

# LBT10

Long Beach Township Marine Education Field Station

Holgate, NJ

Angela C. Andersen, Field Station Manager/Sustainability Director



Long Beach  
Township  
Marine  
Education  
Field Station  
*established 2021*

127. W. Osborn  
Ave  
Holgate NJ



## How it started

2017

LBT acquired the empty parcel that was the old Bouy 77 Marina property Spawned out of Superstorm Sandy and increasing public access.

Back when resilience had more of a survival & recovery basis.



WED, AUG 15, 2018

**How it  
progressed.....**  
Pilot facility 2018 –

“testing” if this type  
of effort would  
work-

Was it the missing  
link in our resilience  
work?



# How its going..

- Establishing a location for resilience work has profoundly enriched the work.
- LBTFSS has become an anchor for coastal education/outreach /study
- It is a place to celebrate the region's heritage & maritime culture
- Inspires hope for the future as people find their place in the story here

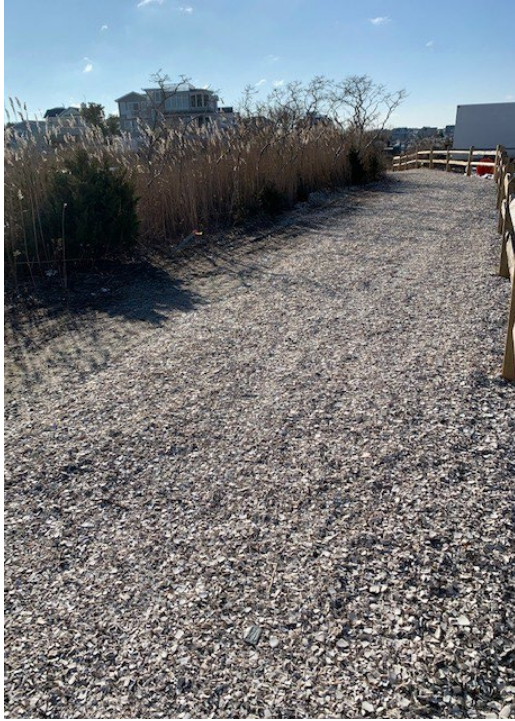




# Public access path

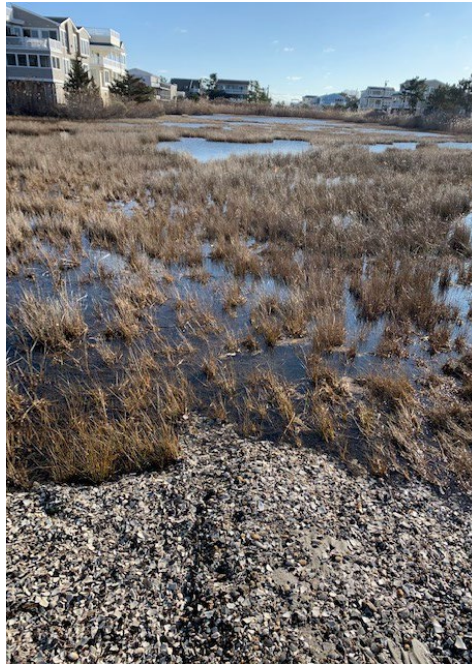
- Science, Research, Education, Community: birding, journaling, field sketch, plant ID,





