

Restoring Coastal Habitats Through Compromise Beach Management In New Jersey

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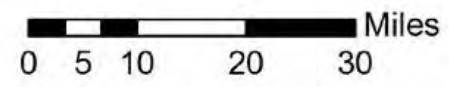
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Pinelands Preservation Alliance



PINELANDS
PRESERVATION
ALLIANCE

-  Tidal Waterways
-  Coastal Zone Municipalities
-  Beaches and Dunes
-  Barrier Islands
-  Tidal Marshes
-  Shrub & Forest Cover within Coastal Municipalities
-  Shrub & Forest Cover within a 1,000 feet Buffer of Upper Wetland Boundary





1930

2002

2022

Dynamic Coastal Ecosystems

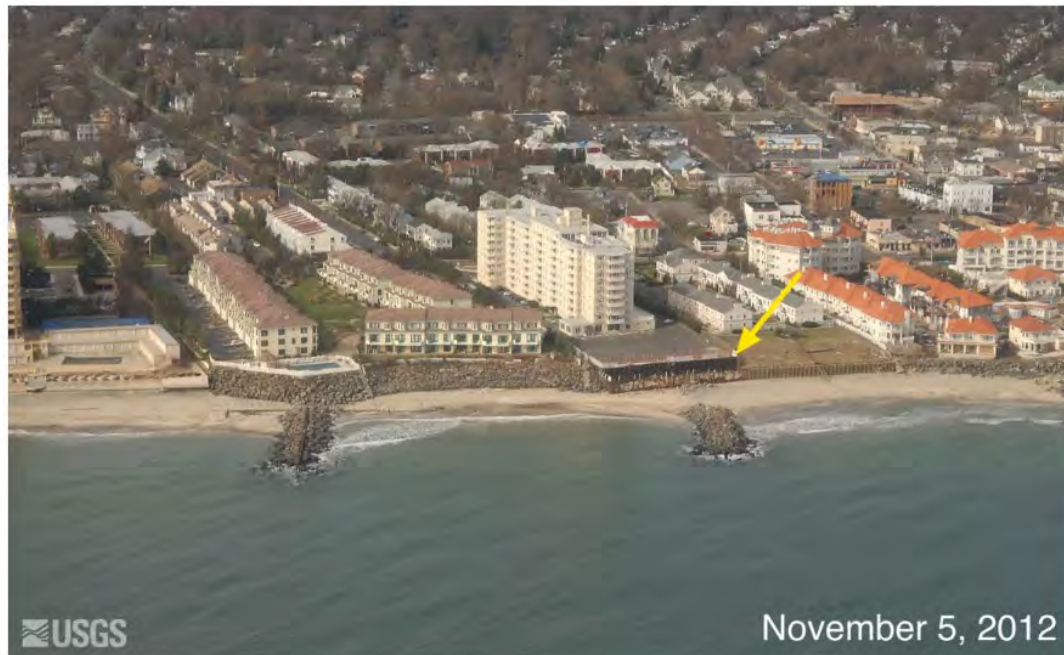
Hurricane Sandy 2012

Climate change increasing the intensity and frequency of storms.

Long Branch, N.J.



