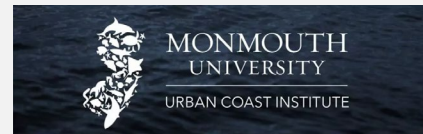


The Marsh Futures Mapper

NJ Restoration Tool Organization Suite (ResTOrS)



Joshua Moody¹, Rick Lathrop²

NJ Coastal Resilience Collaborative 2026 Meeting



¹ NJDEP Division of Science & Research

² Rutgers University Center for Remote Sensing & Spatial Analysis



NJ ResTOrS – Planning Through Implementation



1. Where to Work?

2. Issue Identification

Ability for Self-Maintenance

3. Restoration Approach

Existing AOI
or
CERAP Search
or
BIRP Search
(Islands)

1. CERAP
2. TNC Marsh Explorer
3. BIRP (Island)
4. WATCH (Quantitative, Data Required)
5. NJ Reference Wetland Tool

Existing capacity of a wetland parcel to transgress, prograde, or build vertically.

3a. TNC LS Explorer

Approach rec based on high-level physical conditions

3c. LS Feasibility Model

Team building and installation logistics

3b. Marsh Futures Mapper

Landscape evaluation, single/ multiple tactic evaluation, faunal considerations, and ESS intervention value



The Marsh Futures Mapper



Restoration Explorer

Can Navigate Multiple Tools on a Single Map

- 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
- NJResTORS Home

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

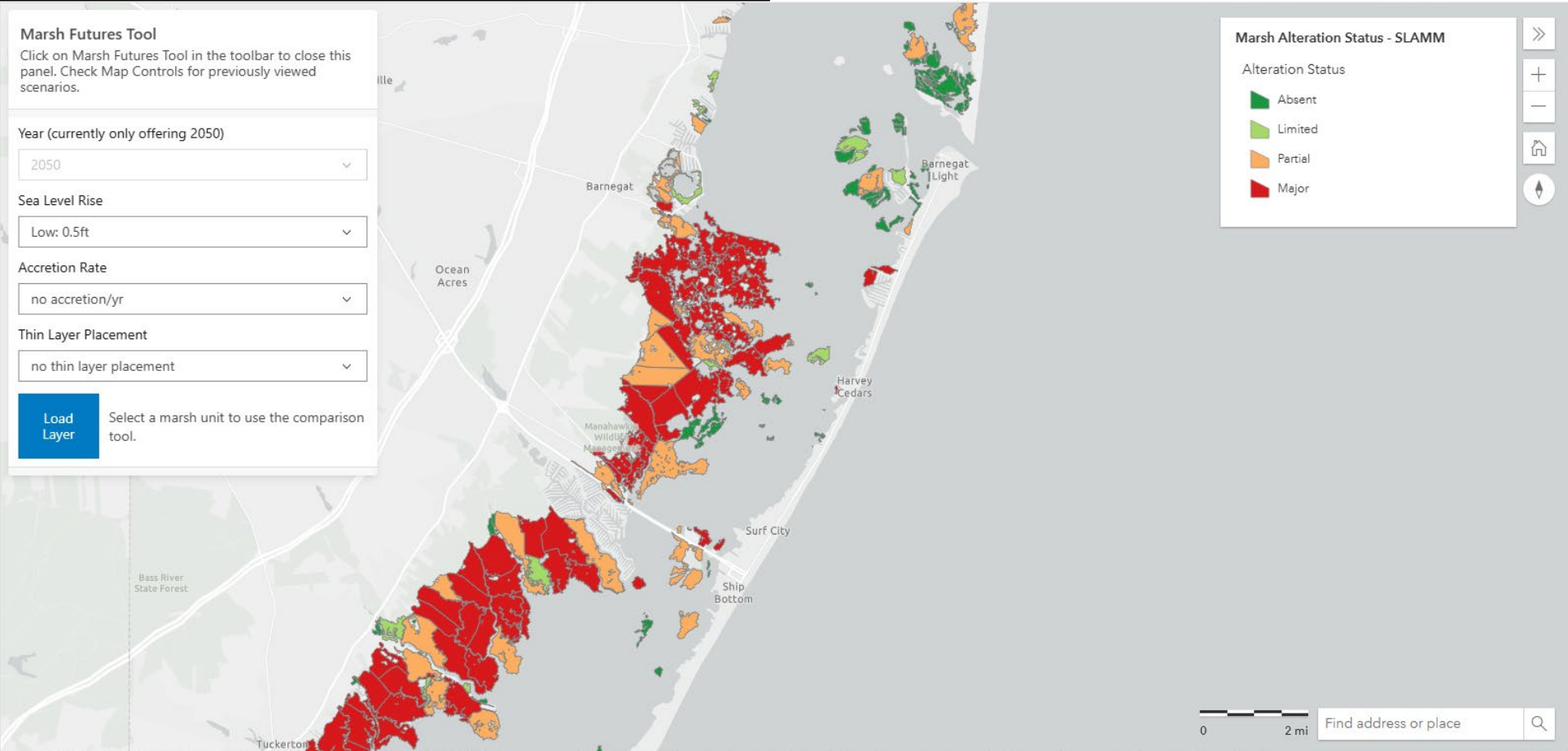
Year (currently only offering 2050)
2050