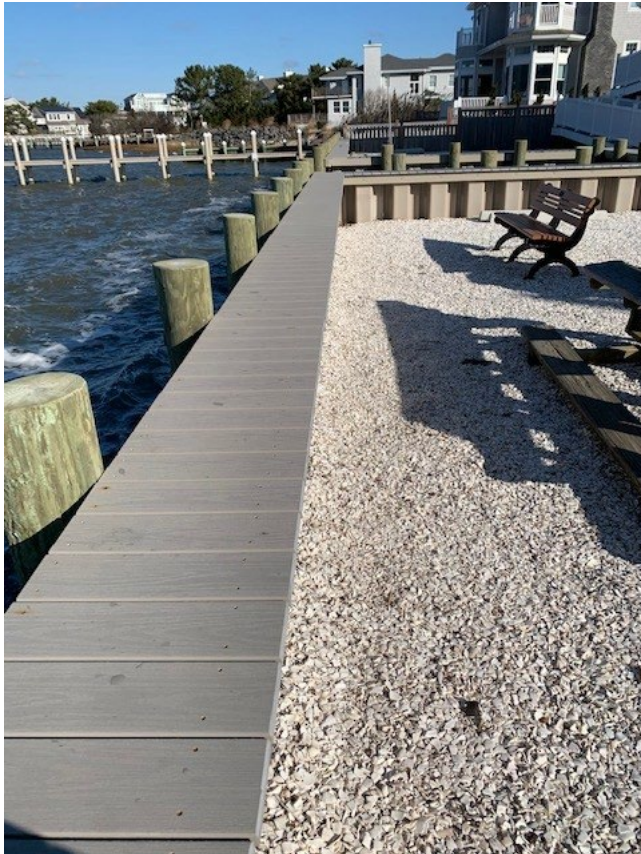
# Public access path

- Pocket Marsh to the east
  - Turtle releases
  - Water quality monitoring
  - Flora & Fauna diversity
  - BYO Kayak tours Wed am in summer
  - Field sketch/journaling





# ‘Resilient’ height bulkhead & community meeting space/ critter traps/habit-spat monitoring







# Outdoor Classroom & Live Lab

- Upstairs,
- Downstairs,
- Inside
- &
- Outside





**Weather Tracking:  
Trifecta of real time  
weather &  
observation**

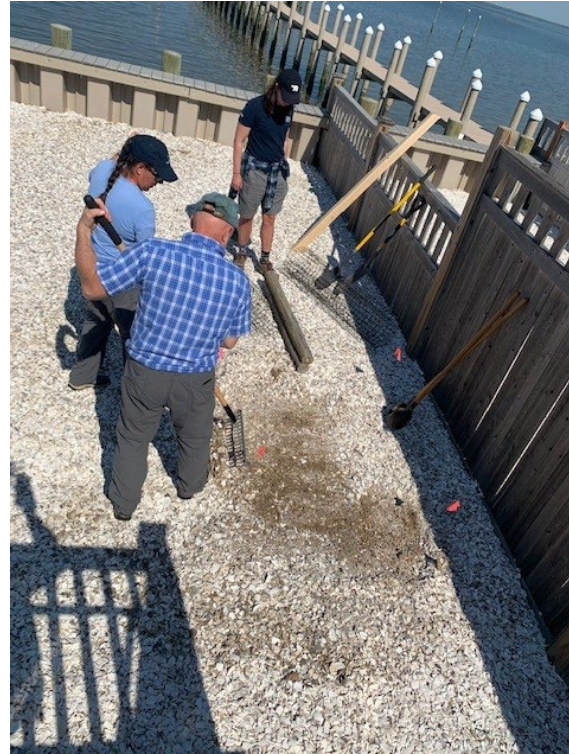
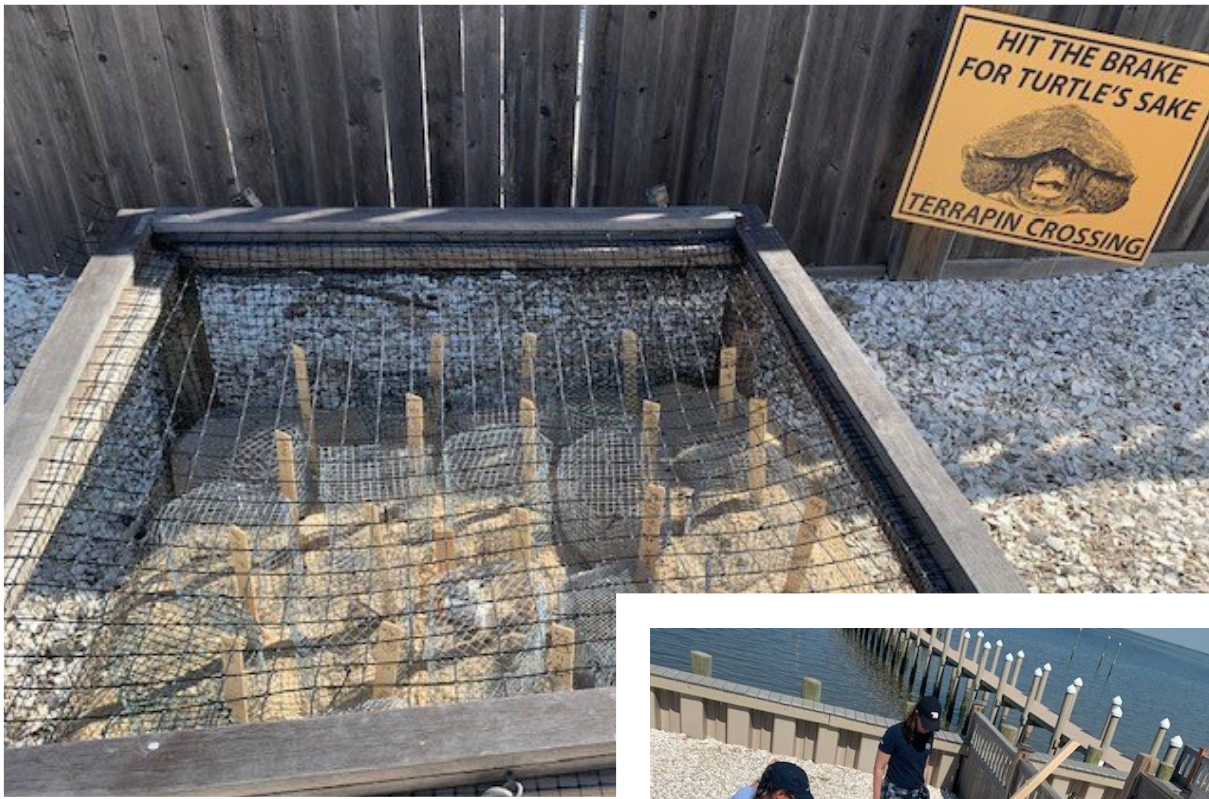
**Weather station  
(part of estuary  
wide mesonet) live  
on website**