May 21, 2009



November 5, 2012

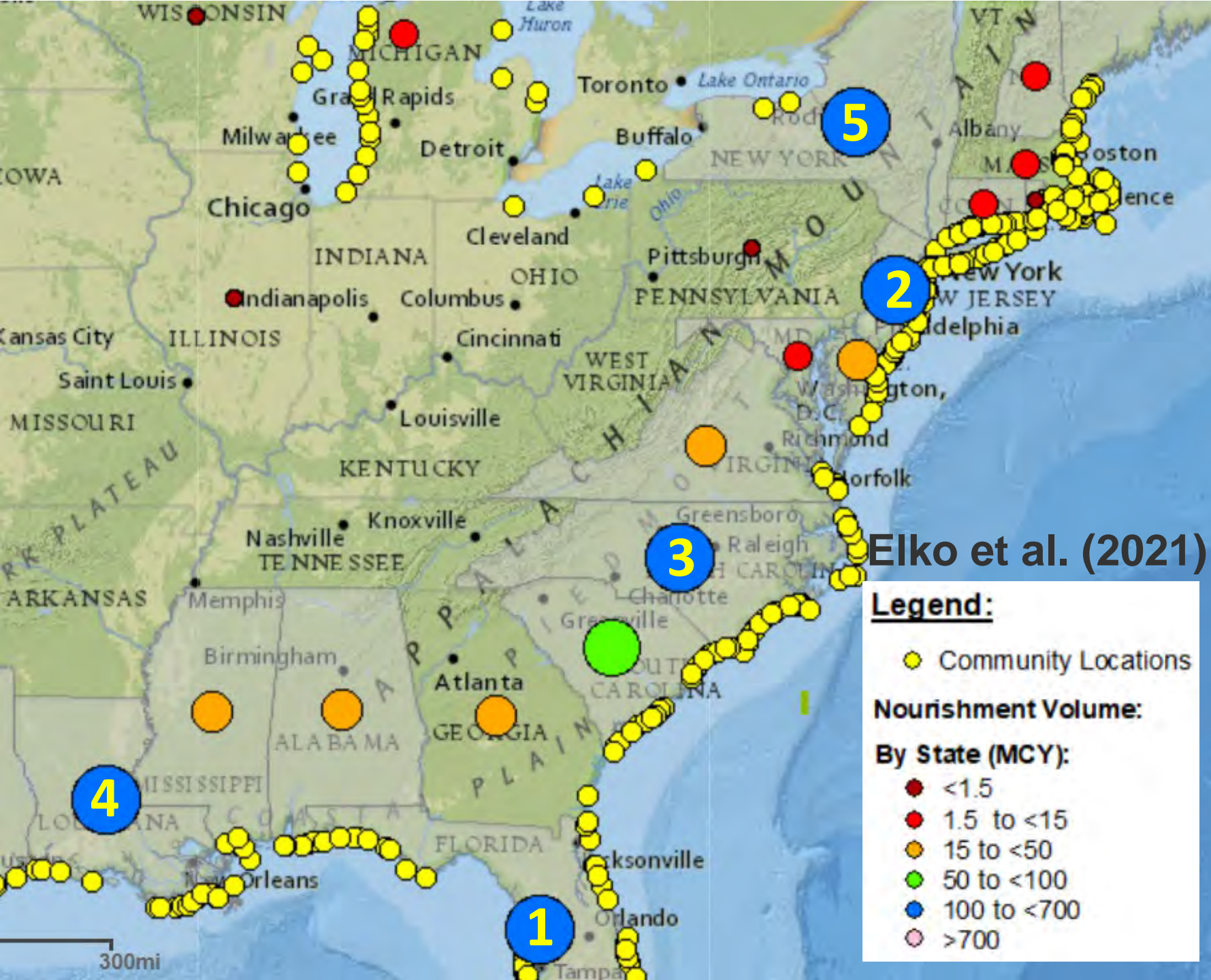
Seaside Heights, N.J.



May 21, 2009



November 5, 2012



Elko et al. (2021)

