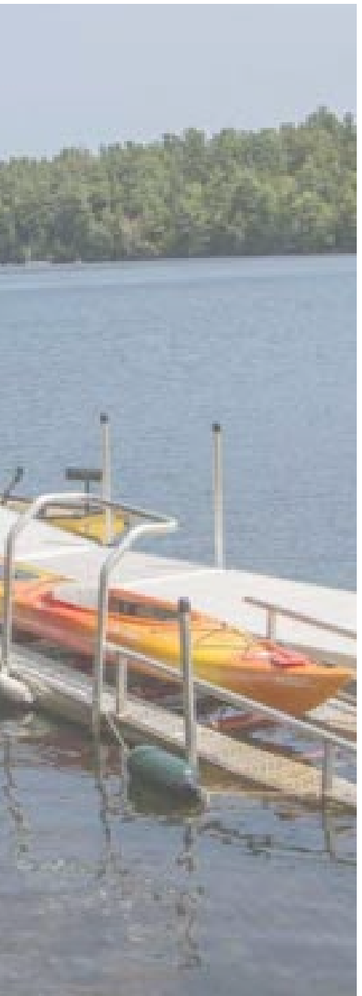
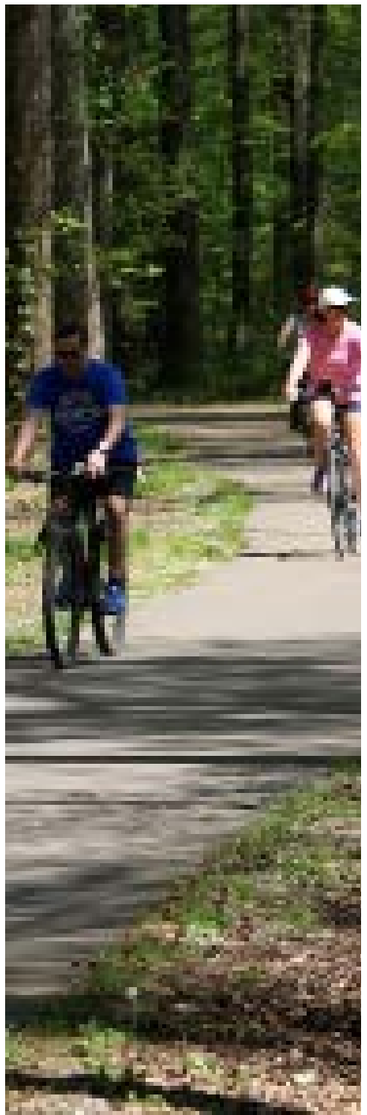
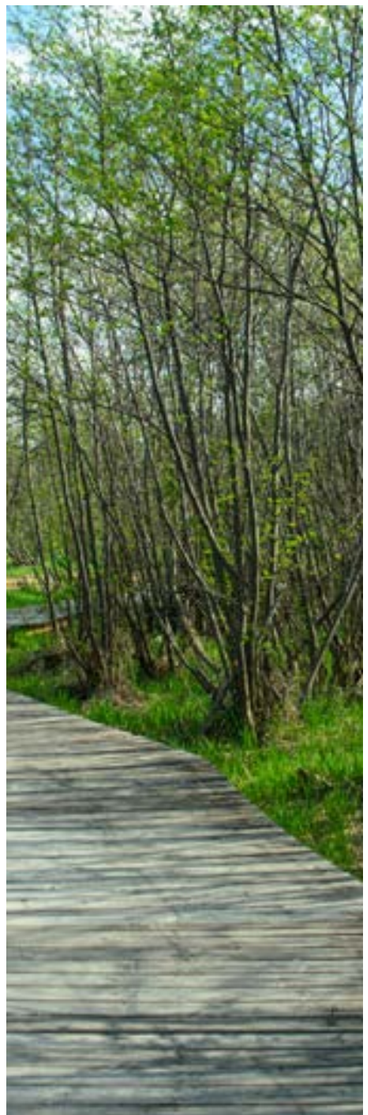
ARAIYS DESIGN, L.A., P.C.
LANDSCAPE ARCHITECTS- Site Planners

RIVERSIDE MARITIME TRAIL PARK

Hamlet of Riverside, Town of Southampton


(Engage) (Embrace) (Revitalize) (Restore) (Protect) (Enjoy)

Goal

To develop a natural, inviting, and safe MARITIME TRAIL PARK accessible to all ages of the community with passive recreational opportunities as well as a revitalized natural environment which respects the unique historical, cultural, and natural character of the site while promoting a more sustainable ecosystem.

“Embrace the Peconic Riverfront”

Meeting Objectives

- To review initial findings (Site Analysis)
- To solicit feedback from the community and project stakeholders
- Develop Park program elements important to the community

MEETING AGENDA
TIMEFRAME : 2 HOURS

. 7:00 - 7:45: INTRODUCTION & REVIEW OF CONTEXT AND INITIAL FINDINGS

. 7:45 - 8:00: QUESTIONS AND ANSWERS

. 8:00 - 8:45: CHARETTE - GROUP DIALOG AND PROGRAM ANALYSIS

. 8:45 - 9:00: SUMMARY AND REVIEW OF NEXT STEPS

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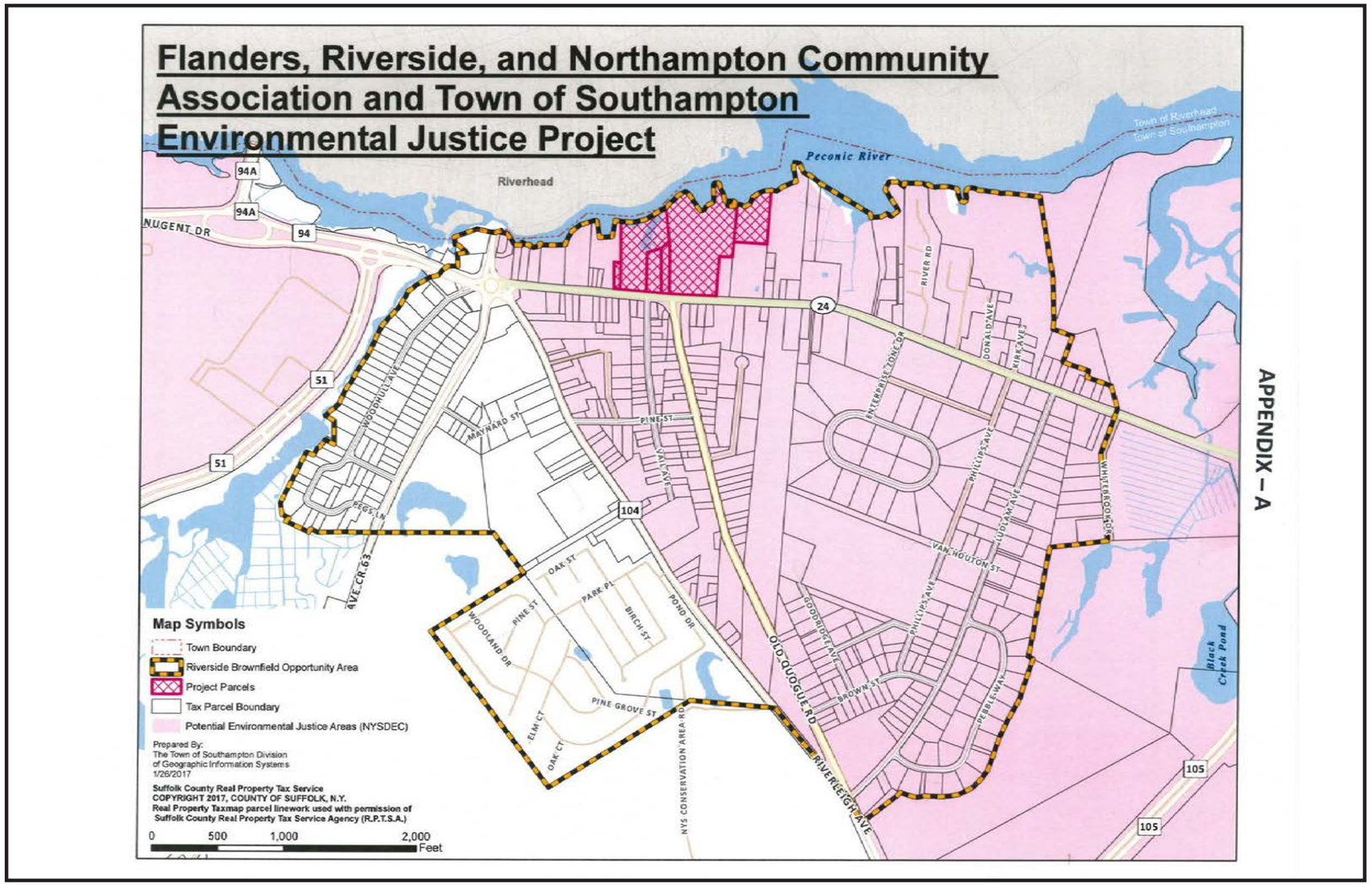
1 Project Background

2 Site Analysis & Assessment

3 Program Development

1.1 Funding and Stakeholders



FUNDING AND STAKEHOLDERS

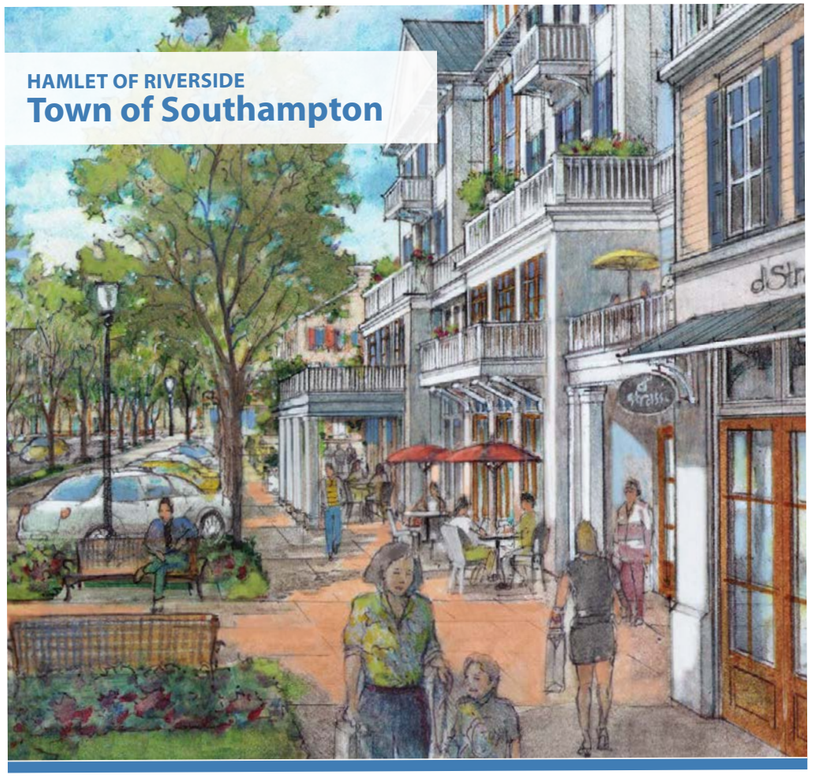
- Funded by the New York Department of Environmental Conservation **(NYDEC)**, **Environmental Justice and Community Impact Grant Program**
- Grant awarded to the **Flanders, Riverside and Northampton Community Association, Inc. (FRNCA)**
- **Town of Southampton** (TOS) is subcontractor to FRNCA
- **Araiys Design** Landscape Architecture is the Design Consultant