Sea Level Rise
Low: 0.5ft

Accretion Rate
no accretion/yr

Thin Layer Placement
no thin layer placement

Load Layer Select a marsh unit to use the comparison tool.





SLAMM-based Approached to Restoration Effects



Restoration Explorer



- 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.

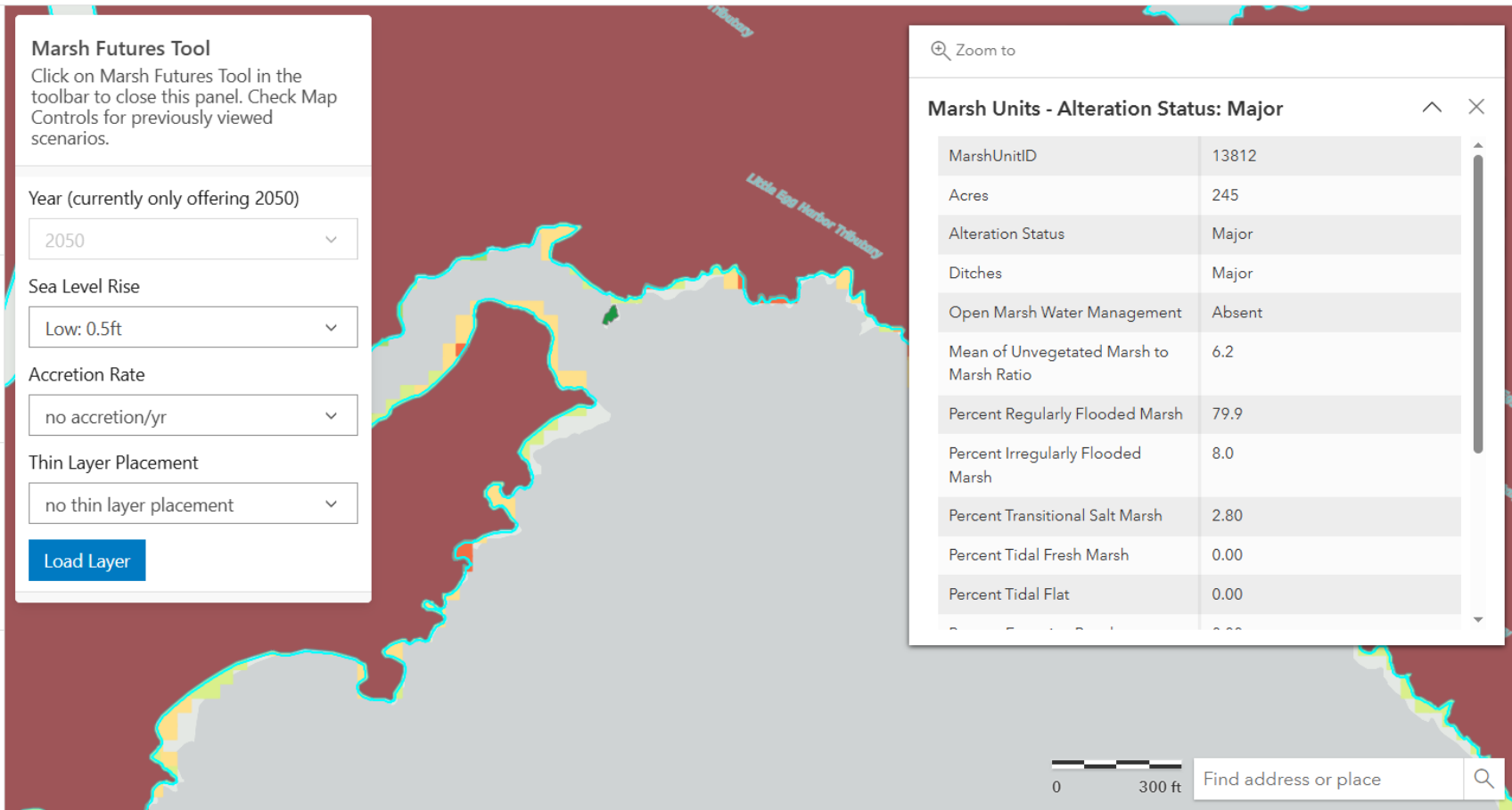
Year (currently only offering 2050)
2050