**NJ Currently Spent:
~\$1.5Bil – moving
~208.5Mil yd³**

**Current Project
Budgets in NJ
>\$4.5Bil***

NJ – \$7.08/yd³

***USAEC 2023**

Surf City



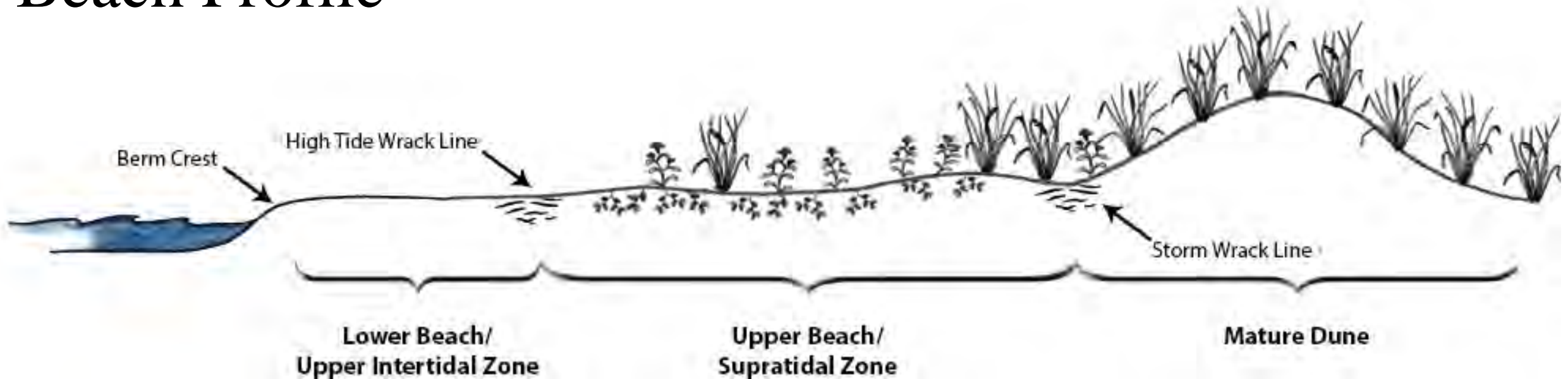
Strathmere



Sea Bright



Beach Profile



Natural Beaches - *Benefits*

Reduce Sediment Erosion

Accelerate Dune Development

Aesthetic Benefits/Tourism

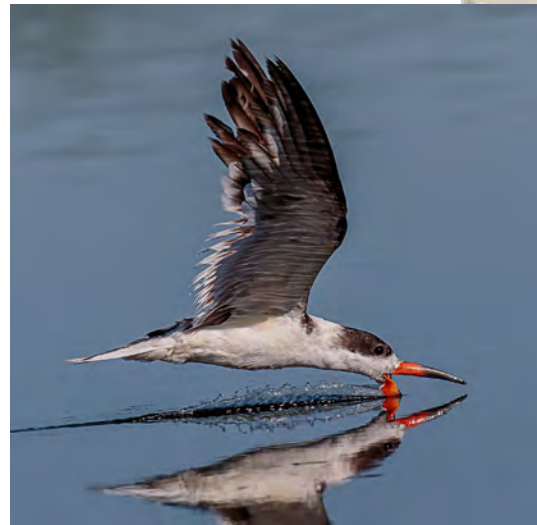
Wildlife/Endangered Species Habitat

Foraging for Shorebirds

Staging for Migration

Beach-Nesting Birds

- Piping Plover
- Black Skimmer
- Least Tern
- American Oystercatcher



Rare and Endangered Plants

Area: NJ Ocean Shoreline (127 miles)

Habitat: Upper Beach (between high tide line and dune)

Seabeach Amaranth (*Amaranthus pumilus*)

Seabeach Knotweed (*Polygonum glaucum*)

Seabeach Sandwort (*Honckenya peploides*)

Sea Purslane (*Sesuvium maritimum*)

Seabeach Evening Primrose (*Oenothera humifusa*)

Sea Milkwort (*Glaux maritima*)



