

Northern Strand Wayside

PUBLIC MEETING 1

Tuesday March 19, 2024

MEETING LOGISTICS

Two ways to ask questions during the meeting

- Use chat feature.
- Raise your hand using the Zoom function, and you will be given permissions to unmute and speak.

Please note that this public information meeting will be recorded; the recording will be a public record.

COMMONWEALTH OF MASSACHUSETTS

Governor

Maura Healey

Lieutenant Governor

Kim Driscoll

Energy & Environmental Secretary

Rebecca Tepper

Department of Conservations & Recreation Commissioner

Brian Arrigo



DCR'S MISSION...

*To protect, promote and enhance
our commonwealth of natural,
cultural and recreational
resources for the well-being of all.*

ADDITIONAL INFORMATION

Recording and tonight's slide deck will be available at:

- www.mass.gov/dcr/past-public-meetings

If you have comments on this project:

- Submit online: www.mass.gov/dcr/public-comment
- Deadline: Three Weeks

Please note: the contents of comments submitted to DCR, including your name, town, and zip code, will be posted on DCR's website. Additional contact information provided, notably email address, will be used for outreach on future updates to the subject project of property.

If you wish to subscribe to a DCR general information on project-related listserv, contact DCR's Office of Community Relations via email at mass.parks@mass.gov

AGENDA

- 1. Introductions**
- 2. Project Overview**
- 3. Existing Conditions and Site Analysis**
- 4. Initial Concept Ideas**
- 5. Public Input: We Want to Hear From You**

1

INTRODUCTIONS

CLIENT

Division of Design & Engineering

Department of Conservation & Recreation

DESIGN TEAM

Landscape Architecture

Halvorson | Tighe&Bond Studio

Civil Engineering, Ecological and Wetland Science, GIS

Tighe&Bond

Cultural Resources

Chronicle Heritage

Interpretive and Wayfinding Signage

goodgood

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PROJECT OVERVIEW

- The Site
- Project Area & Context
- Project Goals
- Schedule

THE SITE



*Post-industrial 8-acre landscape
nestled in a meander of the
Saugus River along the Northern
Strand Community Trail*



*Green Wheat Field with Cypress,
Vincent Van Gogh, 1888*

Inspirational Landscape:

*The site has innate scenic qualities:
river vistas, open expanse of sky,
meadows, and clusters of mature trees.*



Distressed Site to be Restored:

The former use as a contractor's storage yard has left behind broken pavement, some limited soil contamination, and areas of invasive vegetation.



Ecologically Valuable Location:
Part of the larger estuarine ecosystem, the site provides bird and wildlife habitat due to its immediate adjacency to the Rumney Marsh Reservation and the Atlantic Flyway.



Passive Recreation Potential:

Located within a 30-minute bike ride of several urban communities, the site could become an accessible open space for local residents and Northern Strand Trail users.

PROJECT AREA & CONTEXT | NEIGHBORHOOD



NORTHERN STRAND WAYSIDE - SAUGUS, MA

PUBLIC MEETING 1 - MARCH 19, 2024

PROJECT AREA & CONTEXT | NORTHERN STRAND COMMUNITY TRAIL



PROJECT AREA & CONTEXT | SAUGUS RIVER WATERSHED



- 13 mile-long river meanders from Lake Quannapowitt in Wakefield to Rumney Marsh ACEC
- 11 Towns feed the watershed.



Lake Quannapowitt



Rumney Marsh ACEC
(Area of Critical Environmental Concern)

Project Area

Map Source: Saugus River Watershed Council

PROJECT GOALS

DCR’s vision for Northern Strand Wayside is to protect the ecologically sensitive landscape and create a universally accessible and sustainable passive recreation park.



Site Remediation

- Remove contaminated soils and pavements from the site’s prior industrial use
- Manage invasive plants
- Protect significant cultural findings from construction impacts



Ecological Enhancement

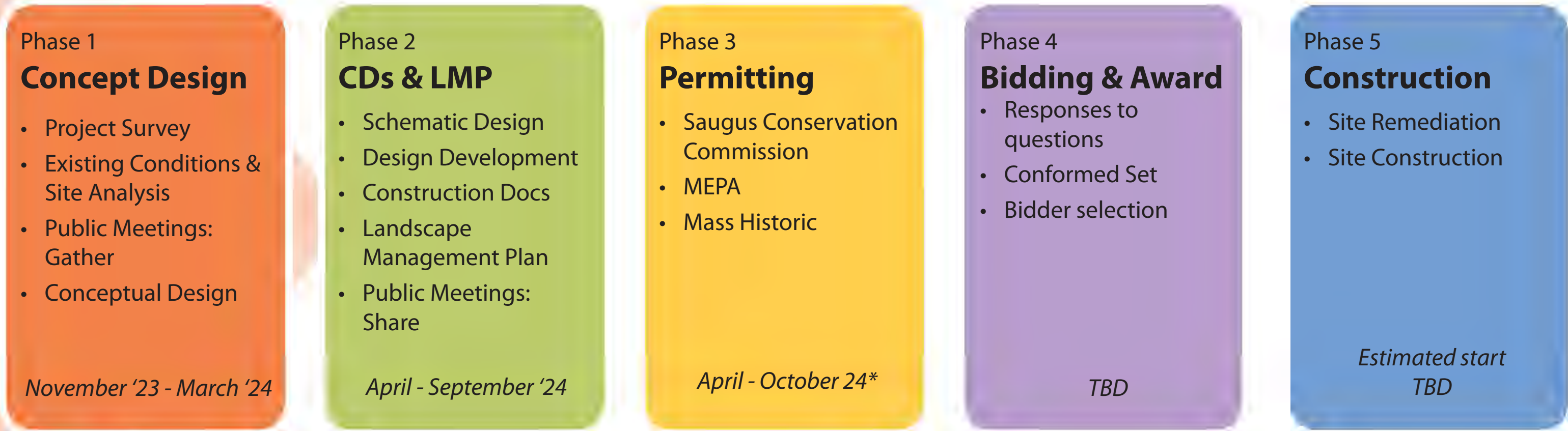
- Minimize impacts to ecologically sensitive areas, while focusing on necessary landscape restoration with habitat-enhancing plants
- Create educational opportunities related to the site’s ecology
- Integrate nature-based stormwater management



Passive Recreation

- Create an accessible parkland for the neighborhood and the Northern Strand Trail users
- Highlight and enhance the site’s scenic qualities
- Invite visitors to stroll, jog, birdwatch, picnic, and enjoy the beauty of the landscape