Sea Level Rise
Low: 0.5ft

Accretion Rate
no accretion/yr

Thin Layer Placement
no thin layer placement

[Load Layer](#)





Evaluate the Effects of Sea Level Rise



Restoration Explorer

The Nature Conservancy New Jersey | Partnership for the DELAWARE ESTUARY | RUTGERS

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
no thin layer placement

[Load Layer](#)

SLAMM - 1 ft SLR - 0 in TLP - 3 mm accretion

- regularly flooded marsh
- irregularly flooded marsh
- transitional salt marsh
- tidal fresh marsh
- tidal flat
- estuarine beach
- inland open water
- estuarine open water

Combined Marsh Shoreline Points
Total Marsh Techniques
• 0

Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS | Powered by Esri



Evaluate the Effects of Sea Level Rise



Restoration Explorer



- 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

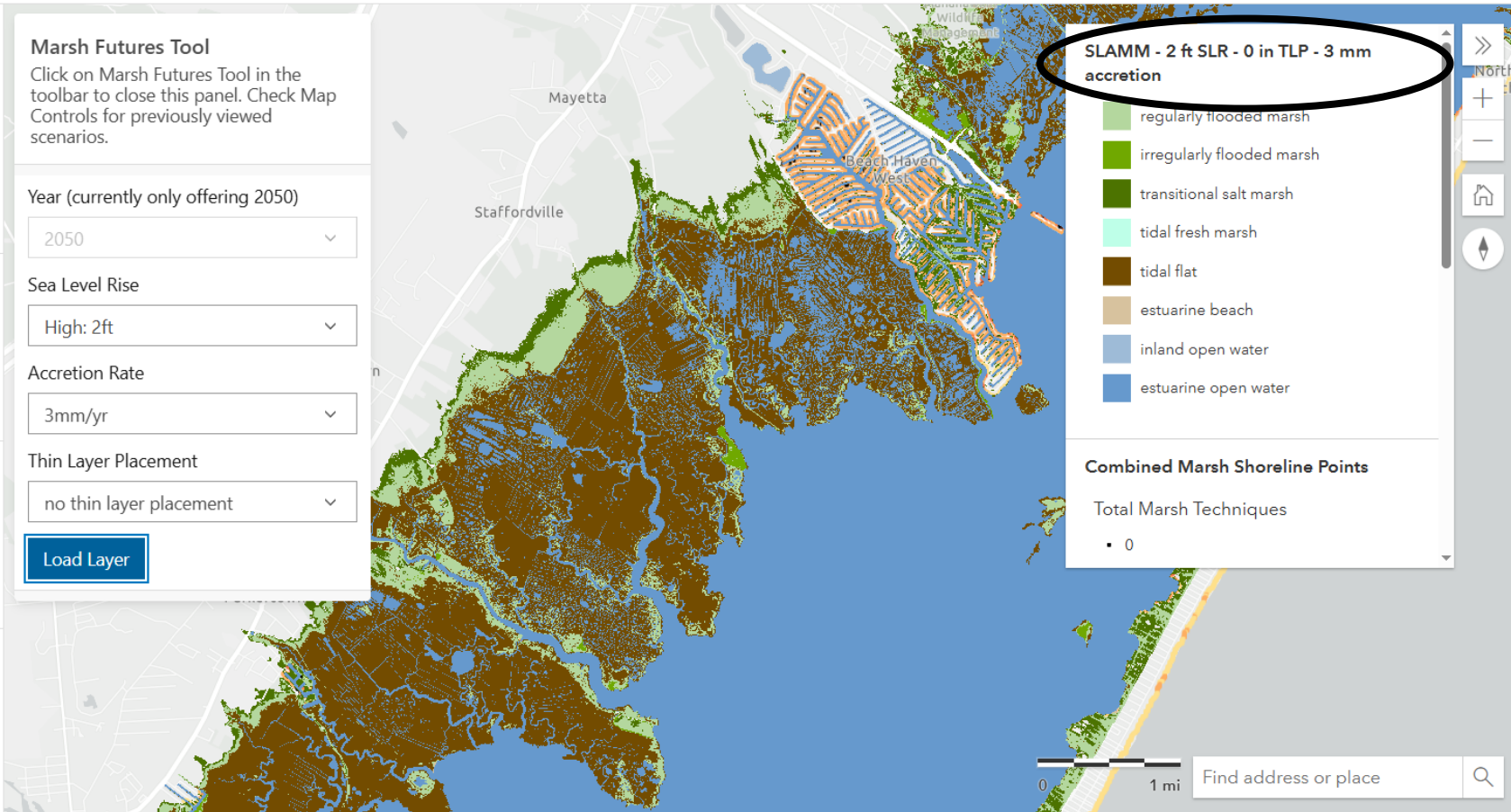
Accretion Rate

3mm/yr

Thin Layer Placement

no thin layer placement

Load Layer





Evaluate the Effects of Sediment Placement Depth



Restoration Explorer

The Nature Conservancy New Jersey | Partnership for the DELAWARE ESTUARY | RUTGERS

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

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

- regularly flooded marsh
- irregularly flooded marsh
- transitional salt marsh