Beach Raking

74% of NJ shoreline

Leaves 2% beach vegetation cover

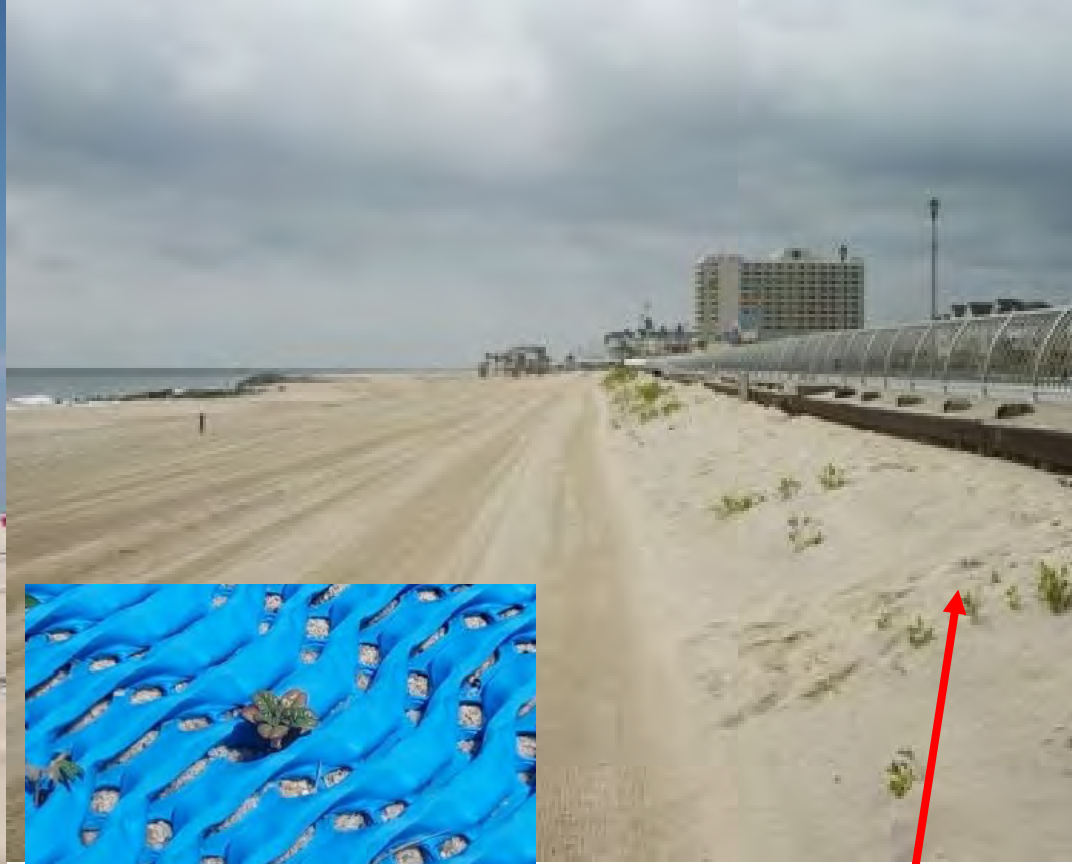


Off-Road Vehicle (ORV) Driving

**83% of NJ shoreline
Leaves 16% beach vegetation cover**



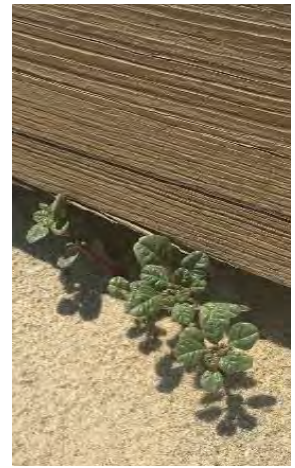
From Kelly (2014)



Seabeach
Amaranth

Seabeach Amaranth

Beach Habitat Availability on Unprotected Beaches



Proactive Management: String and Post Fencing

Island Beach State Park,
No Protection



Island Beach State Park,
Plant Protection Strip



Sea Isle City,
No Protection



Sea Isle City,