PROJECT SCHEDULE

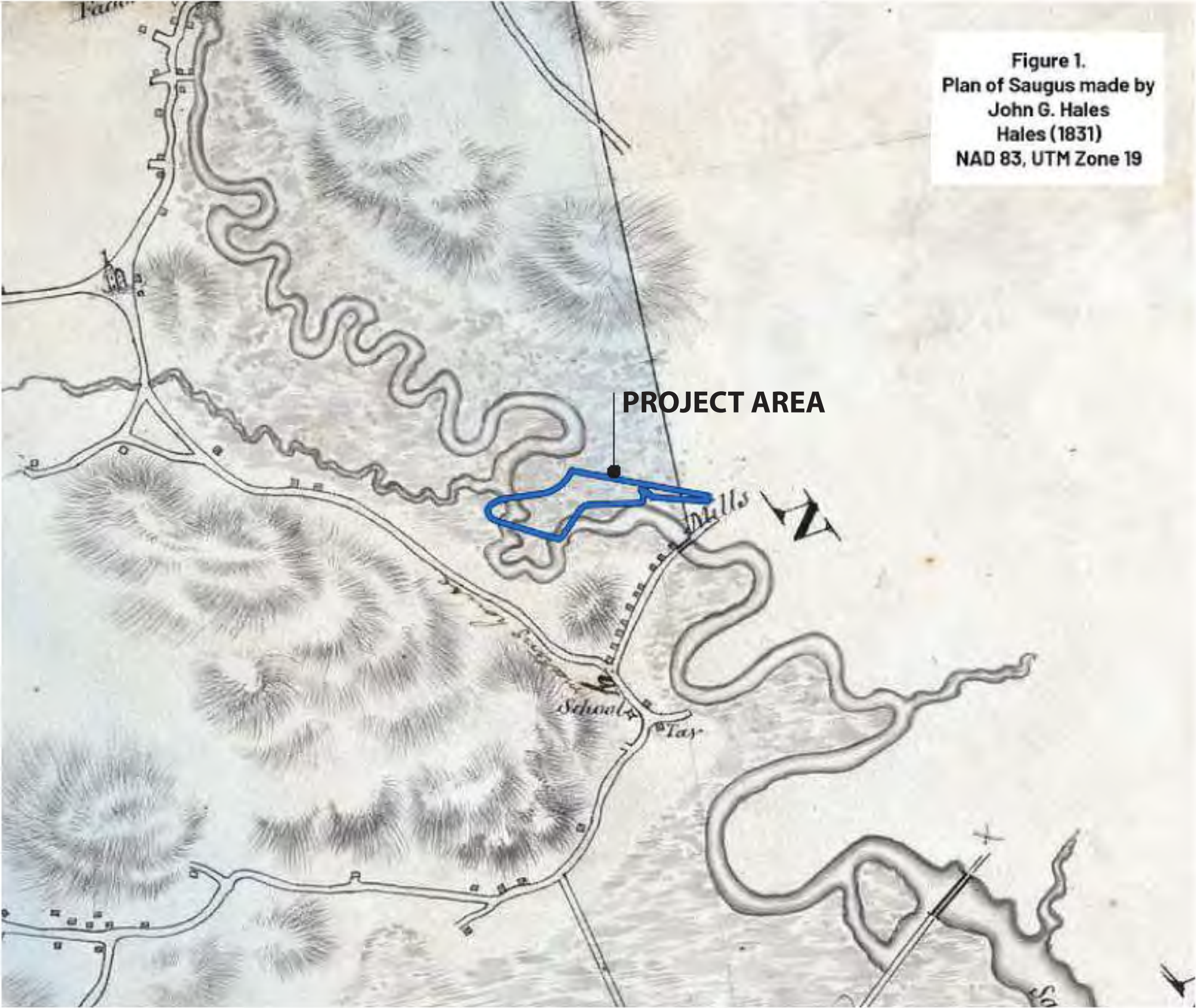


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EXISTING CONDITIONS & SITE ANALYSIS

- Site History & Cultural Resources
- Terrestrial Ecology
- Site Analysis Diagrams

SITE HISTORY | PRE-INDUSTRIAL



Members of the Pawtucket group who inhabited the area named the river **Abousett** (“winding stream”).

English Settlers first called it the River at Saugus, which was a Native American word for “great or extended.”

FINDINGS

- The Project Area was originally a low marsh or wetland in a fluvial environment, prone to frequent flooding, erosion and stream channel changes.
- The sensitivity for precontact era, contact era and Colonial era cultural resources is considered to be low due to the former wetland setting.

Source: Cultural Resources Sensitivity Assessment by Chronicle Heritage

SITE HISTORY | mid-1800s SAUGUS BRANCH RAILROAD



The 1896 bird's eye view of the East Saugus train depot shows the project area as unbuilt marshland as the railroad train is depicted passing by.



East Saugus Station as seen in the later part of 19th century.