- tidal fresh marsh
- tidal flat
- estuarine beach
- inland open water
- estuarine open water

Map: Lanoka Harbor, Main St

Scale: 0 0.4 mi

Find address or place

Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, MERRILL, NASA, USGS, EPA, NRE, US Census Bureau, USDA, USFWS | Powered by Esri



Evaluate the Effects of Sediment Placement Depth



Restoration Explorer

The Nature Conservancy New Jersey | Partnership for the DELAWARE ESTUARY | RUTGERS

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](#)

SLAMM - 1 ft SLR - 12 in TLP - 3 mm accretion

- regularly flooded marsh
- irregularly flooded marsh
- transitional salt marsh
- tidal fresh marsh
- tidal flat
- estuarine beach
- inland open water
- estuarine open water

Map showing Lanoka Harbor area with various marsh types and water bodies. Two black ovals highlight specific areas of interest on the map.

0 0.4 mi Find address or place

Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS Powered by Esri



Evaluate Habitat Effects of Multiple Scenarios



Scenario 1 No Action

Scenario 2 TLP

[Add a scenario to compare](#)

[Clear all scenarios](#)

Sea Level Rise

Low: 0.5ft

Sea Level Rise

Low: 0.5ft

Accretion Rate

3mm/yr

Accretion Rate

3mm/yr

Thin Layer Placement

no thin layer placement







Thin Layer Placement

3in

[View Comparison Table](#)

