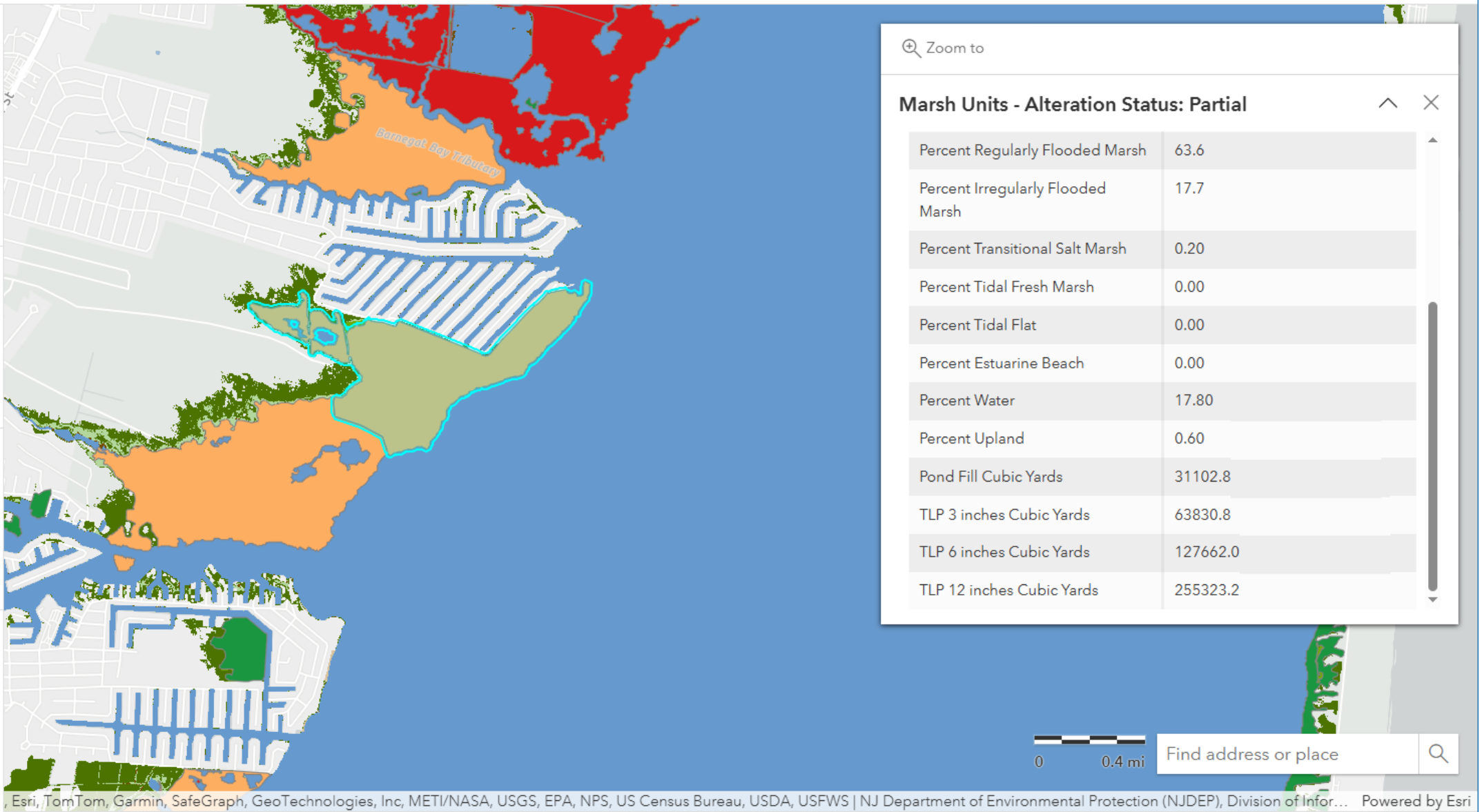
- More
- Collapse



Zoom to

Marsh Units - Alteration Status: Partial

Percent Regularly Flooded Marsh	63.6
Percent Irregularly Flooded Marsh	17.7
Percent Transitional Salt Marsh	0.20
Percent Tidal Fresh Marsh	0.00
Percent Tidal Flat	0.00
Percent Estuarine Beach	0.00
Percent Water	17.80
Percent Upland	0.60
Pond Fill Cubic Yards	31102.8
TLP 3 inches Cubic Yards	63830.8
TLP 6 inches Cubic Yards	127662.0
TLP 12 inches Cubic Yards	255323.2

Funding for NJResTOrS was provided by the NJDEP/NOAA CZM, The Nature Conservancy and National Fish & Wildlife Foundation (subcontract through PDE 414-01).

Special shout out to Drs. LeeAnn Haaf and Josh Moody for their contributions.

Check it out @ njrestors.rutgers.edu