2018, First Season of Protection



RVCC & PPA Coastal Conservation Project - *Results*

Fenced up to 50% of beach in all coastal state parks (Island Beach, Brigantine, Corson's Inlet, Cape May Point), and 15-20% in Brick Twp, Bradly Beach Boro, Ventnor City, and Cape May City

11.9 miles of state-owned land 3.1 miles of municipality-owned land

Results:

Seabeach Amaranth in 6 of 8 locations fenced



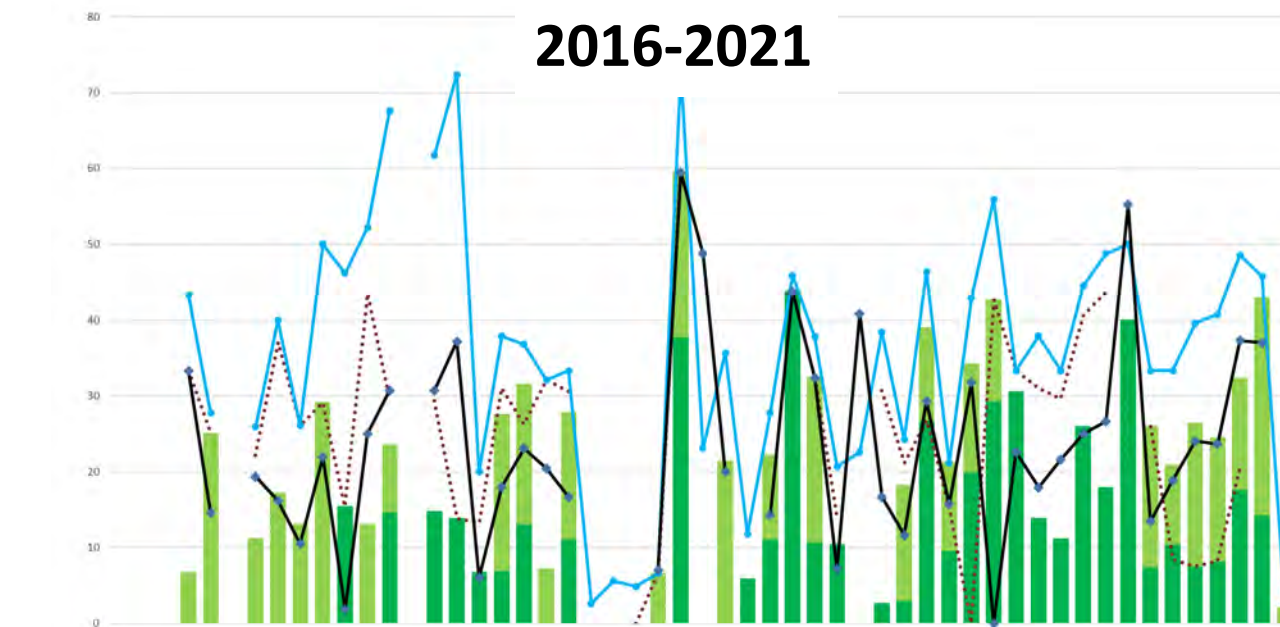
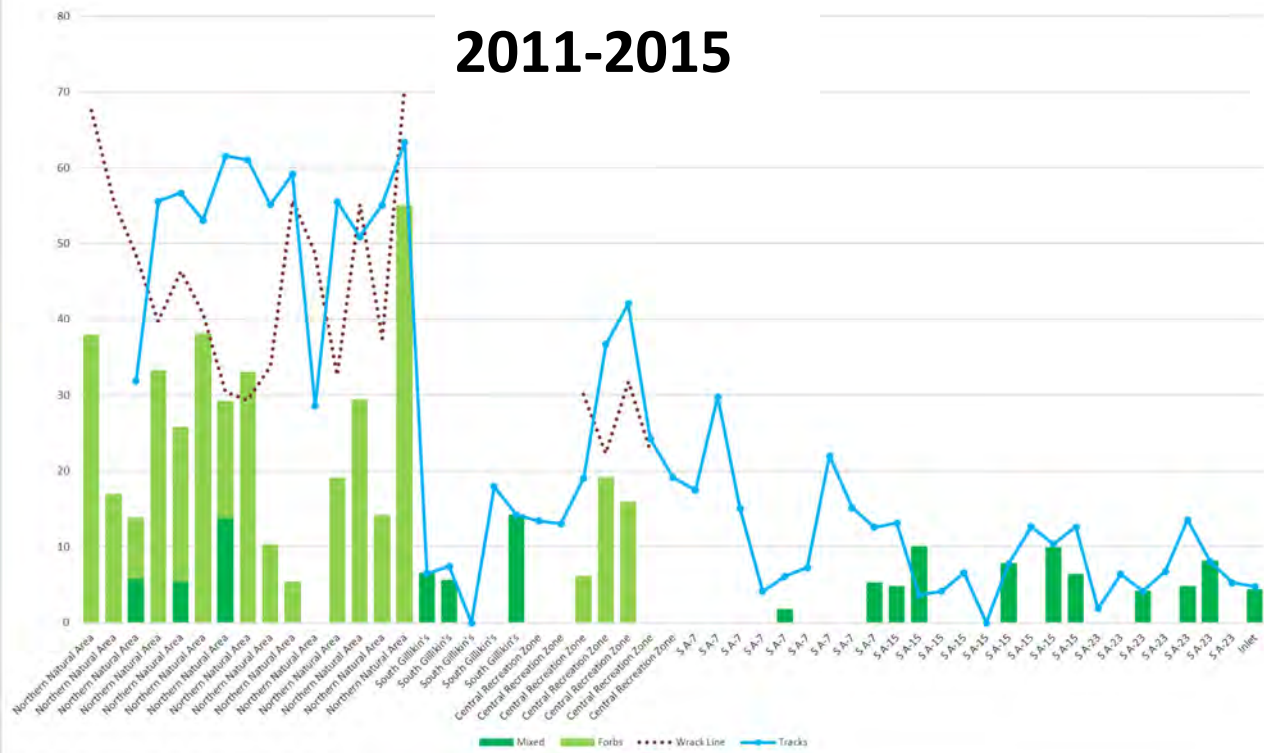
- Total
- Monmouth County
- Ocean County
- Atlantic County
- Cape May County