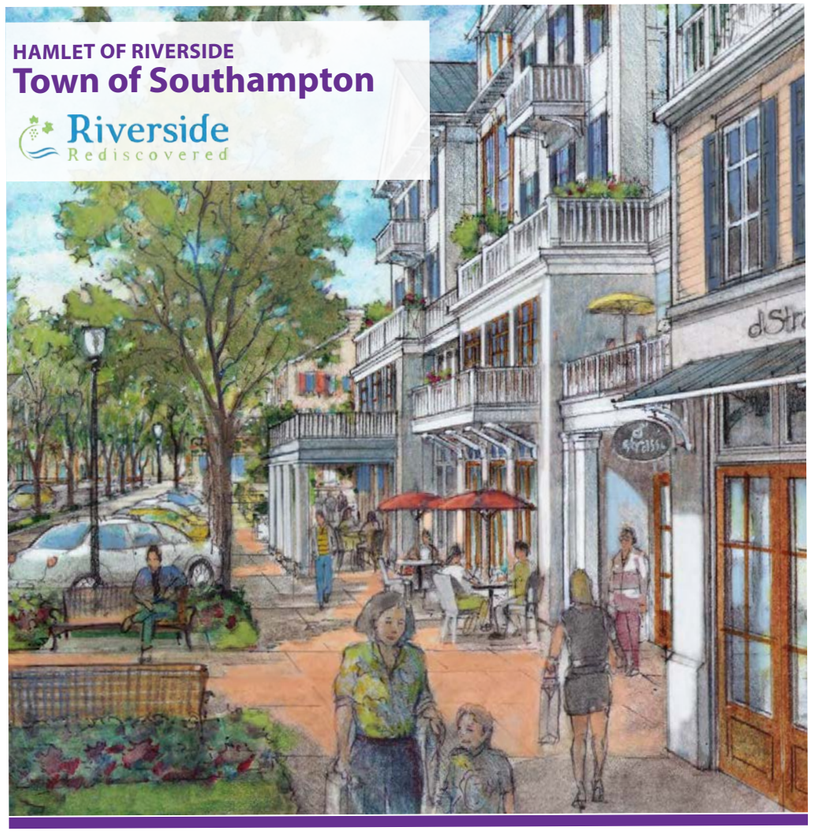
Flanders, Riverside & Northampton Community Association

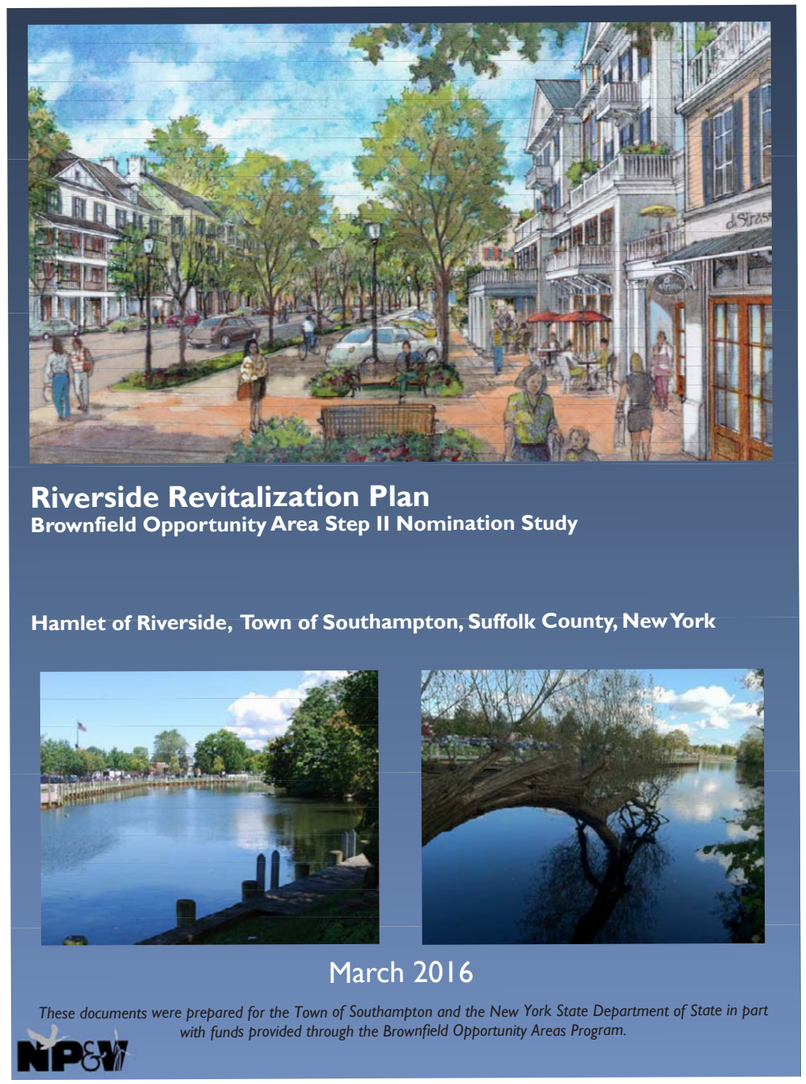
Town of Southampton

1.1 Funding and Stakeholders

"The park will provide a linkage between a new downtown Riverside and the River and as such will facilitate the re-orientation of land use and community life toward the River"



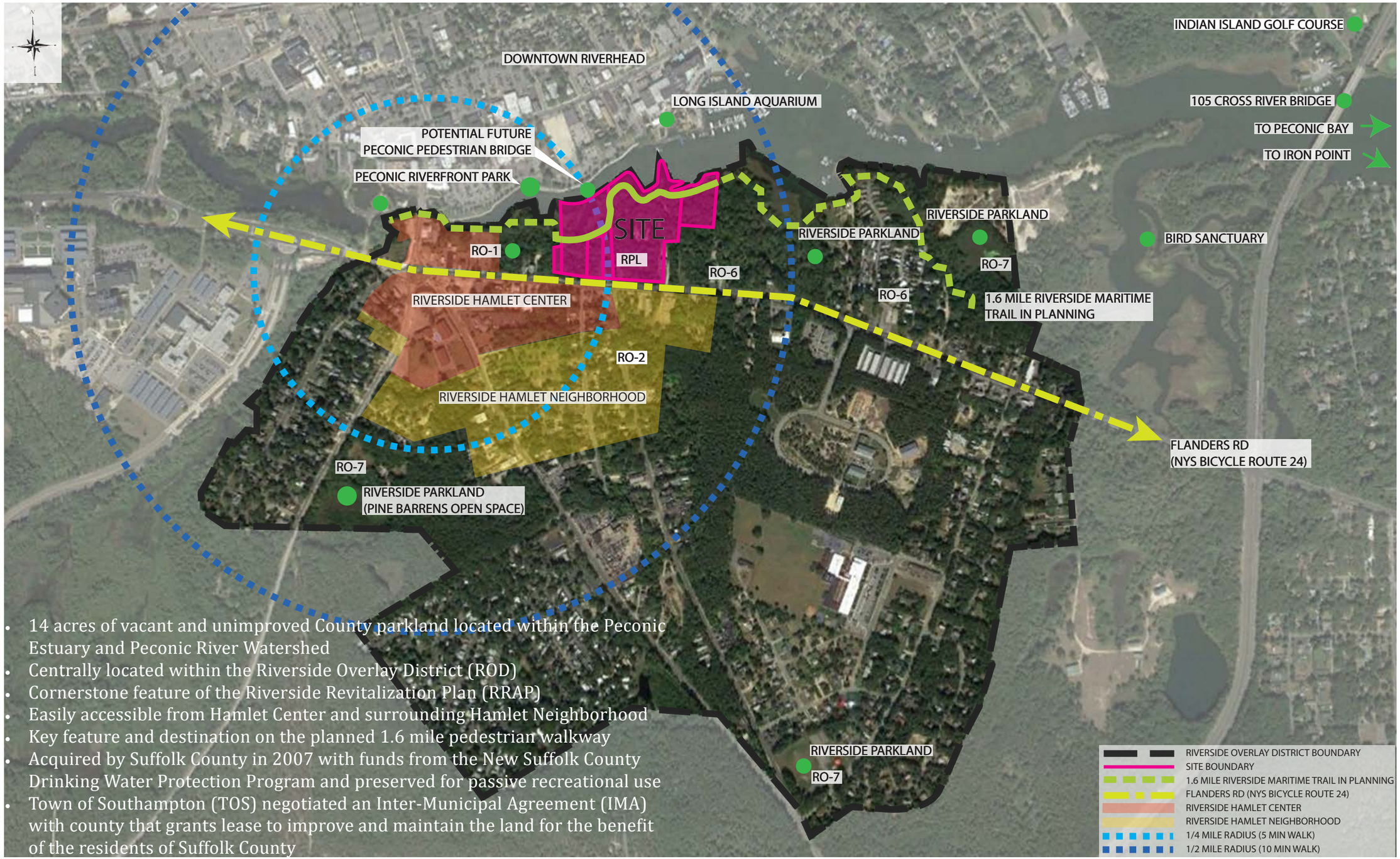




PLACEMAKING & PUBLIC ENGAGEMENT

- **Riverside Revitalization Action Plan (RRAP) and the Riverside Brownfield Opportunity Area (BOA)** Plan adopted by the Town Board in December 2015 to promote the environment and socially responsible redevelopment of the Hamlet of Riverside
- Engage community of Riverside with Crowdsourced, Place Making Approach
- Overwhelming expression for the provision of **public access to the River**

1.2 Site Context



- 14 acres of vacant and unimproved County parkland located within the Peconic Estuary and Peconic River Watershed
- Centrally located within the Riverside Overlay District (ROD)
- Cornerstone feature of the Riverside Revitalization Plan (RRAP)
- Easily accessible from Hamlet Center and surrounding Hamlet Neighborhood
- Key feature and destination on the planned 1.6 mile pedestrian walkway
- Acquired by Suffolk County in 2007 with funds from the New Suffolk County Drinking Water Protection Program and preserved for passive recreational use
- Town of Southampton (TOS) negotiated an Inter-Municipal Agreement (IMA) with county that grants lease to improve and maintain the land for the benefit of the residents of Suffolk County

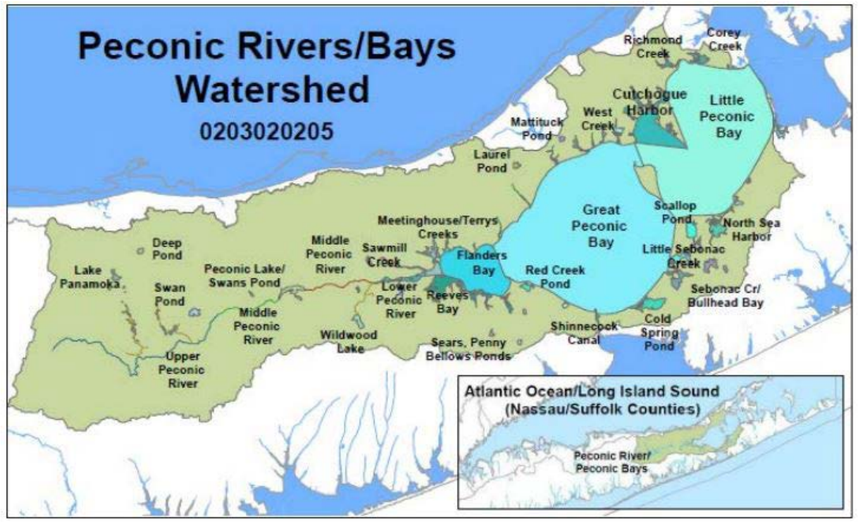
1.3 Environmental Context

Rivserside Maritime Trail Park is located on the Lower Peconic River

Includes reach and tributaries from Peconic Avenue east to the mouth of the river