**Marsh/bay camera  
(live on website)**

**New tide gauge-  
went online 2024.**







# Project Terrapin

research,  
conservation,  
education &  
community  
engagement





**Turtle 'Corral' inside the lab for real time species tracking & research alongside hands on educational opportunities**



**Hatchlings relocated & ready for release, a Mom handled by experts to help navigate roads & head-start yearlings grown up in participating schools around the state**



help build  
community

Sustainable Jersey  
grant  
(ACE Funds)

pollinator pots  
(2022)

wave/wake tank  
(2024)

LBI Garden Club help  
maintain the planters





LBT Shell Recycling program est. 2017- award winning and the only municipal run shell recycling program in NJ>

Truck wrap by Jetty Rock Foundation- 60K+ bushels- for oyster reef & bay island shoreline restoration

*VOLUNTEER: Shell bagging opportunities @LBTF for Clam Cove project-*







Bagging recycled  
shell with  
corporate donors,  
researchers &  
local volunteers



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# NJ Bay Island Initiative (NJBII) – coalition formed to focus on the bay islands which protect our communities ([njbayislands.org](https://njbayislands.org))

Formed in 2020 to ensure the **resilience of both the natural habitats & developed communities**

Taking a **regional & coordinated approach** to bay island assessment & restoration.

Long-term goal to manage **bay islands as a system** & pursue a **variety of habitat enhancement** & restoration projects to address multiple needs.