Figures from Cultural Resources Sensitivity Assessment by Chronicle Heritage

SITE HISTORY | mid-1800s NEWHALL BRICK YARD

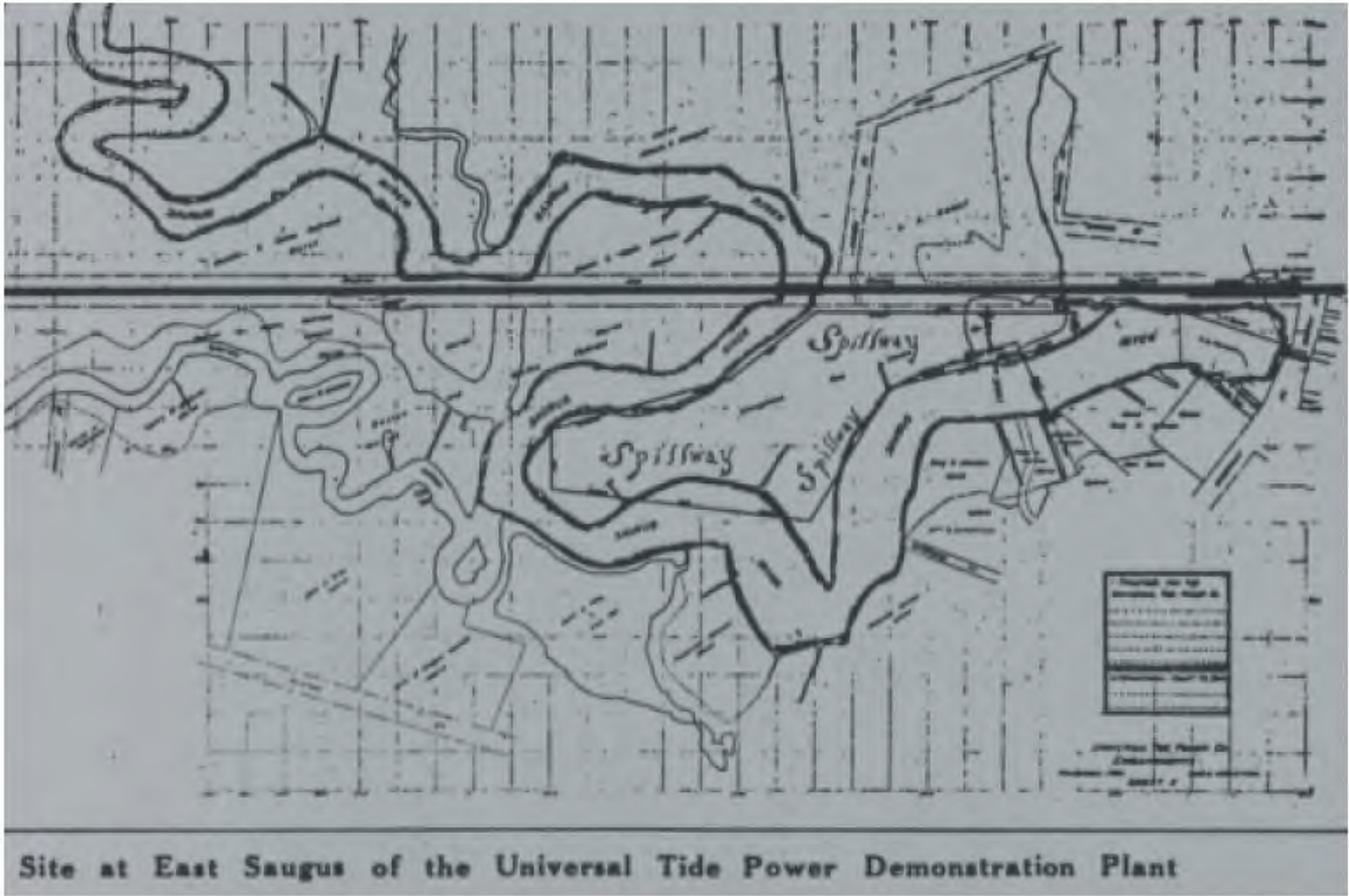


FINDINGS

- The Saugus Branch of the Eastern Railroad, adjacent to the site, was completed in 1854.
- The East Saugus railroad station, which was situated northeast of the present entrance to the property, was a central means of transportation during the 1846-1946 peak of rail transportation.
- The 1856 map (left) shows the first recorded industrial use on the site: "Newhall Brick Yard" on the northwest portion of the Project property south of the railroad.

*Topographical Map of Essex County 1856 by H. F. Walling;
Figure from Cultural Resources Sensitivity Assessment by
Chronicle Heritage*

SITE HISTORY | 1920s-1930s UNIVERSAL TIDE POWER COMPANY



Site of East Saugus Universal Tide Power Demonstration Plant depicting “Spillways.”

*Figures from Cultural Resources Sensitivity
Assessment by Chronicle Heritage*



FINDINGS

- In 1920-21 Universal Tide Power Company built a Demonstration Plant to generate hydroelectric power from tidal flow, utilizing the invention of John Knowlton’s Hydroelectric Air Motor.
- The stock market crash of 1929 and the Great Depression quashed plans for expansion and led to the sale of the property in the 1930s.
- While no archaeological remains of the Demonstration Plant were identified on the ground surface, foundations, former below ground infrastructure, and sluiceway may be buried in the wooded northeast portion of the Project Area.

SITE HISTORY | 1930s - 2000s



A structure visible along the east edge of the property is likely to be the defunct Demonstration Plant of the Universal Tide Power Company.



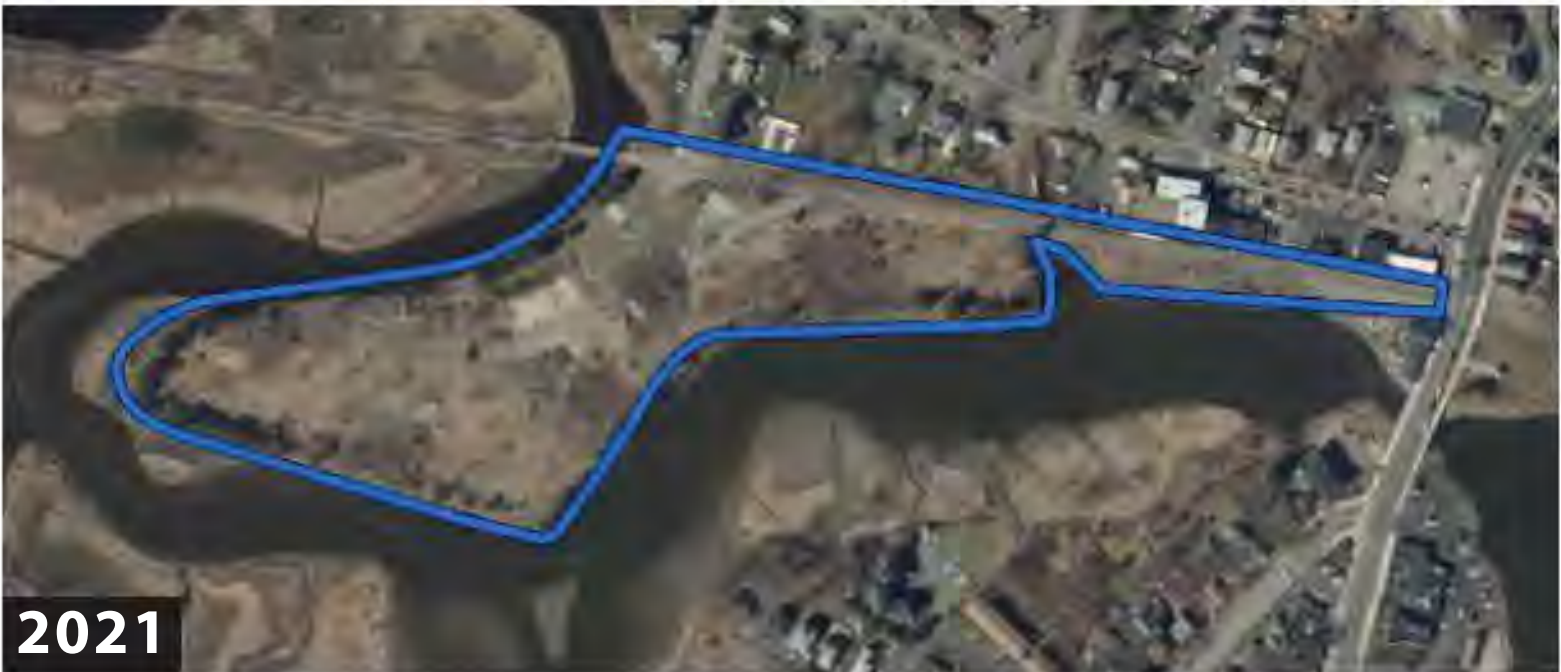
Property was under water at the time of aerial photo in 1955, remaining vacant until the 1960s.



Roy S. Bacon bought the land in 1967 for his construction business and extensively filled the site through the 1980s.



In 1994, the State acquired the property by eminent domain. Subsequent plans for a new park were put on hold due to budget constraints.



The site was used for construction staging for the Northern Strand Rail Trail.

Figures from Cultural Resources Sensitivity Assessment by Chronicle Heritage

CULTURAL RESOURCES | EVIDENCE OF PAST USE



mid 1800s

Quarried and shaped granite blocks at culvert opening underneath and associated with Saugus Branch Railroad.



Closeup of culvert (in excellent condition); quarried granite had 3/4" drill marks consistent with post 1830s stone quarries.



mid 1800s

Brick and other backfill at plank retaining walls, potential remnants from Newhall Brickyard.



1920s-30s

Plank retaining wall/fencing for erosion control at low tide, assumed association with the Universal Tide Power Co.



Closeup of wood plank fencing for erosion control.



1970s-80s

Boulder bank reinforcement, associated with the Bacon Construction Company's site use.