- 6 contiguous tax parcels
- 2,200 linear feet of river frontage
- 1.3 acres of tidal and freshwater wetlands
- Tidal and freshwater wetlands
- Dredging of River and Nutrient laden fill for development
- Adverse impact on water quality
- Reclamation opportunities

Peconic River Watershed Map



Peconic River/Bays Watershed
(0203020205)

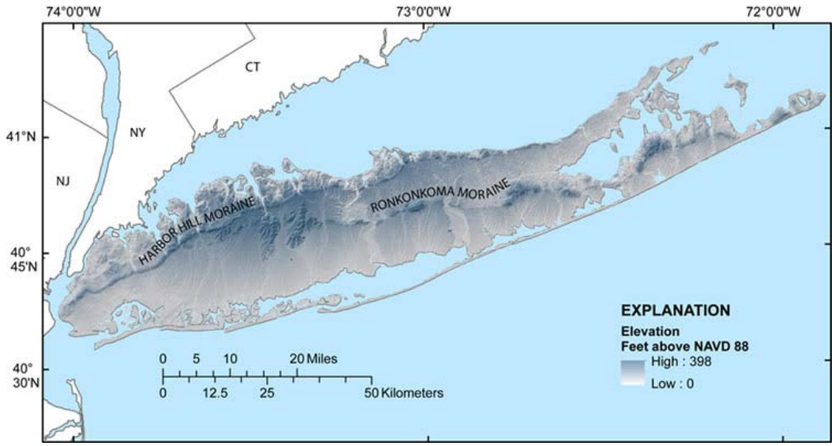
Image Source: NY Department of Conservation, www.dec.ny.gov

Watershed awareness promotes an expanded sense of community and stewardship of precious resources

- Water Type: Estuary Waters
- Class SC - suitable for general recreational use and support of aquatic life, but not as shellfishing water or public bathing
- Recreational uses are also known to be stressed by nutrients, algal blooms, and pathogens
- Type of Pollutants:
  - -Known: Low D.O./Oxygen Demand, Nutrients (nitrogen), Algal plant growth (brown tide, rust tide)
- Source(s) of Pollutants:
  - -Known: Urban Storm Runoff, On Site / Septic Systems
  - -Suspected: Municipal Discharges (Riverhead STP), Other sources (Waterfowl)

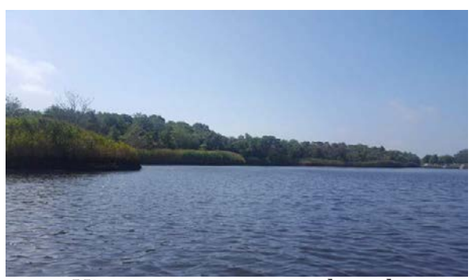
2.1 Peconic Estuary

The proposed park is situated between the Peconic Estuary and the Central Pine Barrens Area. Two unique ecosystems with a rich diversity of plant and animal life



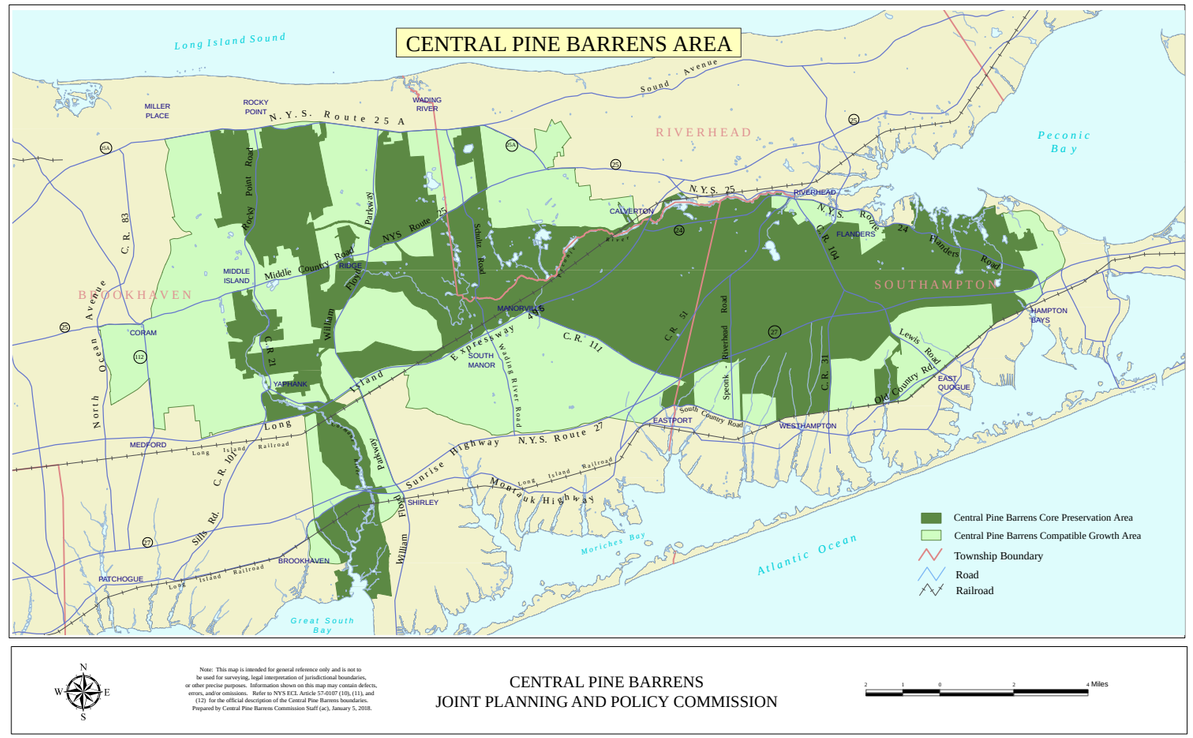
Natural History - Land shaped by Glaciers

- The Peconic River watershed was formed by stream erosion and retreat of the Wisconsin glacier approximately 21,000 years ago
- The glacier left two prominent end moraines that separate to form the Peconic Estuary



View to west toward park

View to east toward park



Central Pine Barrens

- Occupying the central and eastern end of Long Island
- Contains more than 900 square miles of terrestrial and aquatic environments.
- The Peconic River headwaters and tributaries located within the CentralPine Barrens

2.1 Peconic Estuary

The Peconic Estuary - one of the "last great places in the Western Hemisphere." -The Nature Conservancy

An estuary is a grouping of bays, sounds, harbors, and other semi-enclosed coastal waters that are connected to the sea and where fresh water from rivers, streams, creeks, or ground water mixes with salt water.
They provide critical habitat for numerous birds, mammals, fish, shellfish, & other wildlife. They provide nursery & spawning areas for many marine organisms including commercially and recreationally important fish and shellfish. And they are natural buffers that filter sediment and nutrients out of water draining from land, absorb flood waters, and dissipate waves during storms protecting human property.
(Bortman & Niedowski, Characterization of The Living Resources of the Peconic Estuary, 1998)

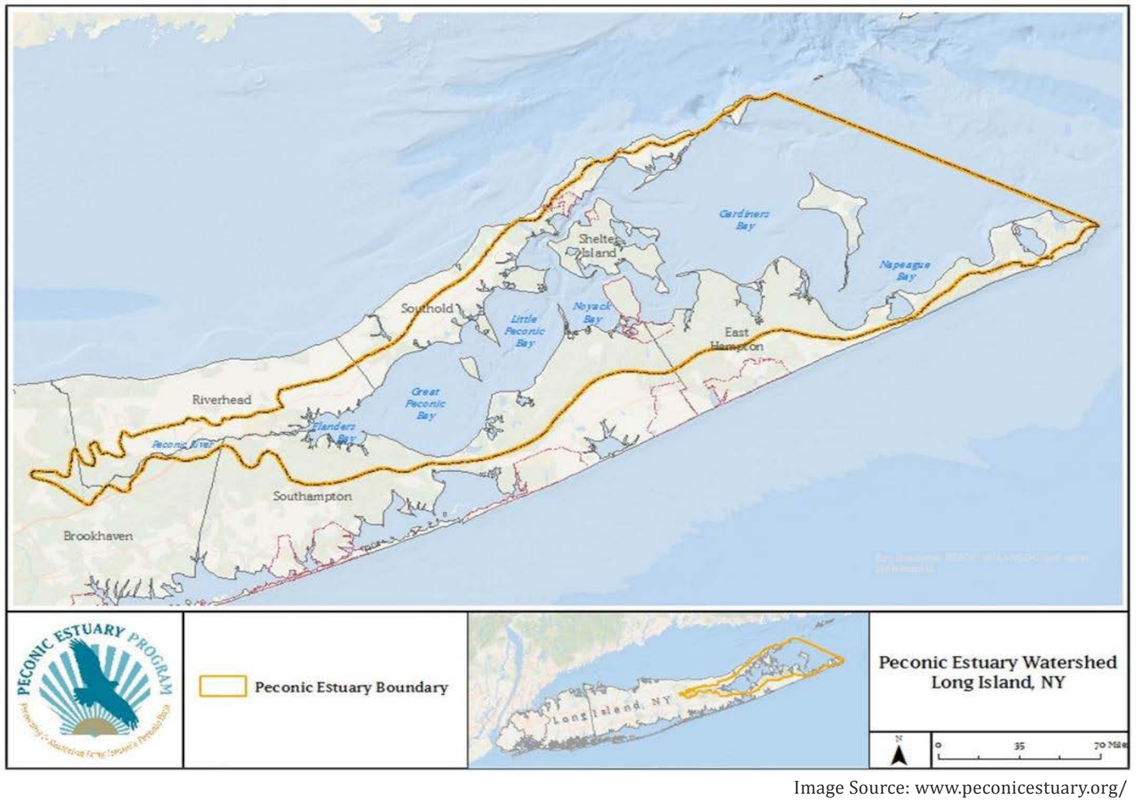


Image Source: www.peconicestuary.org/

- "Estuary of National Significance" - U.S. EPA in 1992
- One of 28 estuaries in the National Estuary Program (NEP)
- Includes the Peconic River and the land areas that contribute groundwater and stormwater runoff to the Estuary
- Reach from headwaters of the Peconic River west of the William Floyd Parkway to the tips of the north and south forks
- The Peconic Estuary Program (PEP) is responsible for creating and implementing a comprehensive management plan to protect the estuary
- For more information please visit www.peconicestuary

PEP Initiatives for the western estuary include:
- Adoption of a nitrogen guideline and a point source nitrogen freeze for the western estuary
- Development of a Nitrogen Total Maximum Daily Load (TMDL) for selected water bodies
- "Living Shoreline" restoration projects