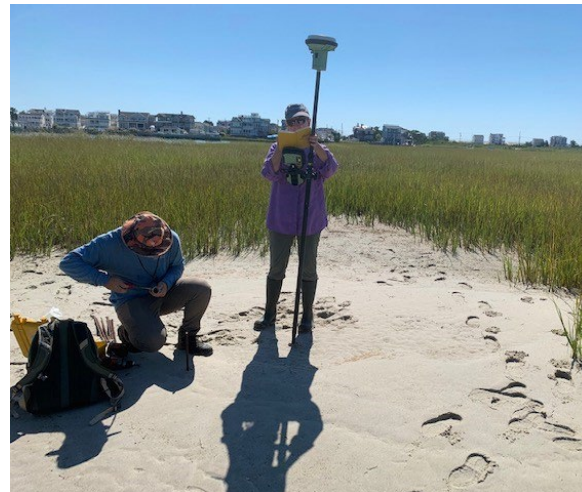






Grant partnerships for  
bay island research

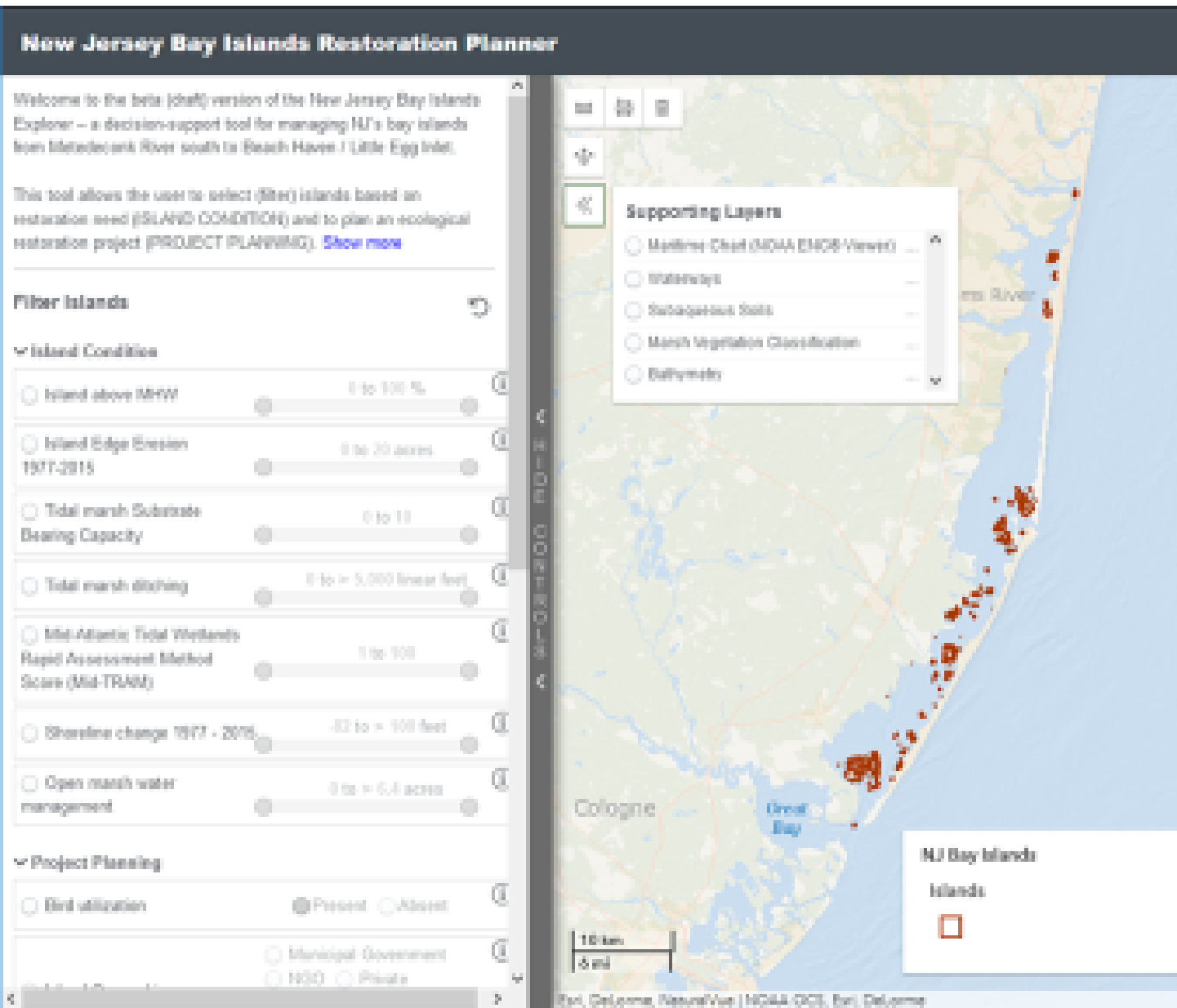
Stockton U Coastal  
Research Center  
& Monmouth U  
Urban Coast Institute