LEGEND & DEFINITIONS

- MassDEP Coastal Wetlands - Tidal Flat
- MassDEP Coastal Wetlands - Salt Marsh
- MassDEP Open Water
- MassDEP Inland Wetlands

FINDINGS

- The site is within the buffer zones of Coastal Wetland resources and within the Riverfront area

Source: MassGIS

TERRESTRIAL ECOLOGY | FEMA FLOOD ZONES



LEGEND & DEFINITIONS

-  100-year FEMA Flood Zone (1-percent annual chance of flooding)

FINDINGS

- Site area is vulnerable to flooding.



Source: MassGIS, FEMA

TERRESTRIAL ECOLOGY | HABITAT & CRITICAL NATURAL LANDSCAPES



LEGEND & DEFINITIONS

NHESP/TNC BioMap

-  Diadromous Fish Migratory Habitat
-  **Core Habitat:**
Areas critical for the long-term persistence of rare species, exemplary natural communities, and resilient ecosystems
-  **Critical Natural Landscape:**
Large landscapes minimally impacted by development and buffers to core habitats and coastal areas, both of which enhance connectivity and resilience

BioMap is the result of ongoing collaboration between MassWildlife and the MA Chapter of The Nature Conservancy (TNC), and serves as a tool to protect the diversity of species and natural ecosystems.



Source: MassGIS, FEMA

TERRESTRIAL ECOLOGY | BIRD SPECIES*



Osprey
Pandion haliaetus



Bald Eagle***
Haliaeetus leucocephalus



Snowy Egret
Egretta thula



Great Egret
Ardea alba



Greater Yellowleg
Tringa melanoleuca



Lesser Yellowleg
Tringa flavipes



Mallard
Anas platyrhynchos



American Black Duck
Anas platyrhynchos



Double-Crested Cormorant
Phalacrocorax auritus



Great Blue Heron
Ardea herodias



Rufa Red Knot**
Calidris canutus rufa



Kildeer
Charadrius vociferus

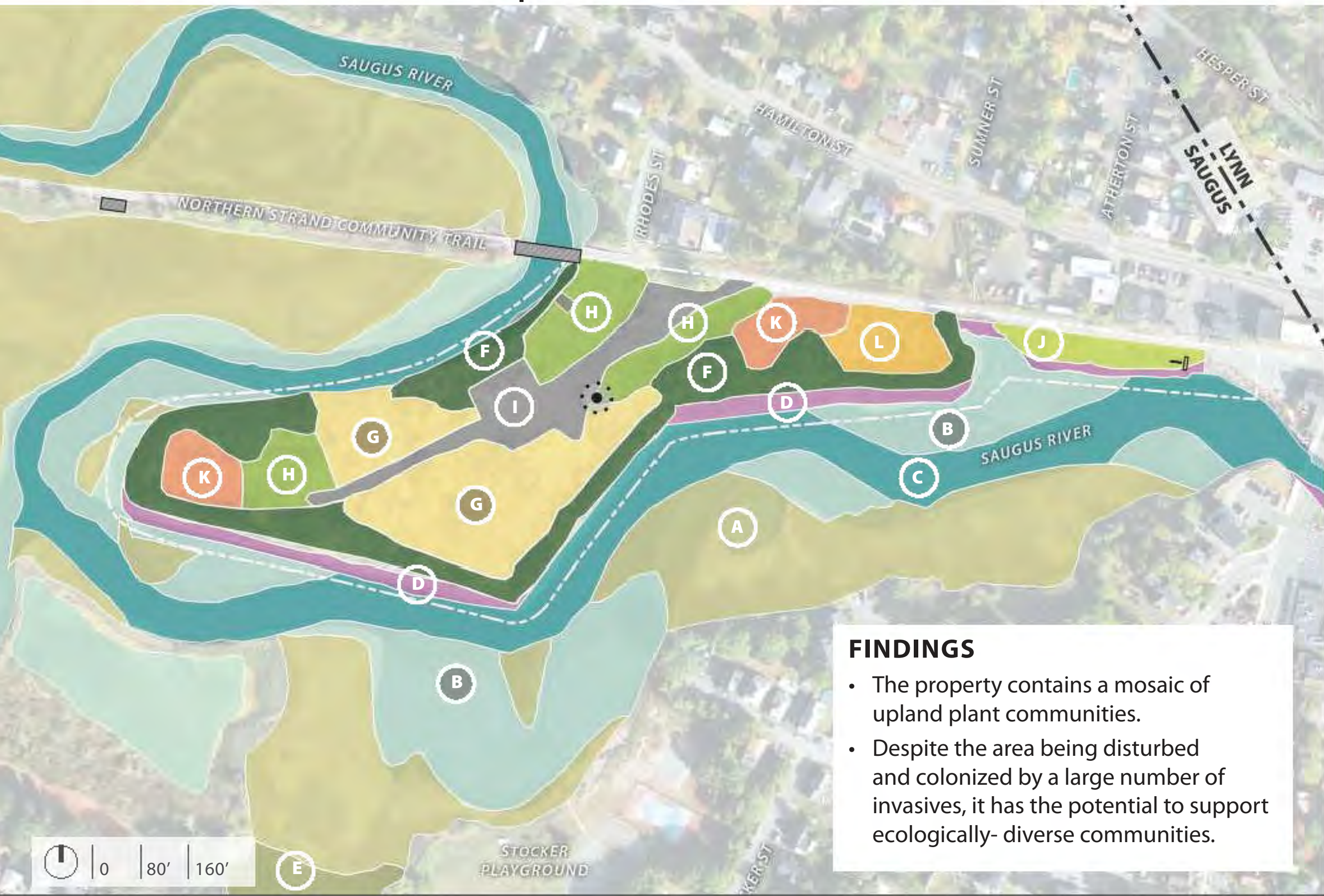


Atlantic Flyway
A major north-south route for migratory birds that stretches from the Northern Atlantic Coast to South America

* Positive bird identifications for the immediate area per INaturalist
** Threatened species per the US Fish and Wildlife IPaC tool
*** Species of special concern in MA

Photo and Map Sources:
National Audubon Society
and The Cornell Lab

TERRESTRIAL ECOLOGY | VEGETATION COMMUNITIES



LEGEND

WETLAND TYPES

- (A) Salt Marsh
- (B) Tidal Flat
- (C) Open Water
- (D) Coastal Bank Bluff or Sea Cliff
- (E) Shallow Marsh Meadow or Fen