Shallow Water Zone

Deep Water Zone

Submerged Aquatic Zone

Terrestial Zone

Peconic River

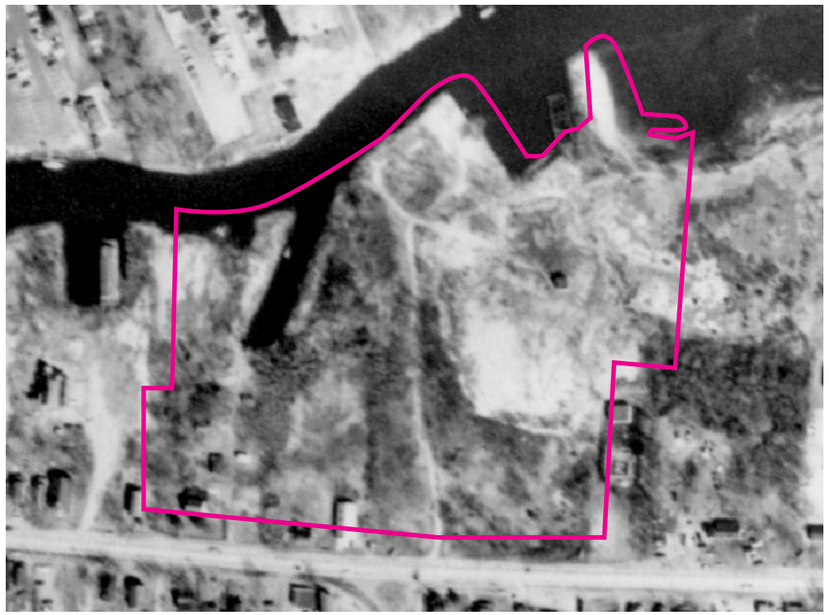
Wetland

Tidal Flat

Salt Marsh

Sandy Beach

2.2 Site Aerials



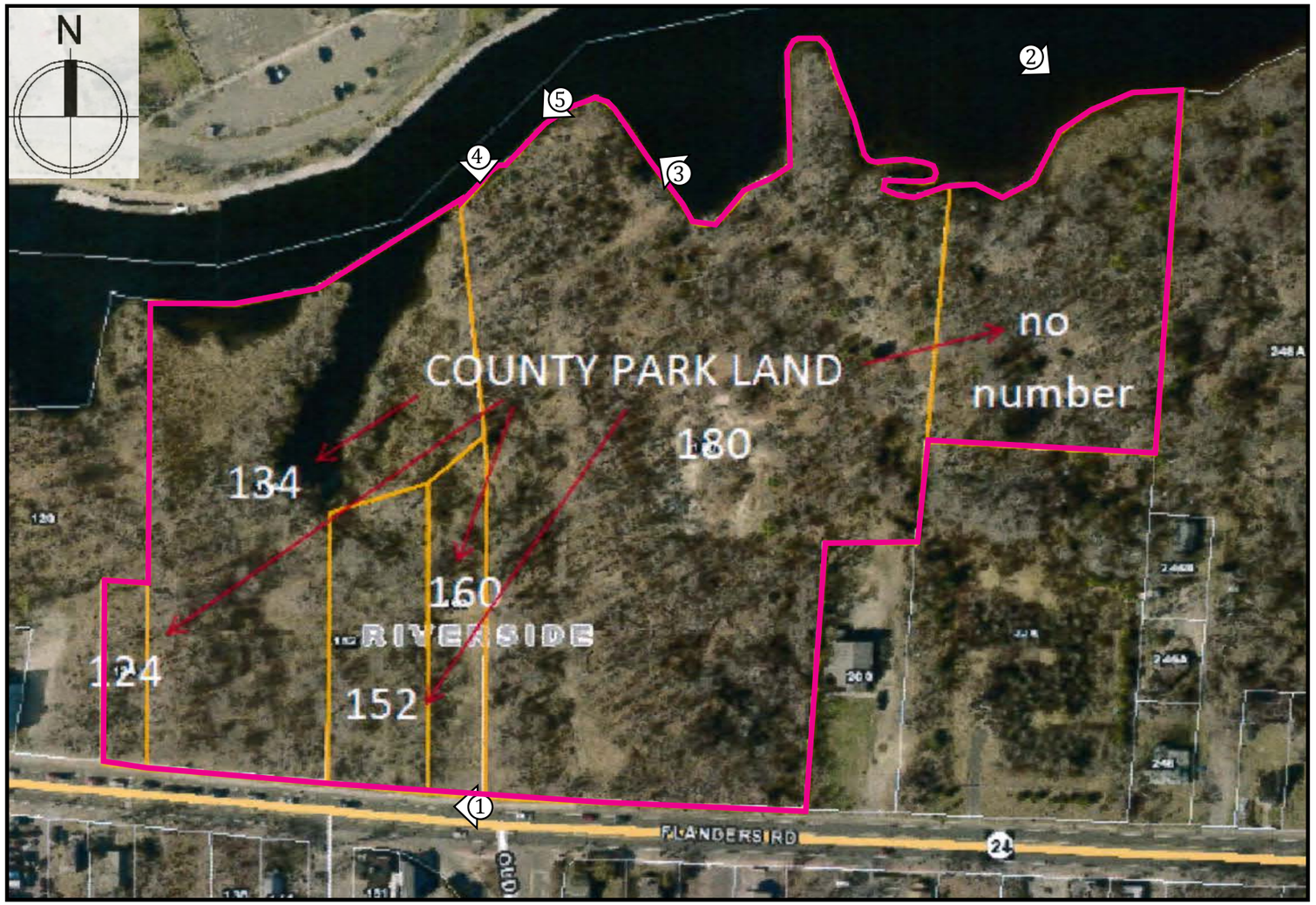
1962

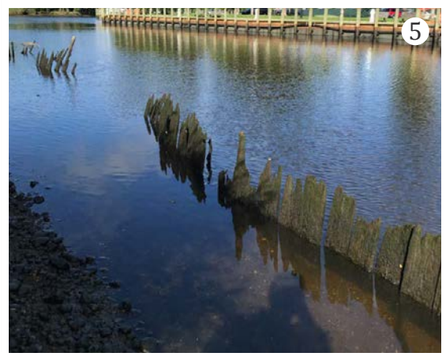
1976

1984

1996

2.2 Site Aerials





Egrets

Heron

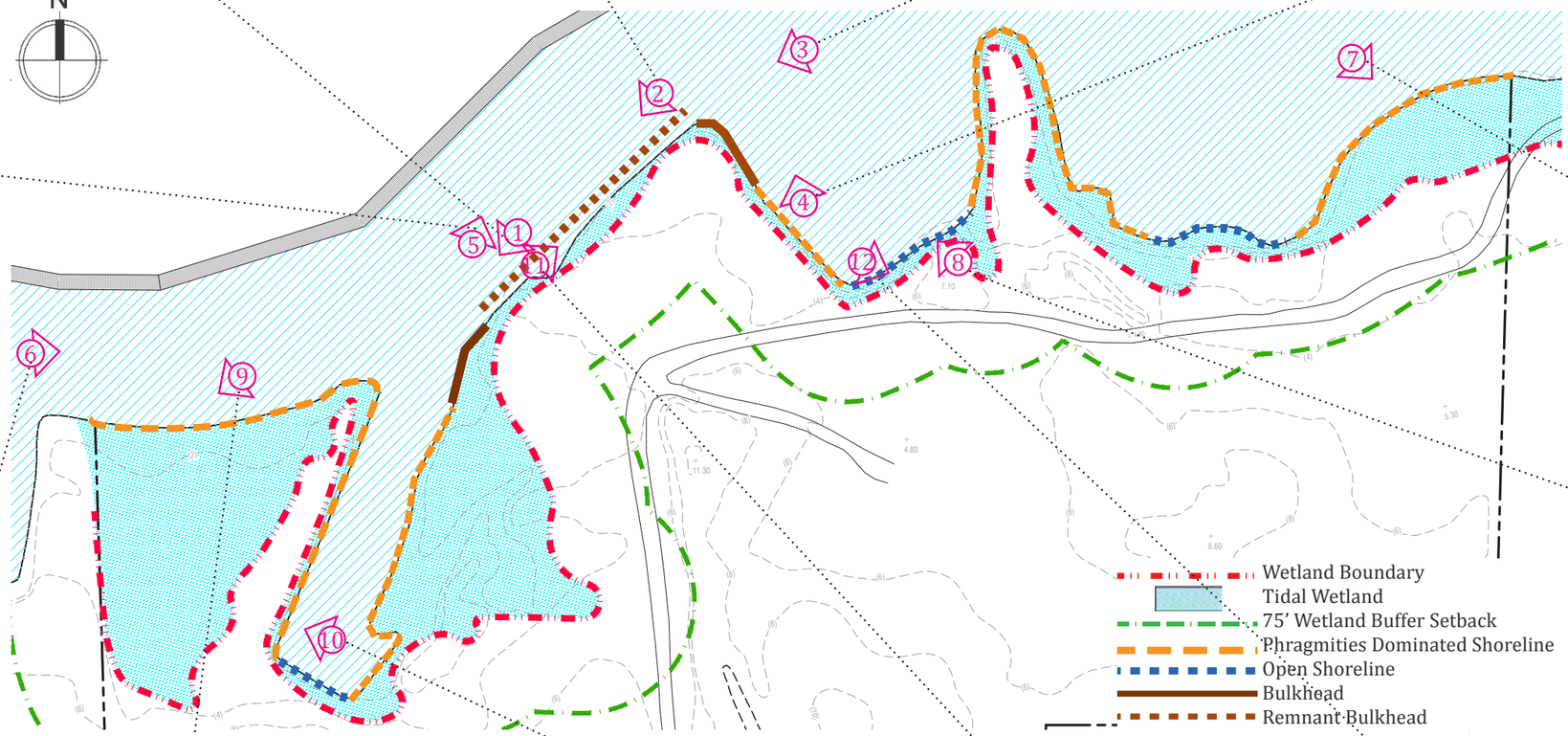
Osprey

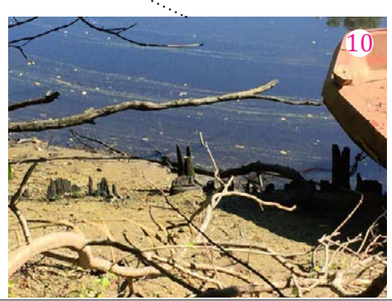
Osprey Nest

Eastern Box Turtle

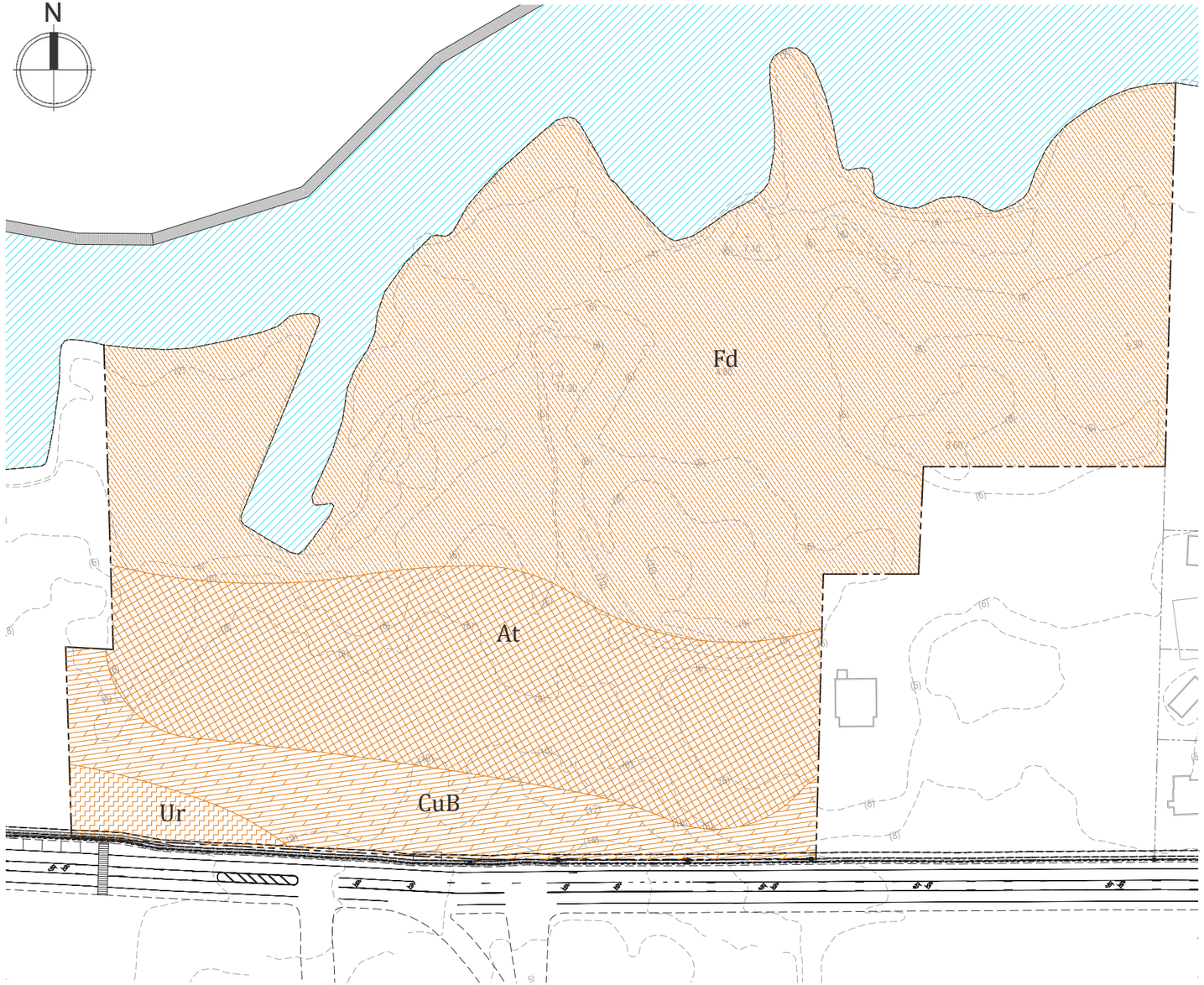
Cormorant

2.3 Shoreline Analysis





2.4 Soil Analysis



Soil Description:

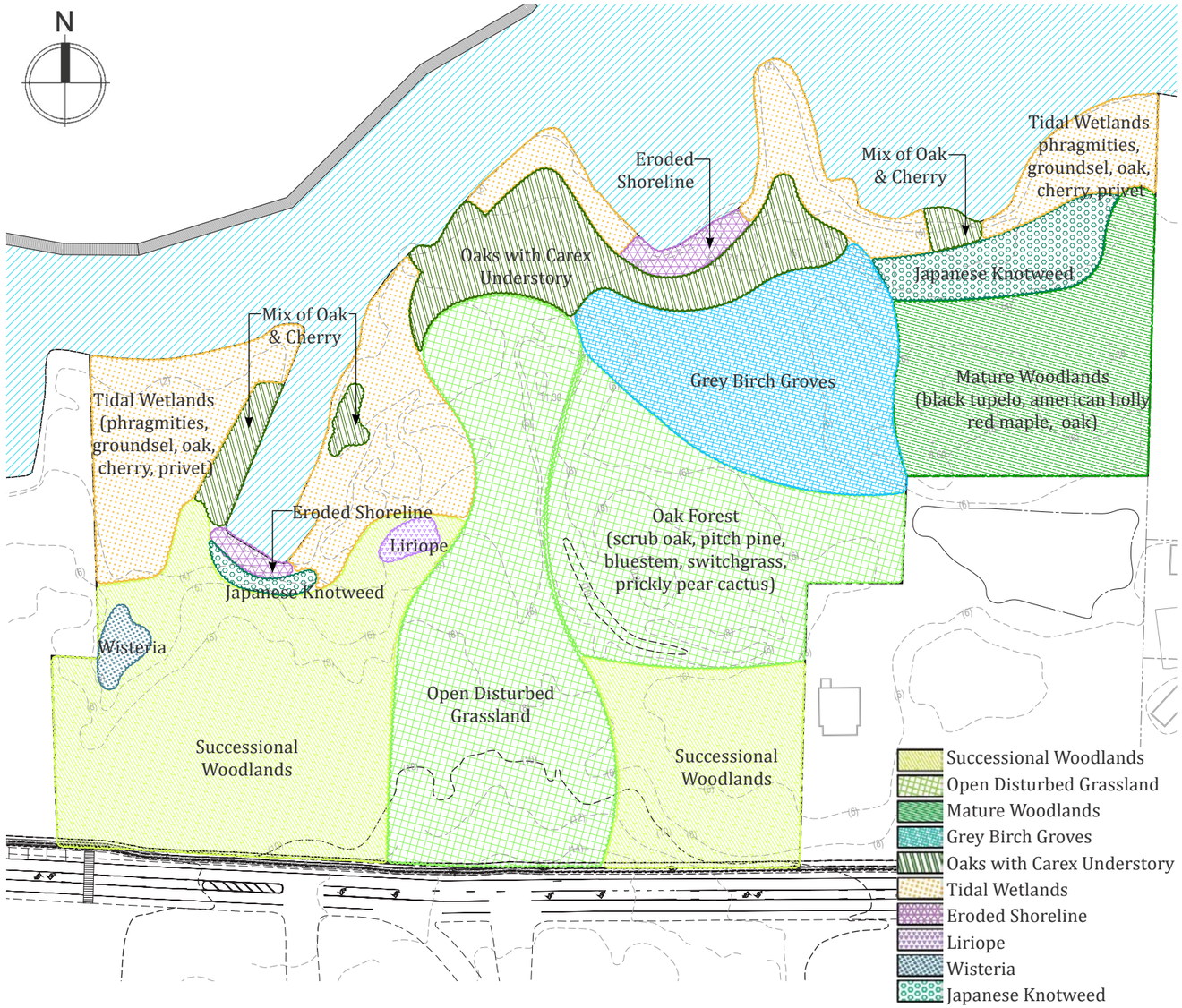
Fd - Fill land, dredged material
Fd is made up of areas that have been filled with material from hydraulic or mechanical dredging operations. Drought, low fertility, and high salt content severely limit the establishment of lawns and other landscape plantings.

At - Atsion sand
At is somewhat poorly drained to poorly drained soil is near ponds and creeks and along the bottoms of deeply cut meltwater channels. This soil has a high water table, and drained areas have very low available moisture capacity. Scarcity of good outlets makes this soil difficult drain. The soil is better suited to woodland.

CuB - Cut and fill land, gently sloping
This unit is made up of level to gently sloping areas that have been cut and filled for nonfarm uses. Texture is dominantly loamy fine sand or coarser textured material throughout.

Ur - Urban land
Urban land consist of areas that are more than 80% covered by buildings and pavements. Examination and identification of the soils in these areas are impractical.