13 14 19 13 15 6 6 10 9 8 9 7 2 6 10 15 20 24 25 24 27 27

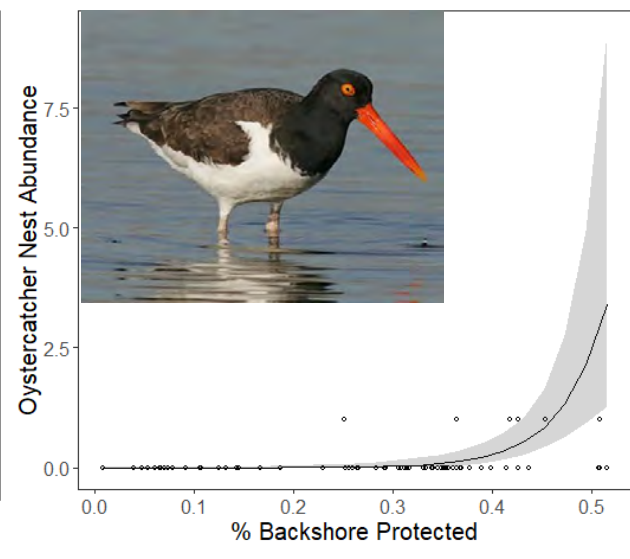
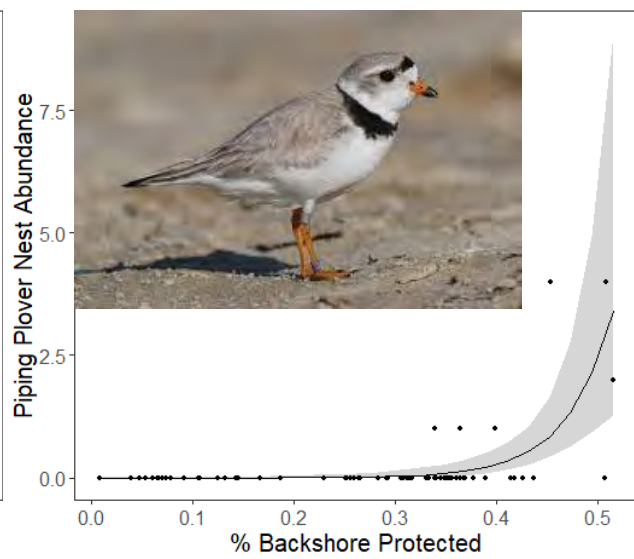
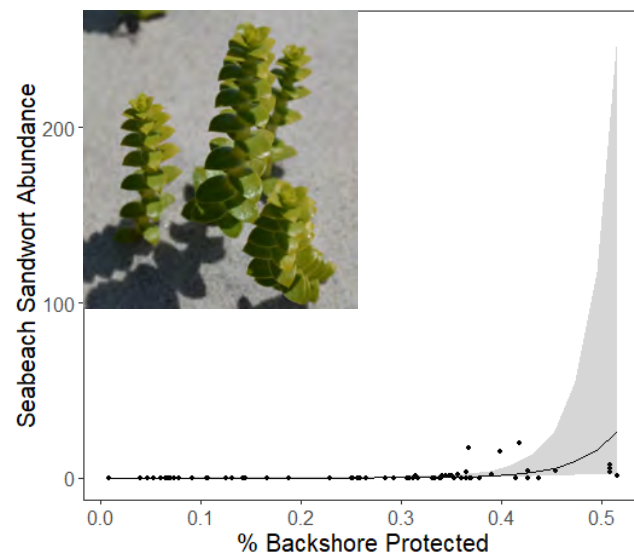
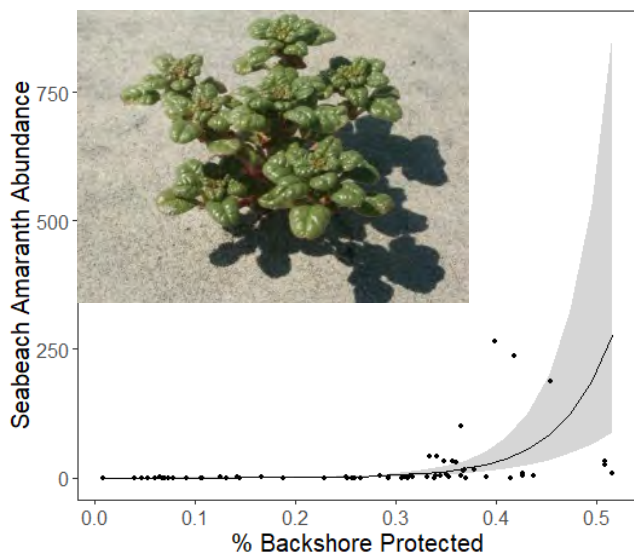
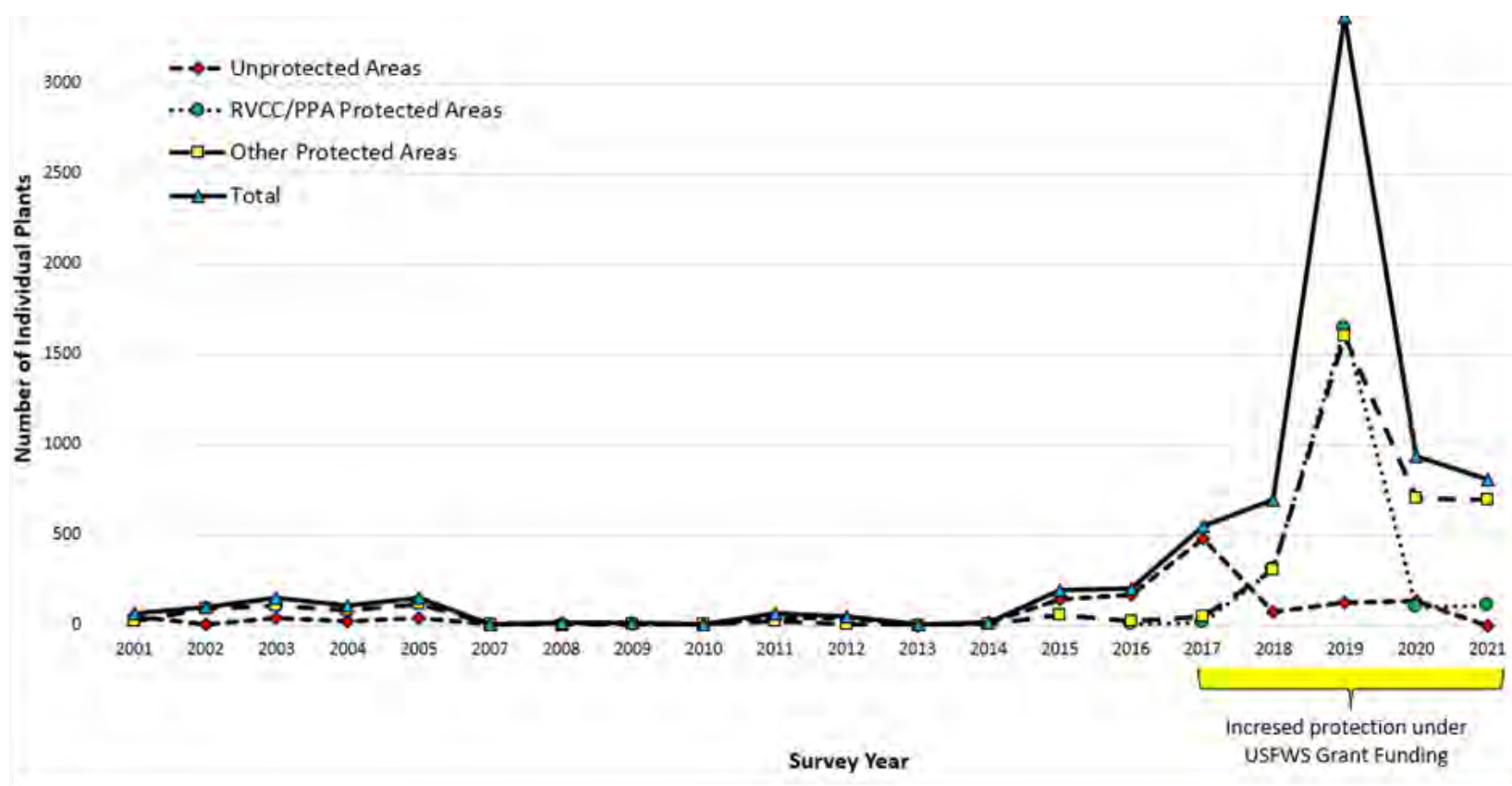
 Increased Protection Under USFWS Grant Funding