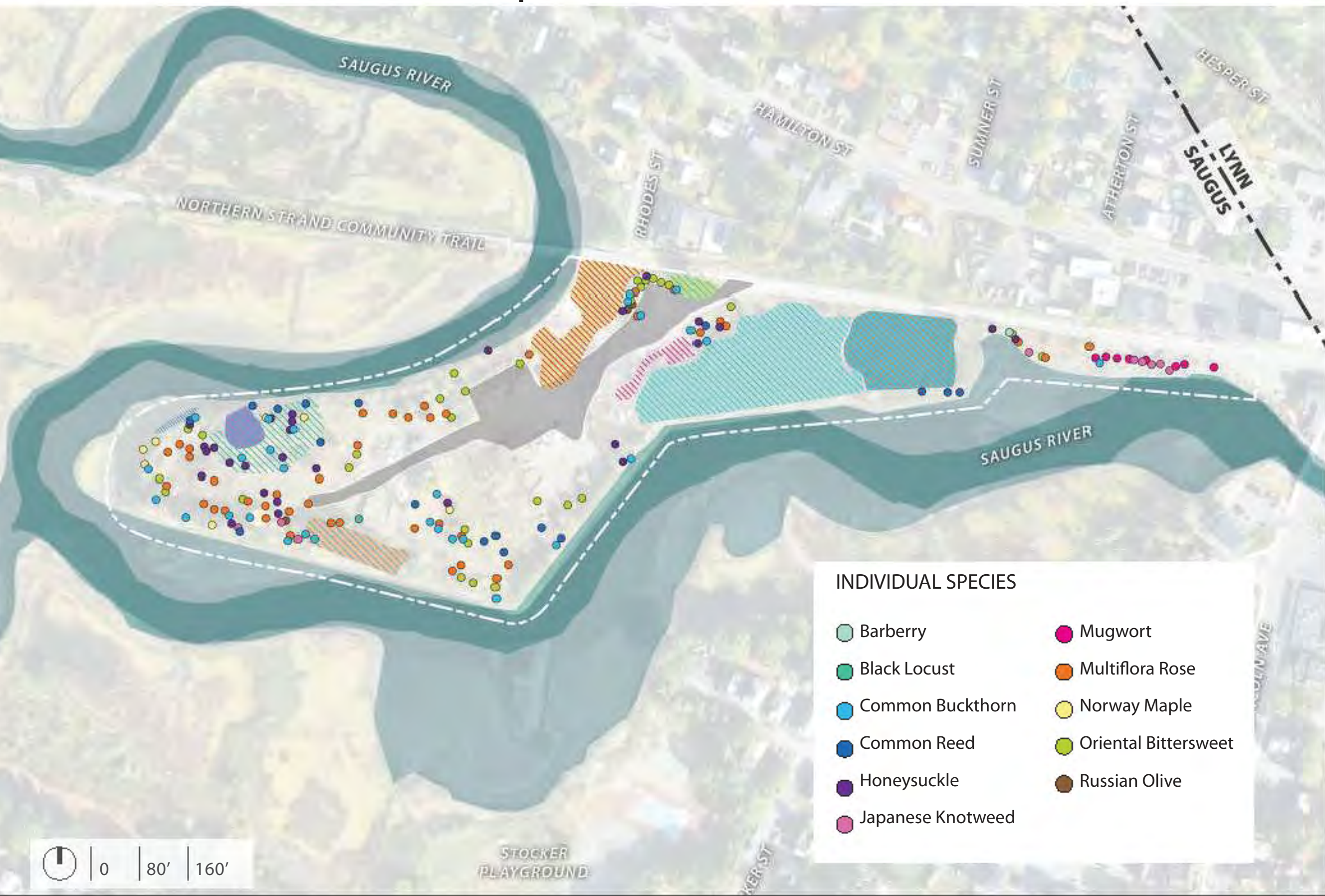
UPLAND TYPES

- (F) Forested
- (G) Grassland
- (H) High Herbaceous
- (I) Impervious/Gravel
- (J) Lawn with Herbaceous Fringe
- (K) High Shrub
- (L) Low Shrub

FINDINGS

- The property contains a mosaic of upland plant communities.
- Despite the area being disturbed and colonized by a large number of invasives, it has the potential to support ecologically- diverse communities.

TERRESTRIAL ECOLOGY | INVASIVE VEGETATION



- ### LEGEND
- HIGHER-DENSITY INVASIVES AREAS
- Black Locust
 - Buckthorn Dominant with Bittersweet and Multiflora Rose
 - Buckthorn Dominant with Multiflora Rose and Honeysuckle
 - Buckthorn Dominant with Honeysuckle, Multiflora Rose, and Bittersweet
 - Buckthorn Dominant with Black Locust, Multiflora Rose, Norway Maple, Bittersweet, and Garlic Mustard
 - Common Reed
 - Mugwort
 - Mugwort Dominant with Garlic Mustard

INDIVIDUAL SPECIES

- Barberry
- Black Locust
- Common Buckthorn
- Common Reed
- Honeysuckle
- Japanese Knotweed
- Mugwort
- Multiflora Rose
- Norway Maple
- Oriental Bittersweet
- Russian Olive



TERRESTRIAL ECOLOGY | UPLAND VEGETATION COMMUNITIES



(F) FORESTED

A mix of native and non-native softwoods around the site perimeter, and a patch of hardwood trees in the eastern portion of the site. Various invasives dominate the understory. Species include:

- Austrian Pine** *Pinus resinosa*
- Black Locust** *Robinia pseudoacacia**
- Eastern Poplar** *Populus deltoides*
- Norway Maple** *Acer platanoides**
- Norway Spruce** *Picea abies*
- Honey Locust** *Gleditsia triacanthos*



(K) HIGH SHRUB

Two areas defined by the prevalence of tall-growing shrubs including:

- Staghorn Sumac** *Rhus typhina*
- Common Buckthorn** *Rhamnus cathartica**



(L) LOW SHRUB

Area is defined by the prevalence of low-growing, mostly invasive, shrubs including:

- Multiflora Rose** *Rosa multiflora**
- Japanese Knotweed** *Reynoutria japonica**
- Honeysuckle** *Lonicera spp**

* Denotes an invasive species

TERRESTRIAL ECOLOGY | UPLAND VEGETATION COMMUNITIES



(H) HIGH HERBACEOUS

These areas are dominated by tall growing herbaceous (non-woody) plant species, with scattered, mostly invasive shrubs and trees. Commons species include:

- Common Mugwort** *Artemisia vulgaris**
- Sweet Yellow Clover** *Melilotus officinalis*
- Garlic Mustard** *Alliaria petiolata**
- Crown Vetch** *Securigera varia**
- Oriental Bittersweet** *Celastrus orbiculatus**
- Multiflora Rose** *Rosa multiflora**
- Honeysuckle** *Lonicera spp**



(J) LAWN W/ HERBACEOUS FRINGE

Located along the eastern portion of the site along the Trail, this area is maintained as mown lawn. The fringe along the river is comprised of low-growing herbaceous species and grasses, with scattered trees and shrubs. Species include:

- Little Bluestem** *Schizachyrium scoparium*
- Fleabane** *Ergeron sp.*
- Common Mugwort** *Artemisia vulgaris**
- Poison Ivy** *Toxicodendron radicans*



(G) GRASSLAND

Centrally located around the existing pavement, this community is dominated by grasses and meadow plants including:

- Goldenrod** *Solidago sp.*
- Fleabane** *Erigeron sp.*
- Asters** *Symphyotrichum sp.*