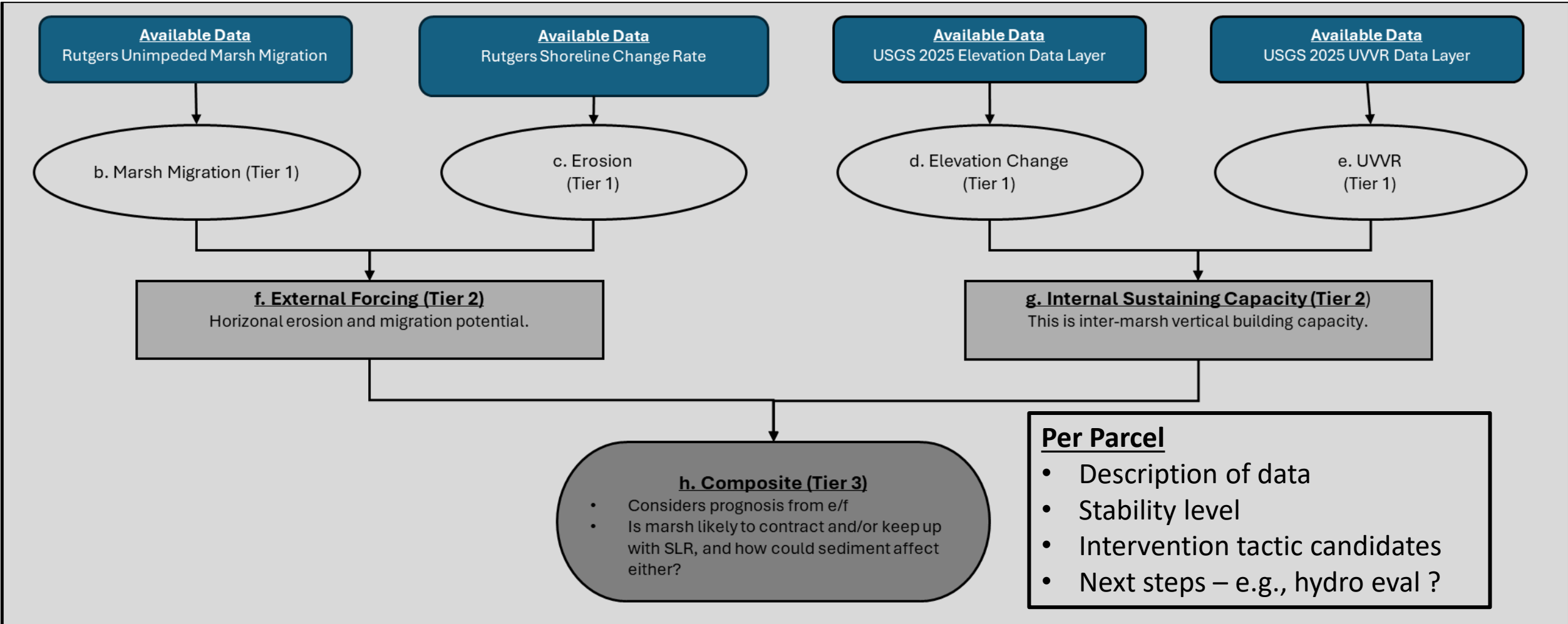
Please only click this button once and wait for the results to display.

If your goal is tidal marsh persistence...

Scenario	% Regularly Flooded Marsh	% Irregularly Flooded Marsh	% Transitional Salt Marsh	% Tidal Fresh Marsh	% Tidal Flat	% Estuarine Beach	% Water	% Upland
Baseline	61.2%	24.5%	0.0%	0.0%	0.2%	0.0%	14.0%	0.0%
Scenario 1	58.5% 	24.0%	0.0%	0.0%	1.5% 	0.0%	16.0% 	0.0%
Scenario 2	59.0% 	24.1%	0.0%	0.0%	1.2% 	0.0%	15.6% 	0.0%



Marsh Futures Data Layers: Fall 2026





Questions & Discussion

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Charles Schutte:

LeeAnn Haaf:

Metthea Yepsen:



<https://dep.nj.gov/dsr/wetlands/>