Case Study – Island Beach State Park



- Increased Beach and Dune Vegetation Along the Back Beach
- Displacement of ORV Tracks From the Back of the Beach to the Seaward Side of the Beach
- Increase Wrack Presence Along the Back Beach





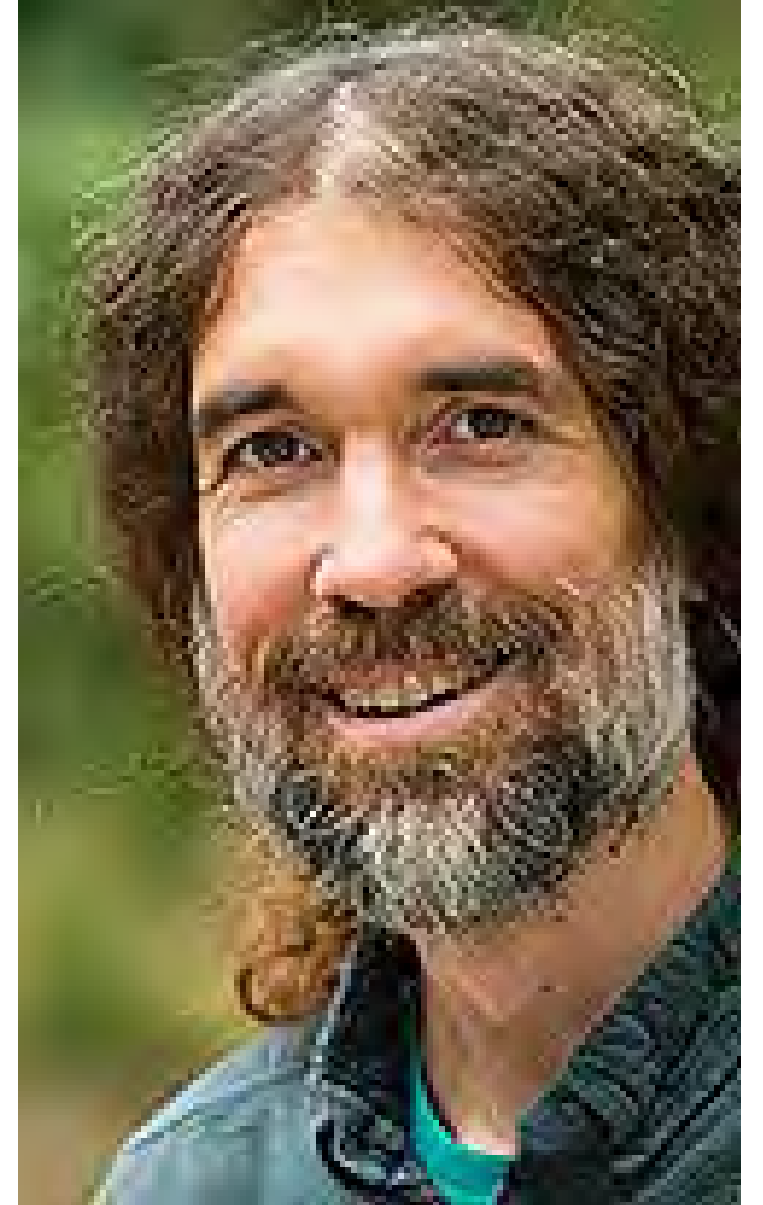
Changing the Culture of Management and Use