2.5 Vegetative Analysis



Oak

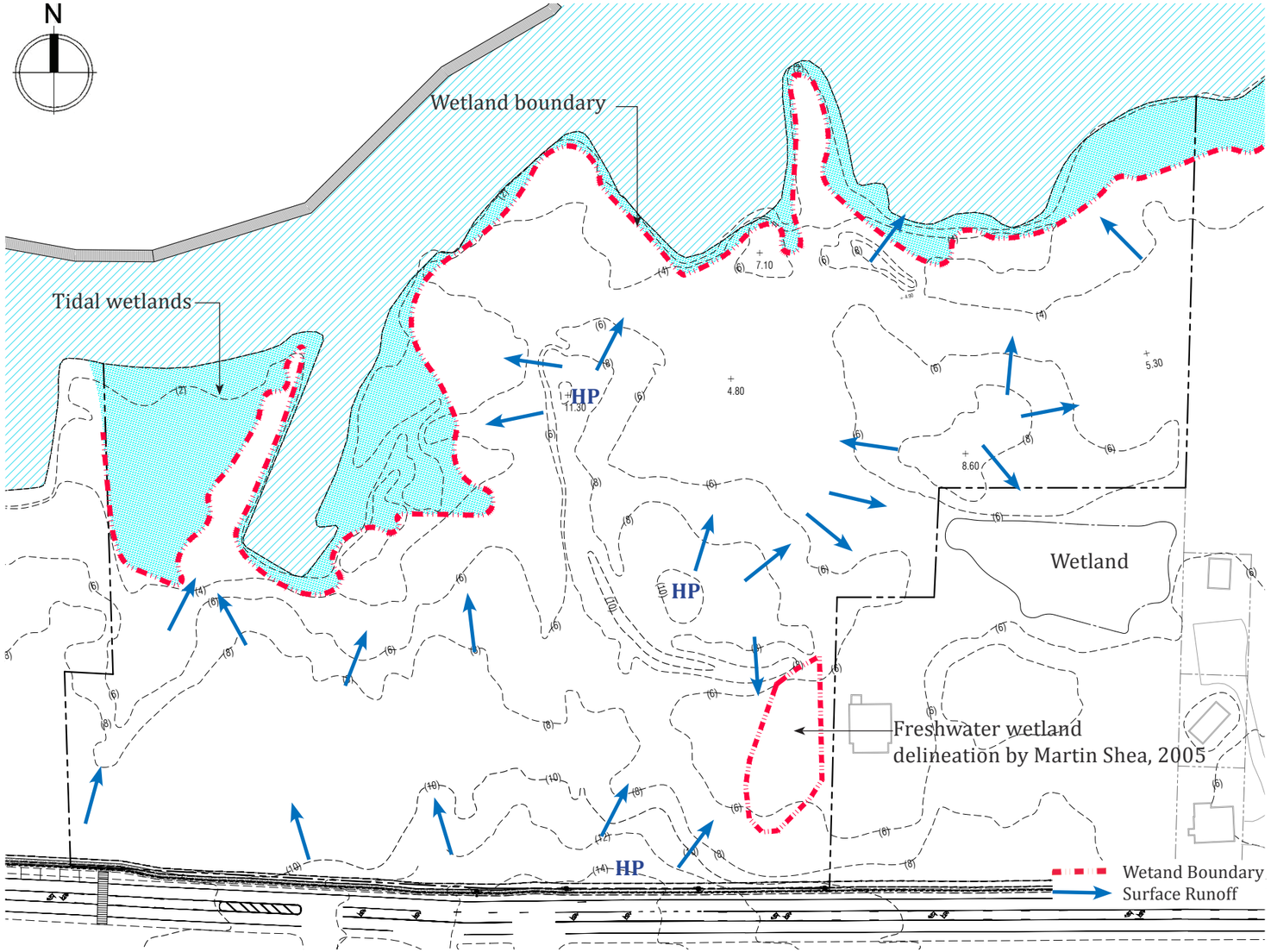
Birch Grove

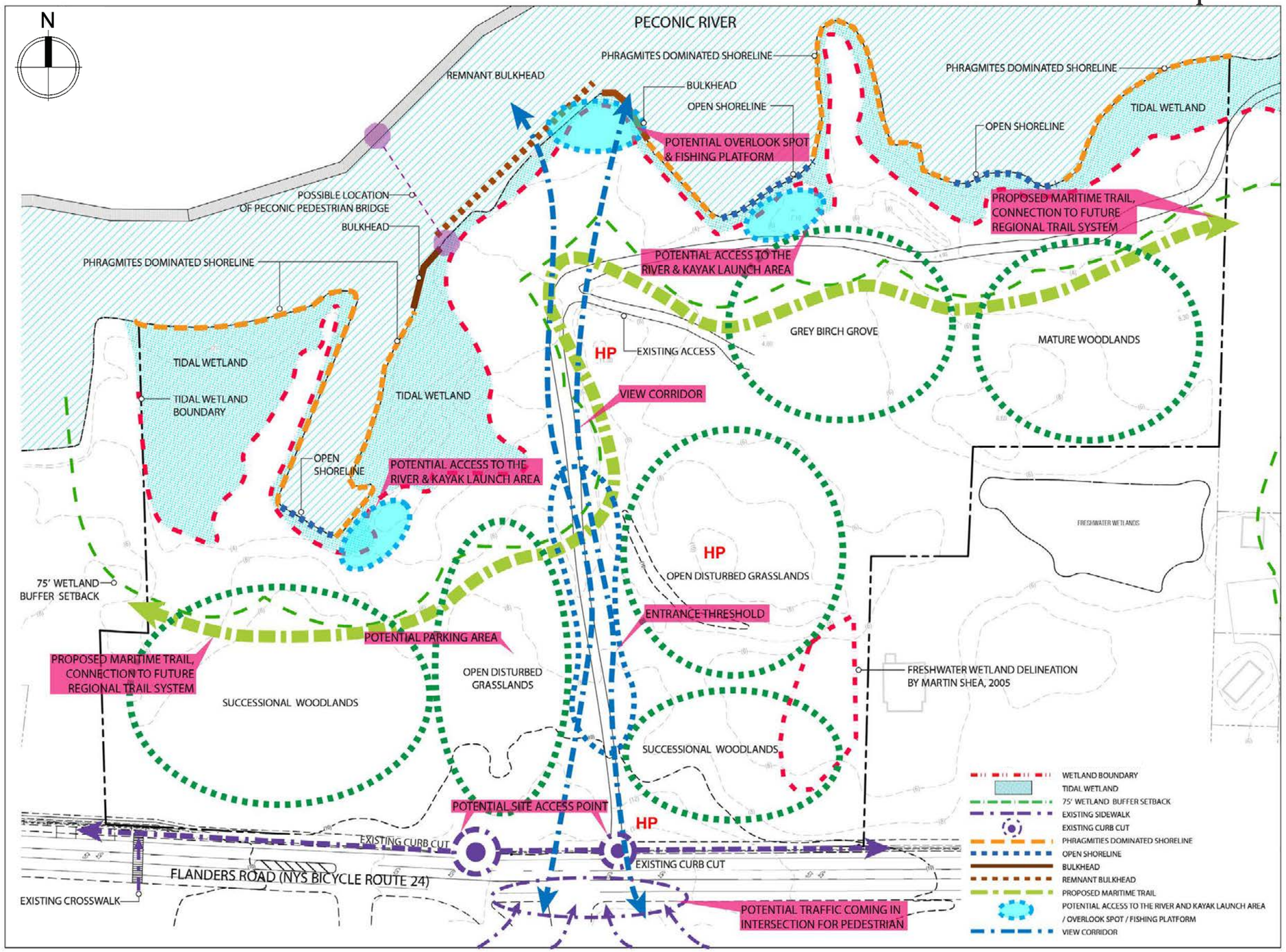
Phragmites

Pitch Pine

Switchgrass


N
7.10
4.80
11.30
5.30
8.60
0<=2%
>2%<=4%
<4%>=10%
<10%>=20%
>20%


N
Wetland boundary
Tidal wetlands
HP
HP
HP
7.10
4.80
5.30
8.60
Wetland
Freshwater wetland
delineation by Martin Shea, 2005
Wetand Boundary
Surface Runoff


N
PECONIC RIVER
REMNANT BULKHEAD
PHRAGMITES DOMINATED SHORELINE
BULKHEAD
OPEN SHORELINE
POTENTIAL OVERLOOK SPOT & FISHING PLATFORM
PHRAGMITES DOMINATED SHORELINE
OPEN SHORELINE
TIDAL WETLAND
POSSIBLE LOCATION OF PECONIC PEDESTRIAN BRIDGE
BULKHEAD
PROPOSED MARITIME TRAIL, CONNECTION TO FUTURE REGIONAL TRAIL SYSTEM
PHRAGMITES DOMINATED SHORELINE
POTENTIAL ACCESS TO THE RIVER & KAYAK LAUNCH AREA
TIDAL WETLAND
TIDAL WETLAND BOUNDARY
TIDAL WETLAND
HP
EXISTING ACCESS
GREY BIRCH GROVE
MATURE WOODLANDS
VIEW CORRIDOR
OPEN SHORELINE
POTENTIAL ACCESS TO THE RIVER & KAYAK LAUNCH AREA
FRESHWATER WETLANDS
HP
OPEN DISTURBED GRASSLANDS
75' WETLAND BUFFER SETBACK
ENTRANCE THRESHOLD
POTENTIAL PARKING AREA
PROPOSED MARITIME TRAIL, CONNECTION TO FUTURE REGIONAL TRAIL SYSTEM
OPEN DISTURBED GRASSLANDS
FRESHWATER WETLAND DELINEATION BY MARTIN SHEA, 2005
SUCCESSIONAL WOODLANDS
SUCCESSIONAL WOODLANDS
POTENTIAL SITE ACCESS POINT
HP
EXISTING CURB CUT
EXISTING CURB CUT
FLANDERS ROAD (NYS BICYCLE ROUTE 24)
EXISTING CROSSWALK
POTENTIAL TRAFFIC COMING IN INTERSECTION FOR PEDESTRIAN
WETLAND BOUNDARY
TIDAL WETLAND
75' WETLAND BUFFER SETBACK
EXISTING SIDEWALK
EXISTING CURB CUT
PHRAGMITIES DOMINATED SHORELINE
OPEN SHORELINE
BULKHEAD
REMNANT BULKHEAD
PROPOSED MARITIME TRAIL
POTENTIAL ACCESS TO THE RIVER AND KAYAK LAUNCH AREA / OVERLOOK SPOT / FISHING PLATFORM
VIEW CORRIDOR

PROGRAM DEVELOPMENT

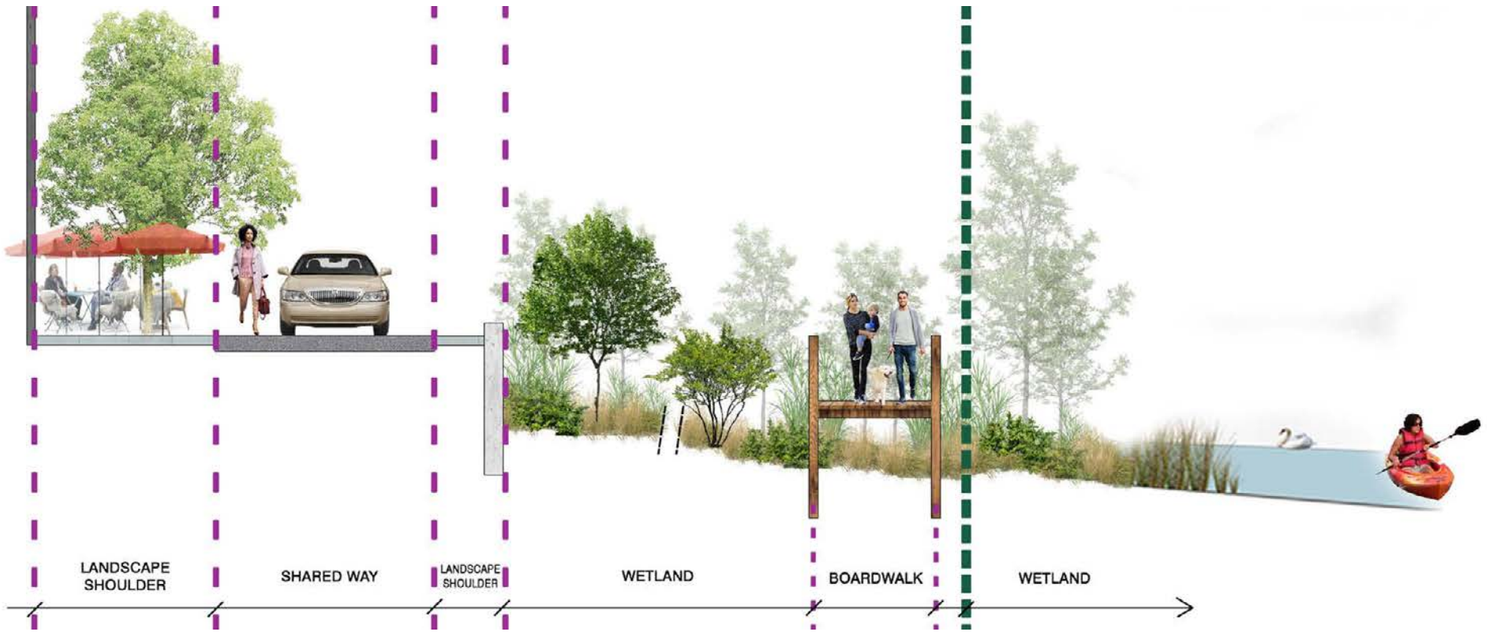
- ***The program is the list of desired elements, features, and uses for the park.***
- ***It will evolve from the site inventory and analysis phase, community input & feedback, and the community health survey***

Maritime trail park with passive recreation

Create natural trails, public access to the river

Environmental revitalization

Restore natural wetland system with wetland buffer and native plantings



Avalon Park Preserve
Stony Brook, NY

- Located in Stony Brook Harbor on Mill Pond
- Park provides walking trails, wildlife observation, community events
- 8 acre park once a residential site abandoned sometime in the early 1900's
- Years of neglect allowed non-native species of vines and shrubs to invade and dominate the landscape choking out large trees
- Park design concept was to create a series of woodland gardens and paths celebrating native flora of Long Island
- Park programming includes walking paths, wildlife observation overlooks, labyrinth, trails
- Community events include star gazing, nature programming, stewardship projects, yoga and meditation