* Denotes an invasive species

SITE ANALYSIS | PRESENT SITE



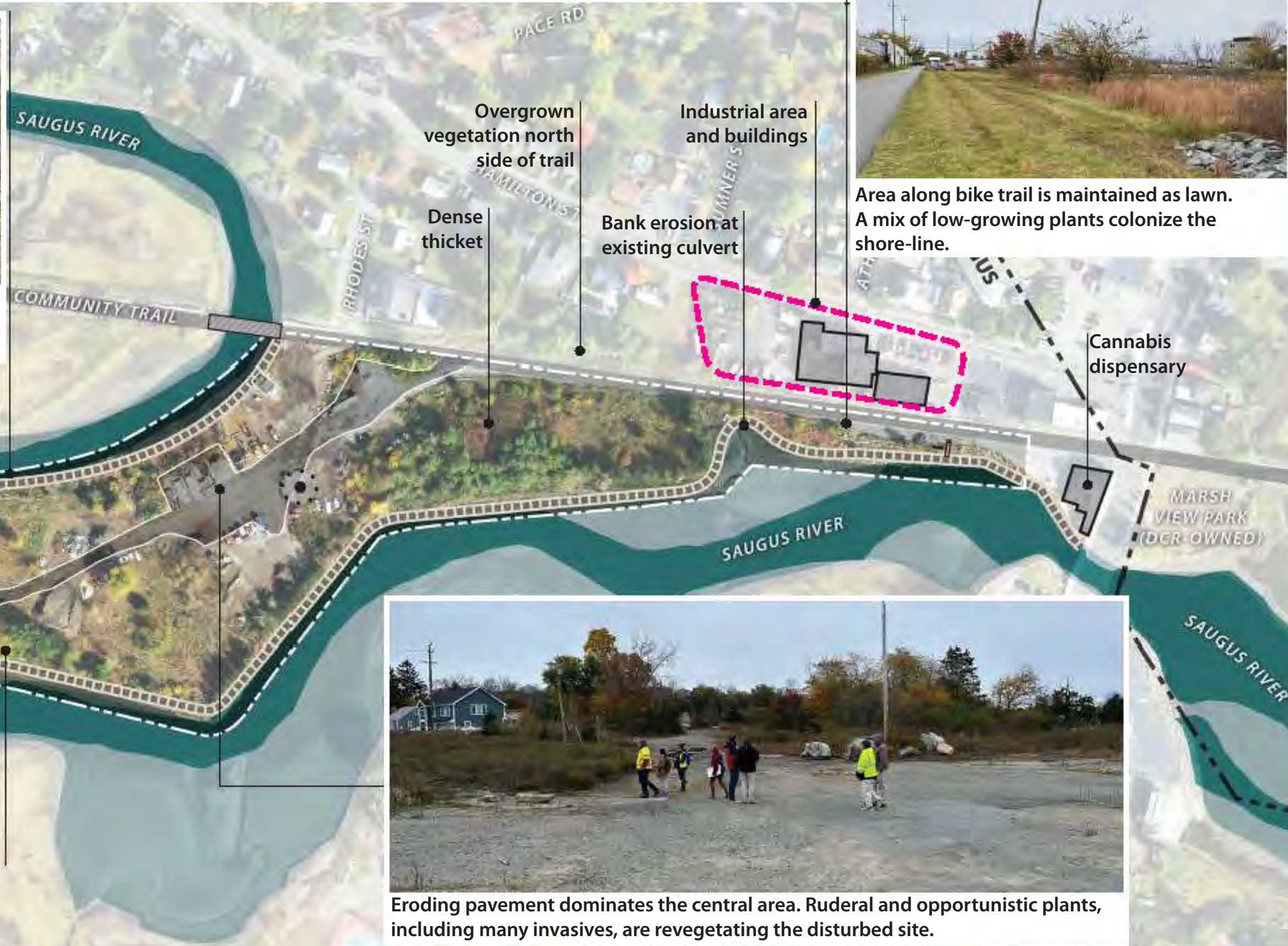
NORTHERN STRAND WAYSIDE - SAUGUS, MA

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SITE ANALYSIS | POST-INDUSTRIAL LANDSCAPE



Steep embankment armored with stones indicates a history of fill; native marsh grasses soften the hard edges.

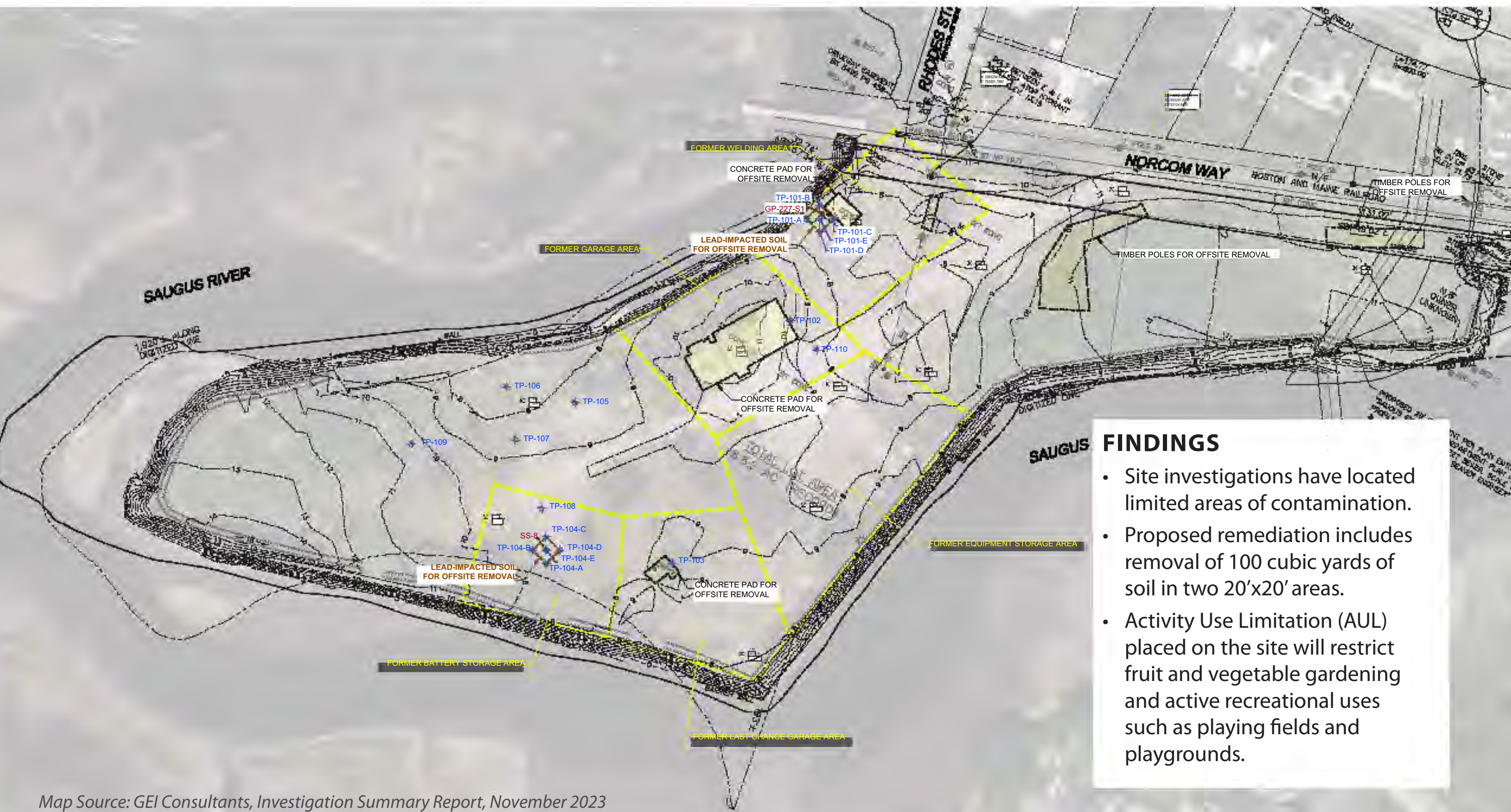


Area along bike trail is maintained as lawn. A mix of low-growing plants colonize the shore-line.