Field studies w  
students &  
researchers

# New Jersey Bay Islands Restoration Planner

## NJBIRP: Characterize Islands & Prioritize Restoration



- Current NJBIRP focus: islands within Barnegat Bay (Manasquan Inlet to Little Egg Inlet)
- Developed as a decision-support tool to prioritize island restoration for the New Jersey Bay Islands Initiative (NJBII)
- NJBII composed of federal, state, county, municipal, academic, and non-governmental partners
  - ❖ Goal to manage bay islands as a system
- NJBII selected islands could feed into CERAP tool as areas for restoration
- 2020-2021 Identified 92 subaerial islands & 13 submerged islands



# National Fish & Wildlife Foundation National Coastal Resilience Fund

## Restoring Bay Islands for Community Resilience (NFWF # 72889)

### Long Beach Township, Ocean County NJ

A. Andersen, V. Rettig, K. McKenna, W. Shadel, T. Herrington, J. Smith,





## **Clam Cove Reserve- LBT /Ocean County joint acquisition**

photo courtesy Krystal Aguilar 8/18/2022



**West Marshelder Island Shoreline  
Change Analysis 1977 - 2018**

This map shows changes in the shoreline on West Marshelder Island from 1977 to 2018.

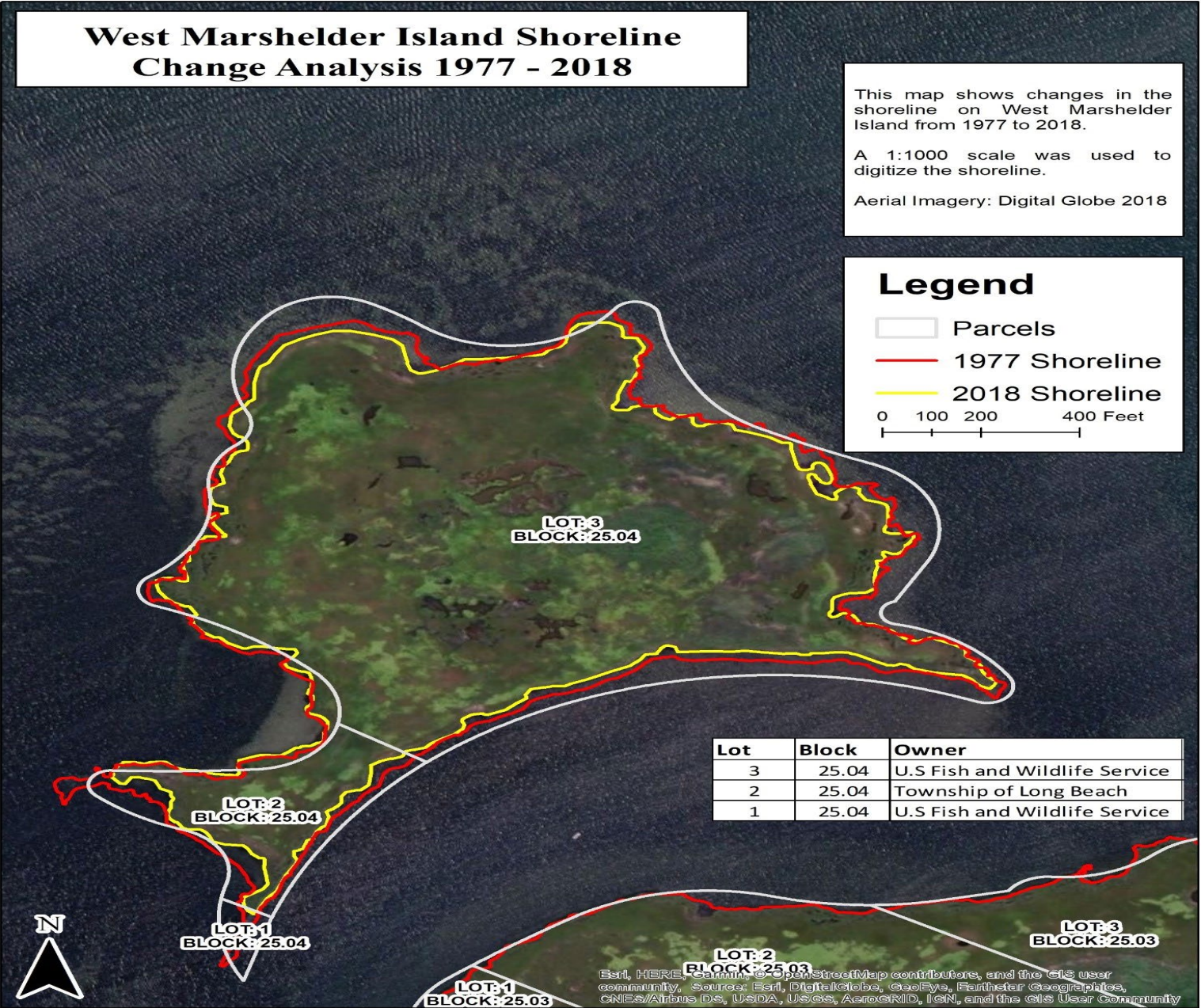
A 1:1000 scale was used to digitize the shoreline.