Family's enjoying the labyrinth


Yarn Bombing tree at park

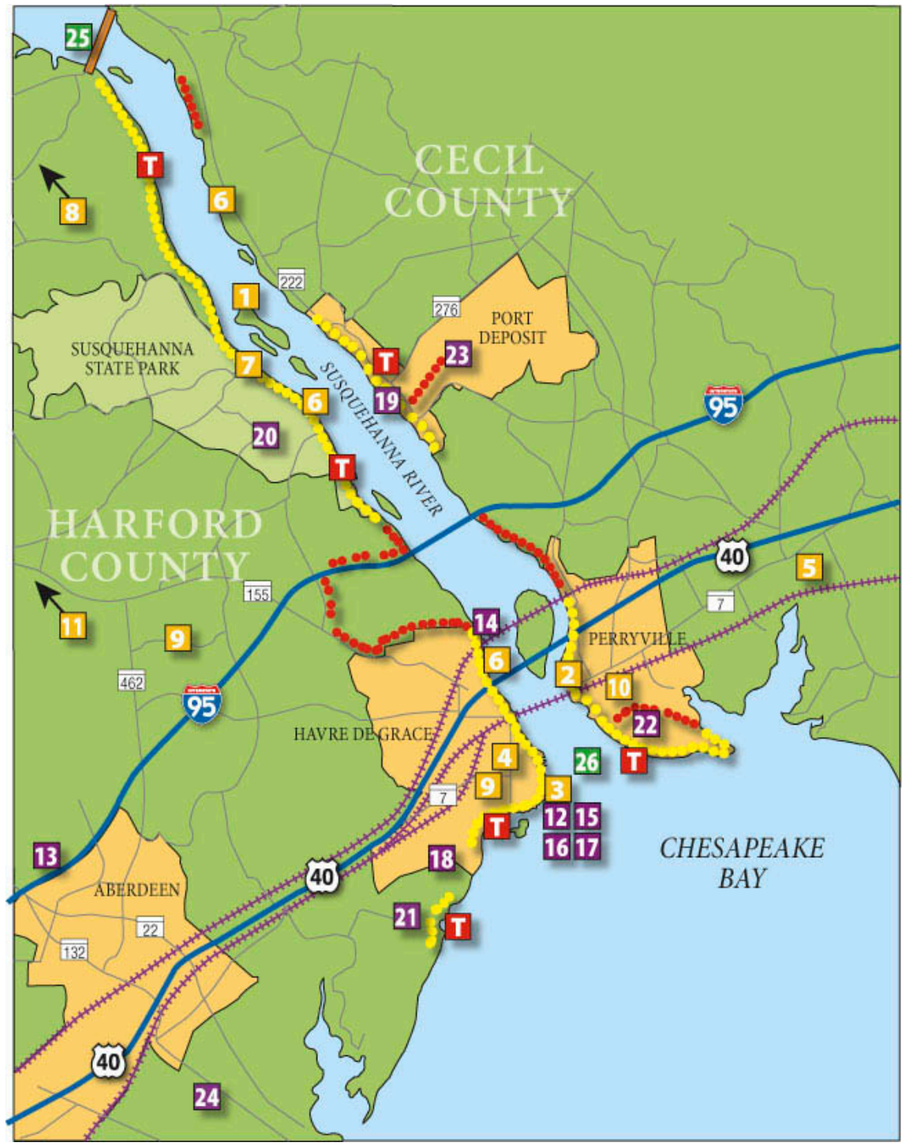

Art sculpture in clearing


Children exploring labyrinth

Signage describing park feature


Art celebrating nature

Havre de Grace, Maryland
Lower Susquehanna Heritage Greenway Trail



Lower Susquehanna Heritage Greenway Trail is a 4.8 mile moderately trafficked out and back trail located near Havre de Grace, Maryland that features a river and is rated as moderate. The trail offers a number of activity options and is accessible year-round.

Shoreline restoration component of park includes:

- Wetland restoration within 75 feet of the shoreline with an additional 25 foot buffer
- Removal of dredge spoil within 75 feet of the shoreline
- Removal of non-indigenous plants within 75 feet of the shoreline
- Base line natural resources and plant inventory
- Long term vegetation management plan
- Removal and control of invasive vegetation in upland areas
- Environmental remediation in upland areas
- Enhancement of public access and vistas to the River
- Conservation and management measures aimed at restoring water quality

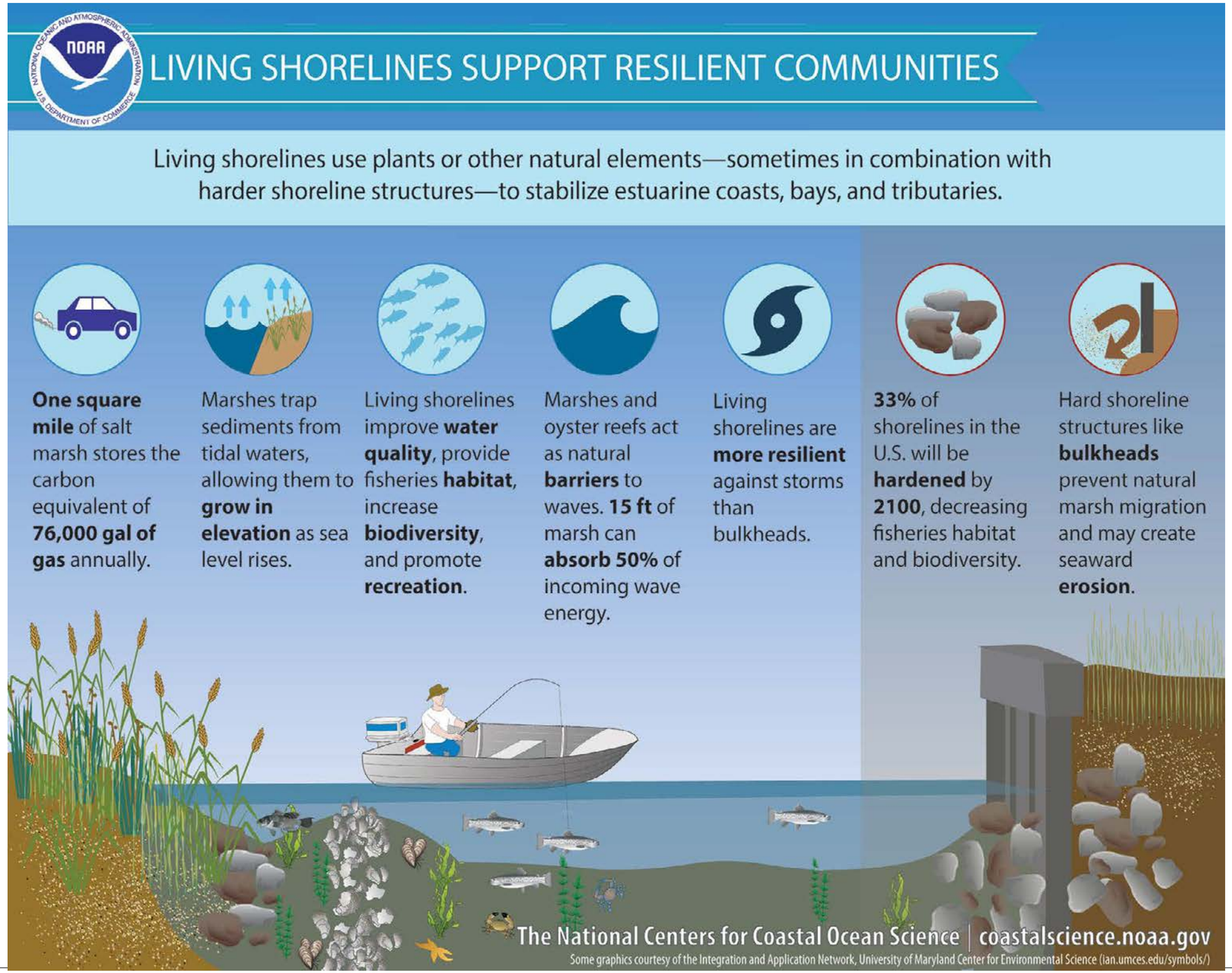
Current restoration efforts within the Peconic Estuary provide solid precedent for scientifically sound, local best management practices

1. Peconic Land Trust's Widows Hole Preserve Proposed Shoreline Restoration Plan
2. Shinnecock Coastal Resiliency and Habitat Restoration Project

Both projects utilizing **"Living Shoreline"** methods for invasive plant removal and shoreline and wetland restoration to be considered for the Riverside Maritime Park

Living Shorelines

Shoreline techniques that incorporate natural living features alone or in combination with structural components such as rock, wood, fiber rolls, bagged shell, and concrete shellfish substrate.



Benefits

- Control or reduce shoreline erosion while maintaining benefits comparable to the natural shoreline such as allowing for natural sediment movement;
- Use the minimum amount of structural components necessary for hybrid techniques to obtain project goals
- Improve, restore, or maintain the connection between the upland and water habitats; Incorporate habitat enhancement and natural elements ex: native revegetation, establishment of new vegetation

Source: Tidal Wetlands Document, Living Shoreline Techniques in the Marine District of New York State

Example of Living Shoreline technique for eroded shoreline

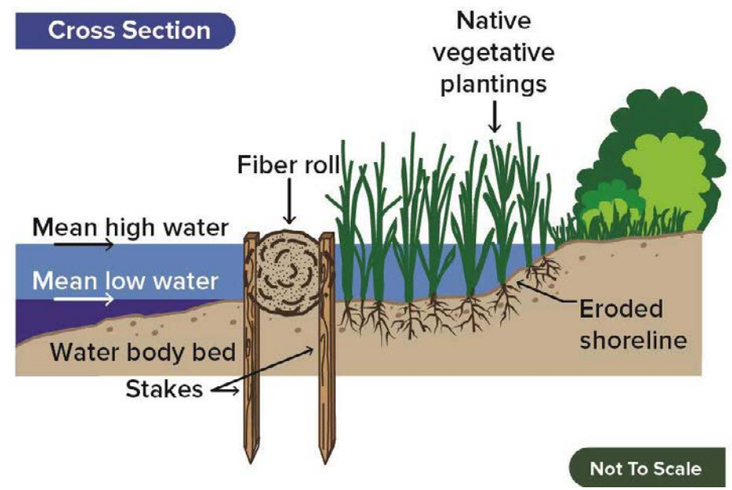


Image Source: Tidal Wetlands Document, DEC

Peconic Land Trust's Widows Hole Preserve
Proposed Shoreline Restoration Plan

Project Overview:

- Located at the former Greenport Terminal
- Includes 0.4 acres of shoreline and adjacent upland
- Goal is to increase the resiliency of the shoreline to erosion and the overall habitat value and aesthetics of the property

Shoreline Restoration

- Degraded shoreline due to historic use
- Restoration plan will rebuild the shore with clean sand fill to allow for the planting of smooth cordgrass (Spartina alterniflora)
- Spartina is an intertidal plant that spends approximately half of each day immersed in salt water and ranges from mean sea level (MSL) to mean high water (MHW).
- The MSL became the bottom boundary of the spartina planting
- Addition of fill will restore this section of shoreline to a grade comparable to pre-commercial use of the site
- **Result in a wider intertidal area which will allow for the natural expansion of cordgrass and expanded forage area for shore birds**

Shinnecock Coastal Resiliency and Habitat Restoration Project

Project Goals:

- Beach nourishment and restoration
- Nourish American Oyster Habitat
- Eelgrass meadow restoration
- Salt marsh plantings
- Restore upland plant community
- Restore tidal flow to existing marshes

- 3,000 Linear Feet of shoreline restoration heavily impacted by super storm Sandy
- Restore a natural resilience and ecological diversity
- Increase in the carrying capacity of the local waters for important species of fish and wildlife and there will be greater protection of the reservation through wave attenuation and sediment trapping
- Tidal flushing in two wetland systems that are being invaded by Phragmites and serving as sources of significant nuisance mosquito populations
- Increasing the tidal flow of these marshes there will be an improvement in the ecological carrying capacity, an increase in species diversity, and will reduce, if not eliminate, a significant mosquito issue.