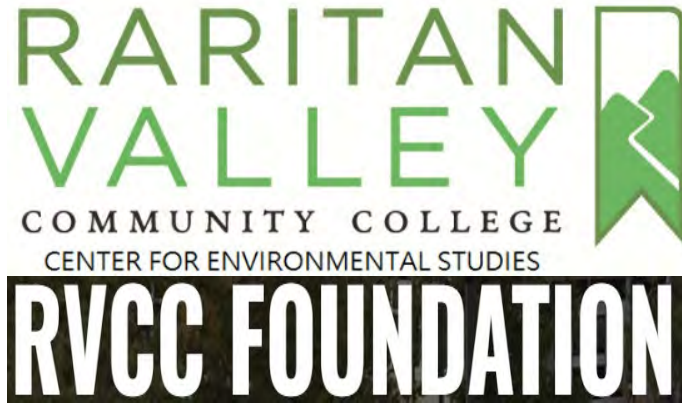
RVCC Student Interns –Dylan Hardy, Lee Minicuci, William Grosch, Kristen Greaney, Angelina Arcure, Brianna Skripko, John McDonough, Alexa Christensen, Emily Woods, Joe Caruso, Cayla Casucci, Nick Chaballa, Morgan Hubert, Jess Yohn, Amber Lindsay, Samantha Naulty, Noah Motz, Lina Rivetti, Chris Baron, Scarlett Simpson, Robert Pagliario, Chris Balajadia

Co-Authors





CONSERVE WILDLIFE
FOUNDATION OF NEW JERSEY



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Funding

NJ Sea Grant 2016-2017; National Fish and Wildlife Foundation 2018-2019; NJDEP – Office of Natural Lands Management; U.S. Fish and Wildlife Service; RVCC Foundation



BEACH MANAGEMENT PLAN

For the Protection of

Federally & State-Listed Species

- **Started Requiring “Plant Protection Strips” along the back beach in 2016.**
- **19+ municipalities to have PPS**
- **24+ liner miles of habitat protection**

IN COOPERATION WITH:

New Jersey Department of Environmental Protection
Division of Fish and Wildlife
Endangered and Nongame Species Program

and



United States Department of the Interior
Fish and Wildlife Service
New Jersey Field Office



	Length (mi)	Compliance Status
Seven Presidents Park	0.4	Not Compliant
Long Branch	2.5	Not Compliant
Ocean Grove	0.3	Not Compliant
Bradley Beach	0.7	Compliant
Avon-By-The-Sea	0.4	Not Compliant
Belmar- Recreational Zone	0.6	Not Compliant: only compliant in areas where NJ CWF ropes off habitat and plants
Spring Lake	2.2	Partially Compliant - Not compliant at the beginning of the season but erected fencing at the end of the season.
Manasquan	0.8	Partially Compliant - violations in scattered areas were observed in June, July, and September.
Jekinson's Beach- South	0.3	Not Compliant
Jekinson's Beach- North	0.3	Compliant
Mantoloking	2.2	Compliant
Brick	1.5	Partially Compliant – ORV tracks were seen in areas when fencing was damaged from the public.
Toms River- Ortley Beach	0.8	Not Compliant
Toms River- North Beaches	1.5	Not Compliant
Seaside Heights	0.8	Not Compliant
Brigantine City	3.7	Not Compliant
Ocean City- Precautionary Zone	1.1	Not Compliant
Upper Township	1.4	Compliant
Sea Isle City- Northern Protected Zone	1	Not Compliant
Sea Isle City- Recreational Zone	0.38	Compliant
Avalon		Compliant
North Wildwood- Recreational Zone	0.5	Not Compliant

76% are Partially or Compliant