Eroding pavement dominates the central area. Ruderal and opportunistic plants, including many invasives, are revegetating the disturbed site.

SITE ANALYSIS | SITE REMEDIATION



FINDINGS

- Site investigations have located limited areas of contamination.
- Proposed remediation includes removal of 100 cubic yards of soil in two 20'x20' areas.
- Activity Use Limitation (AUL) placed on the site will restrict fruit and vegetable gardening and active recreational uses such as playing fields and playgrounds.

Map Source: GEI Consultants, Investigation Summary Report, November 2023

SITE ANALYSIS | ACCESS AND CIRCULATION



SITE ANALYSIS | SELECT WATERFRONT VIEWS



SITE ANALYSIS | BUILT FEATURES



Northern Strand Community Trail and Bridge, looking west



Osprey Nest Platform



Culvert Structures



Trail Signage and Bench

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INITIAL DESIGN CONCEPTS

- Potential Site Character and Program
- Concept Designs

POTENTIAL SITE CHARACTER & PROGRAM | LANDSCAPE EXPERIENCES



POTENTIAL SITE CHARACTER & PROGRAM | BIRD-RELATED FEATURES



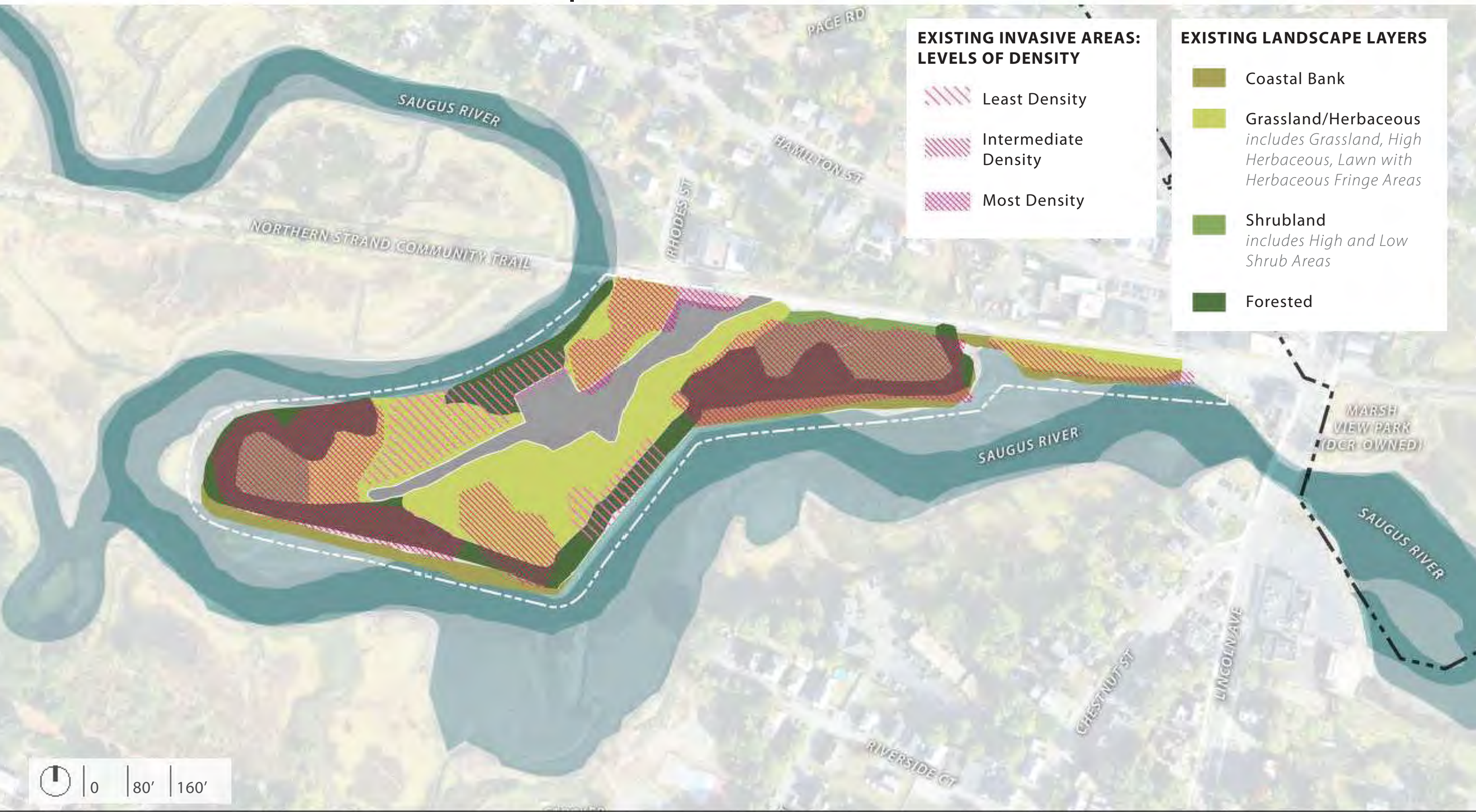
POTENTIAL SITE CHARACTER & PROGRAM | EDUCATIONAL OPPORTUNITIES



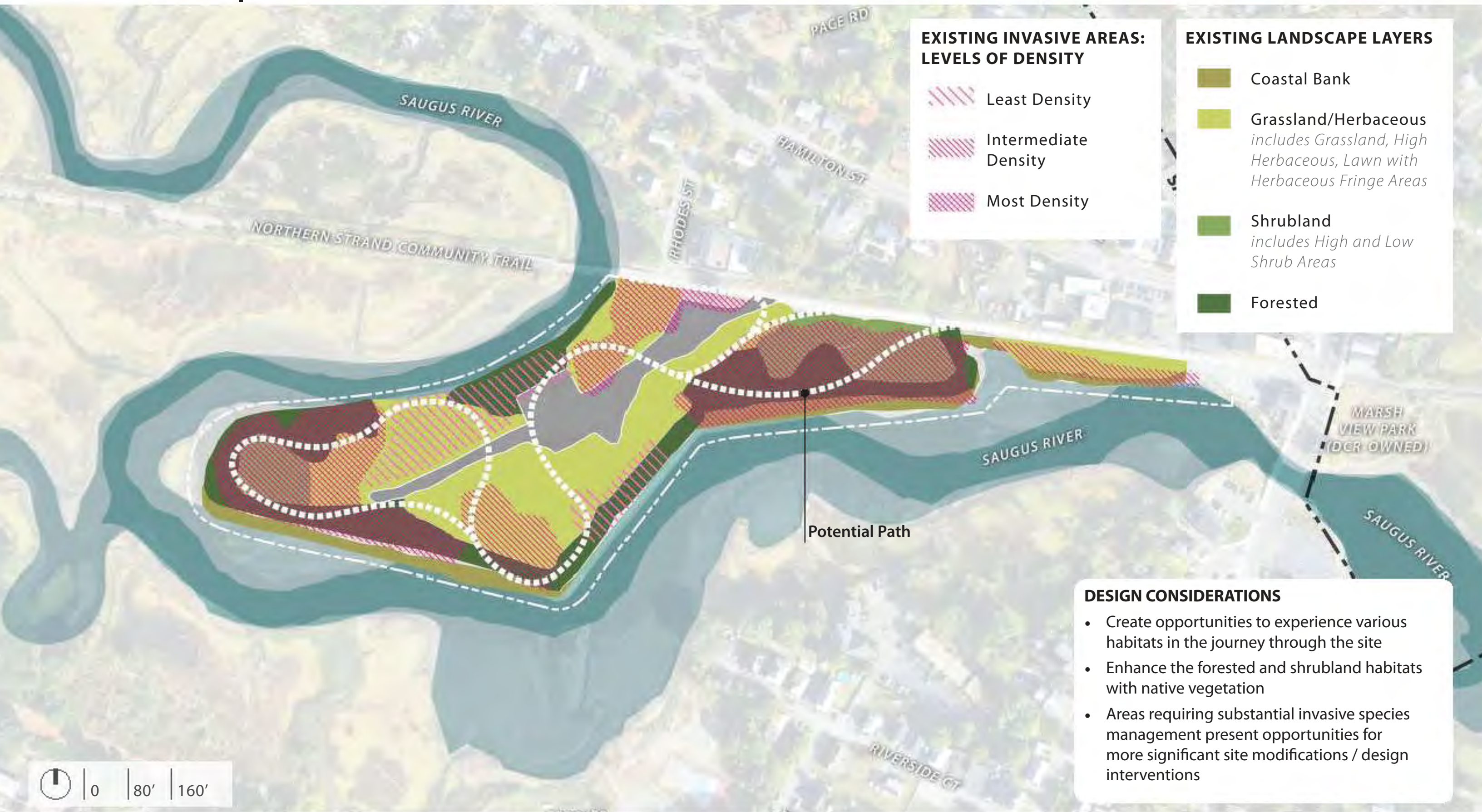
POTENTIAL SITE CHARACTER & PROGRAM | AMENITIES ALONG THE TRAIL



CONCEPT DESIGN INFLUENCES | EXISTING LANDSCAPE CONDITIONS



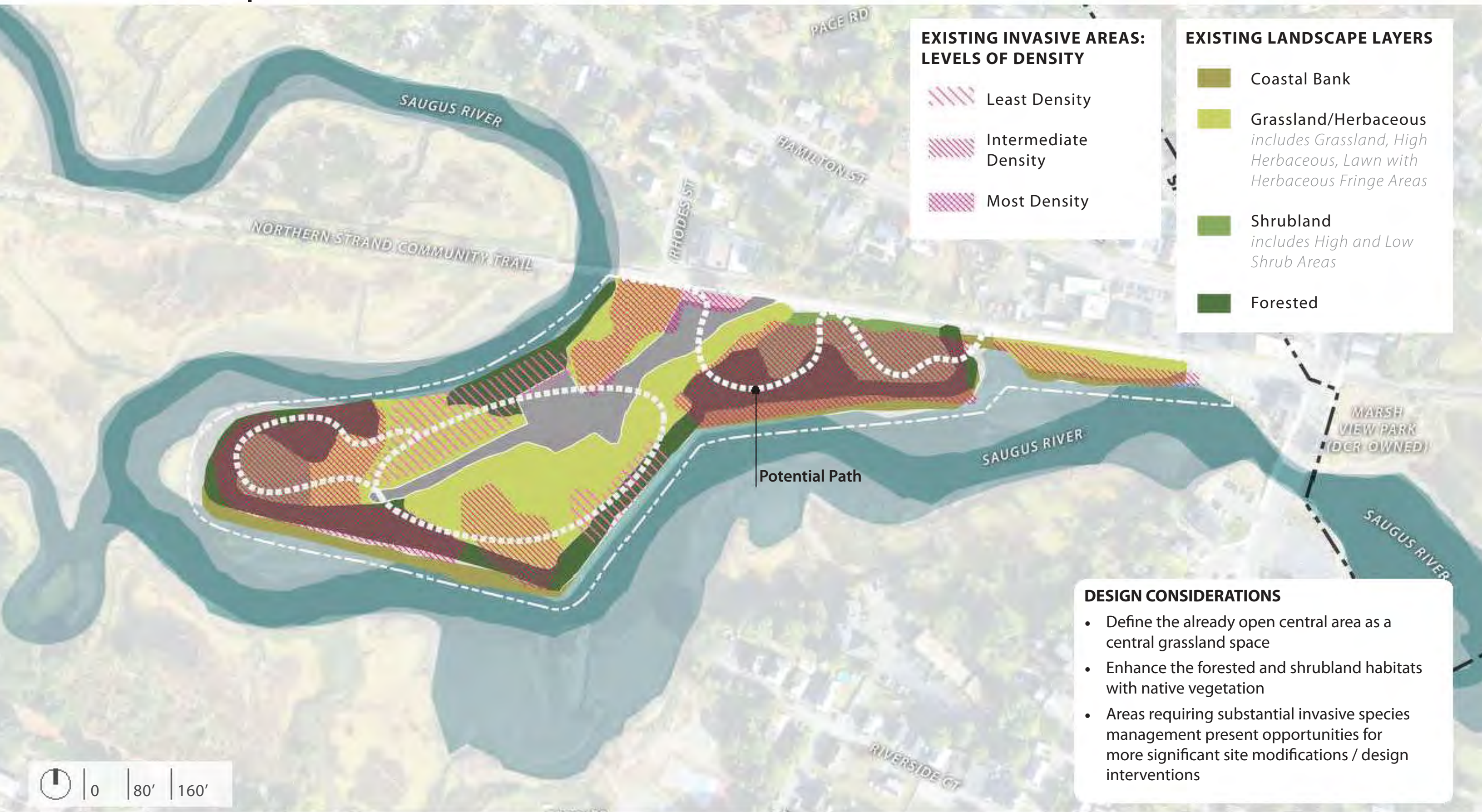
CONCEPT 1 | POTENTIAL PATH OVERLAY



CONCEPT 1 | MEANDERING LANDSCAPE & ENVIRONMENTAL FEATURES



CONCEPT 2 | POTENTIAL PATH OVERLAY



CONCEPT 2 | OUTDOOR ROOMS & RECREATIONAL PROGRAMMING





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WE WANT TO HEAR FROM YOU

- Your link to the Community/Affiliation
- Feedback on Initial Concepts
- Ideas on Program and Park Uses