Source: Cornell Cooperative Extension, http://ccesuffolk.org/marine/habitat/coastal-habitat-restoration-project-shinnecock-indian-reservation

Community Participatory Public Health Survey

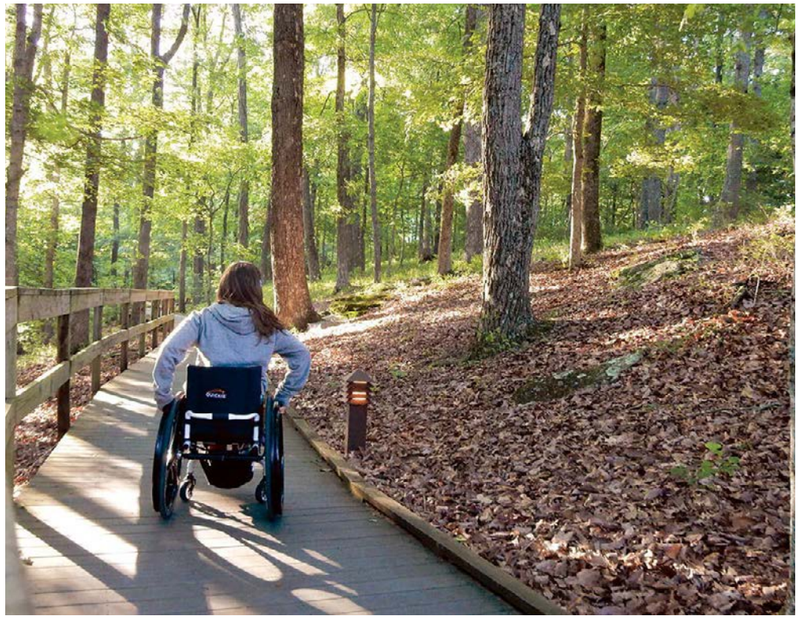
- Population based household survey of 500 consenting residents aged 18 years and above
- Findings will guide and inform the preparation of the plan for the park

Park Elements to be considered in Survey:

- Wooden platform/Catwalk (not bulk headed) (wheelchair and stroller friendly)
- Walking trail (paths in the woods)
- Displays about waterfront ecosystem and history of the river
- Fishing platform
- Picnic tables and benches
- Kayak/canoe launch
- Group fitness classes (Zumba, karate)
- Outdoor yoga and meditation
- Open Green space
- Fitness Trail (guided circuit of exercises)
- Comfort/rest station
- Organized wildlife watching (birds, butterflies, other wildlife) and interpretive education
- Displays and information accessible to people with cognitive, visual and hearing impairments
- Social Media/Meet Up Group Activities
- Game tables (chess, checkers, backgammon)
- Children's trail (nature education, music, sensory experiences)
- Coin operated binoculars for viewing
- Fenced-in dog park
- Bike path
- Wildlife conservation efforts

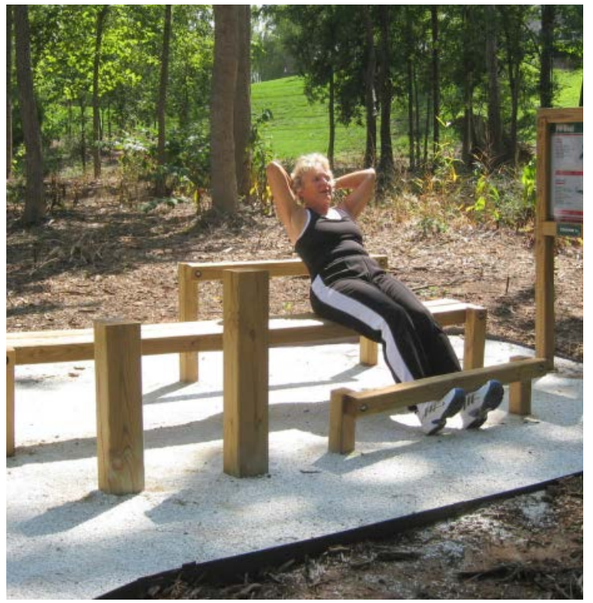
Walking trails

Displays and information accessible to people with cognitive, visual and hearing impairments / Handicapped accessible trails

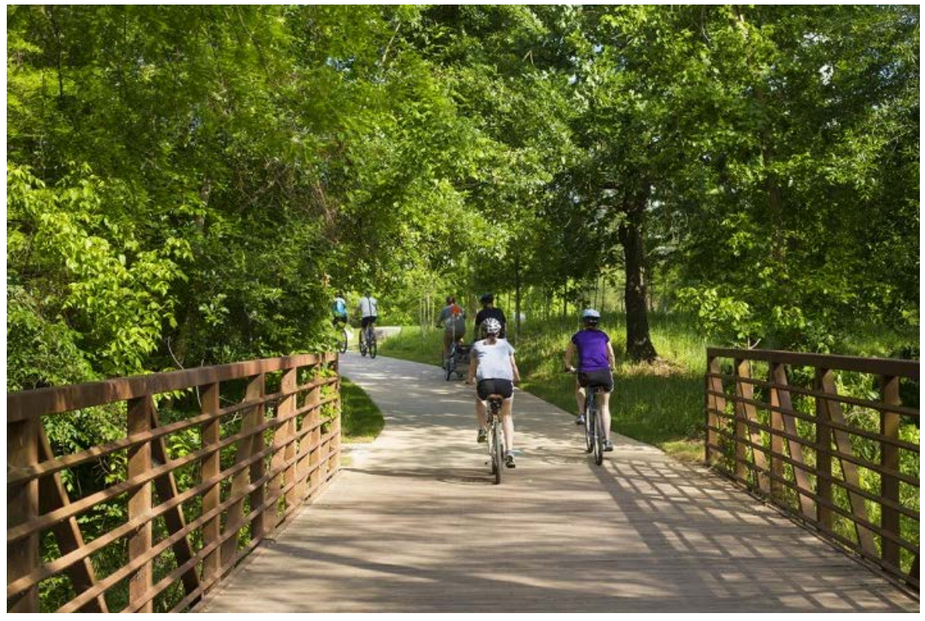


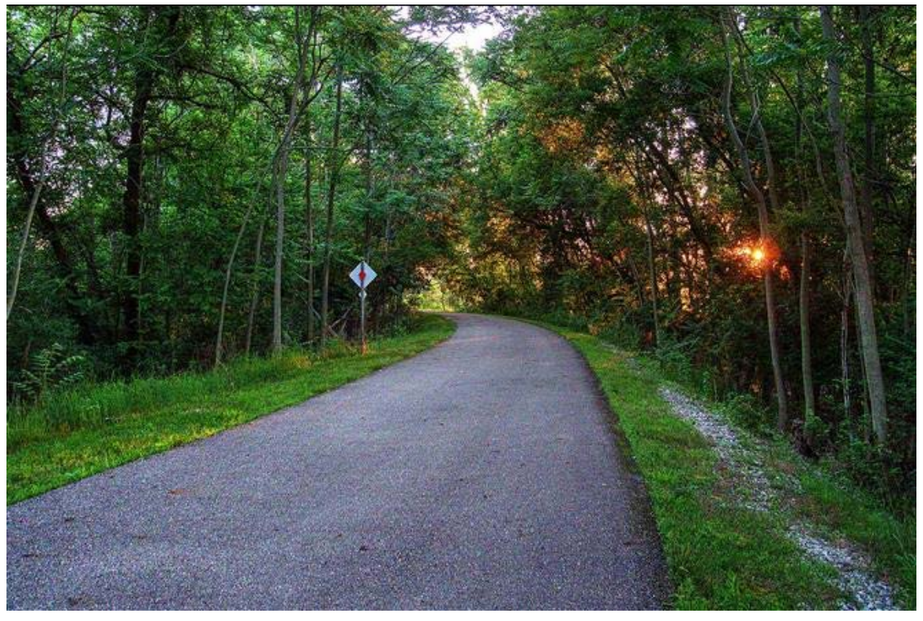
At grade/ Elevated boardwalk

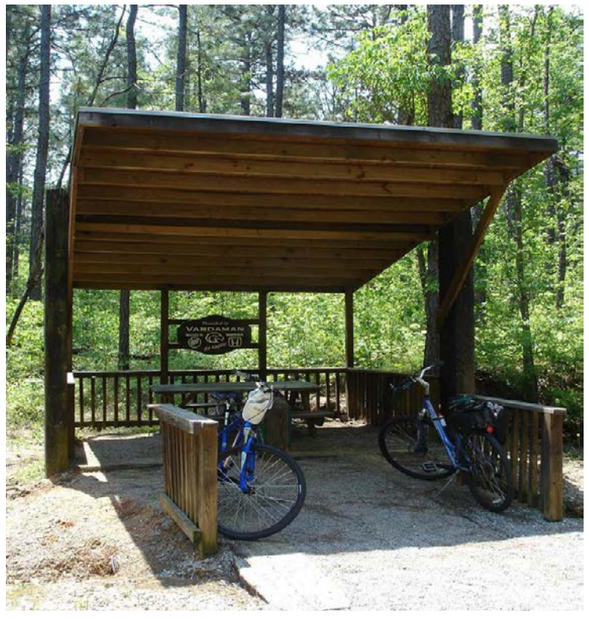
Fitness trail



Bike path







Children’s trail, sensory experiences

Water platform, overlooks, fishing platform

Kayak launch area

Open green space, meet up group activities

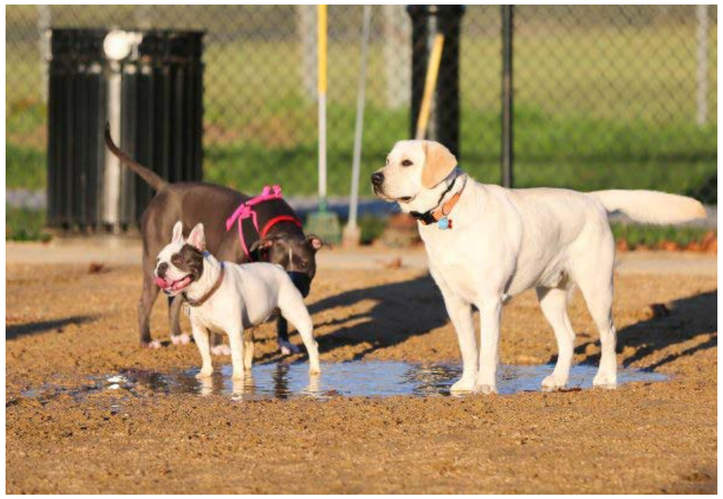
Organized wildlife education / Wildlife observation

Habitat gardens

Community gardens

Group fitness

Fenced-in dog space



Art displays




Rest stations, park amenities (picnic tables, wood benches, kiosks)

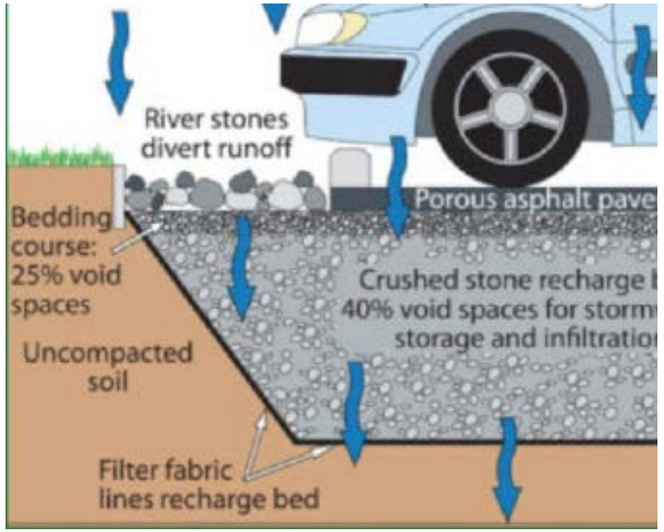
Game Tables (chess, checkers, backgammon)

Safety features: lighting & railing

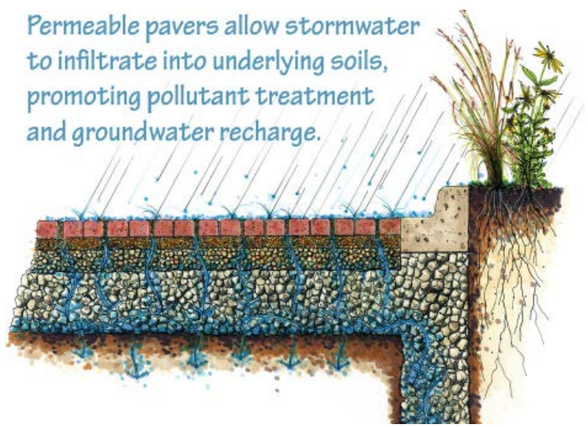


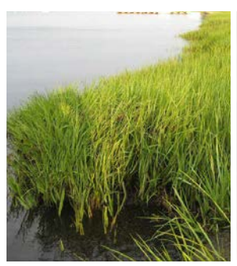

Educational displays

On site parking



Rain gardens, bioswale, native planting, permeable paver





Thank you

Questions?