Aerial Imagery: Digital Globe 2018

**Legend**

- Parcels
- 1977 Shoreline
- 2018 Shoreline

0 100 200 400 Feet



Esri, HERE, Garmin, OpenStreetMap contributors, and the GIS user community. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community









Photo 8: Courtesy of Dr. Josh Moody. Photo showing coir logs stabilizing sediment and supporting vegetation growth at eroded marsh



Photo 9: Courtesy of Danielle McCulloch. Photo showing oyster shell bags protecting eroded edges of spartina patches and supporting new growth at Gandys Beach, NJ.

**What resilience  
marsh restoration  
looks like:**

**Nature based  
solutions  
stabilization**

**dredge material to  
enhance, enrich &  
build back  
marsh/islands**

**Bio- mimicking  
natural systems**

***(ex. shell bags mimic  
ribbed mussels at  
base of marsh grass)***

# Cove Emergency Stab



## NJResources Support \$

LBT (FS & DPW staff)

Monmouth University- Urban Coast Institute

Stockton University- Coastal Research Center

Municipal Engineer

NJBII partners

Ocean County ( part owner)

DEP & Tidelands permits in had- ACOE on way





NFWF grant  
received as a  
RNJ deliverable  
for DPW (critical  
infrastructure)  
shoreline flood  
reduction and  
improved public  
access

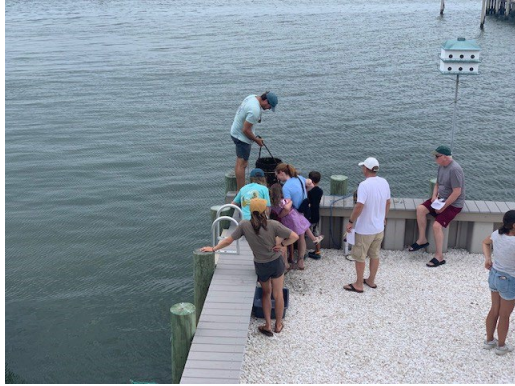
# Njcoastalresilience.org

*A network of more than 100 diverse partners established to foster resilient and sustainable coastal communities and ecosystems-*

***excellent resource for municipalities & restoration practitioners***



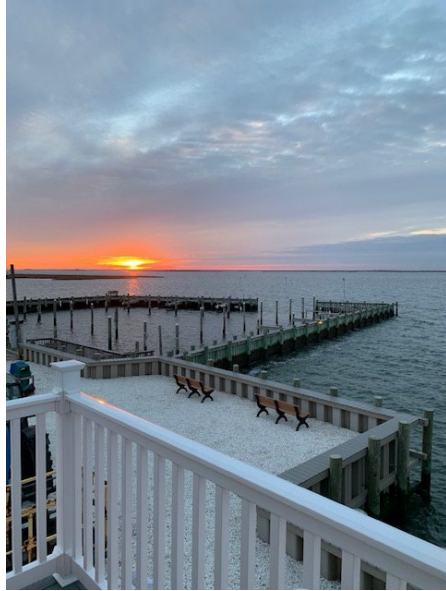




2025 ..

More community  
based & family  
hands on science  
through  
enrichment  
programs,  
art, writing,  
skill developing

Resiliency is also  
HUMAN& is  
built on  
collaborative  
relationships &  
empowering  
people



#followtheshell (Oyster Recycling Program)

@theoysterfarmers ( 2017 film)

[www.njbayislands.org](http://www.njbayislands.org)

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