

# Northern Strand Wayside

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## PUBLIC MEETING 1

Tuesday March 19, 2024



# MEETING LOGISTICS

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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

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Governor

**Maura Healey**

Lieutenant Governor

**Kim Driscoll**

Energy & Environmental Secretary

**Rebecca Tepper**

Department of Conservations & Recreation Commissioner

**Brian Arrigo**



# DCR'S MISSION...

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

# ADDITIONAL INFORMATION

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

- [www.mass.gov/dcr/past-public-meetings](http://www.mass.gov/dcr/past-public-meetings)

If you have comments on this project:

- Submit online: [www.mass.gov/dcr/public-comment](http://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](mailto:mass.parks@mass.gov)

# **AGENDA**

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- 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

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### 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**



# 2

## **PROJECT OVERVIEW**

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- **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.*



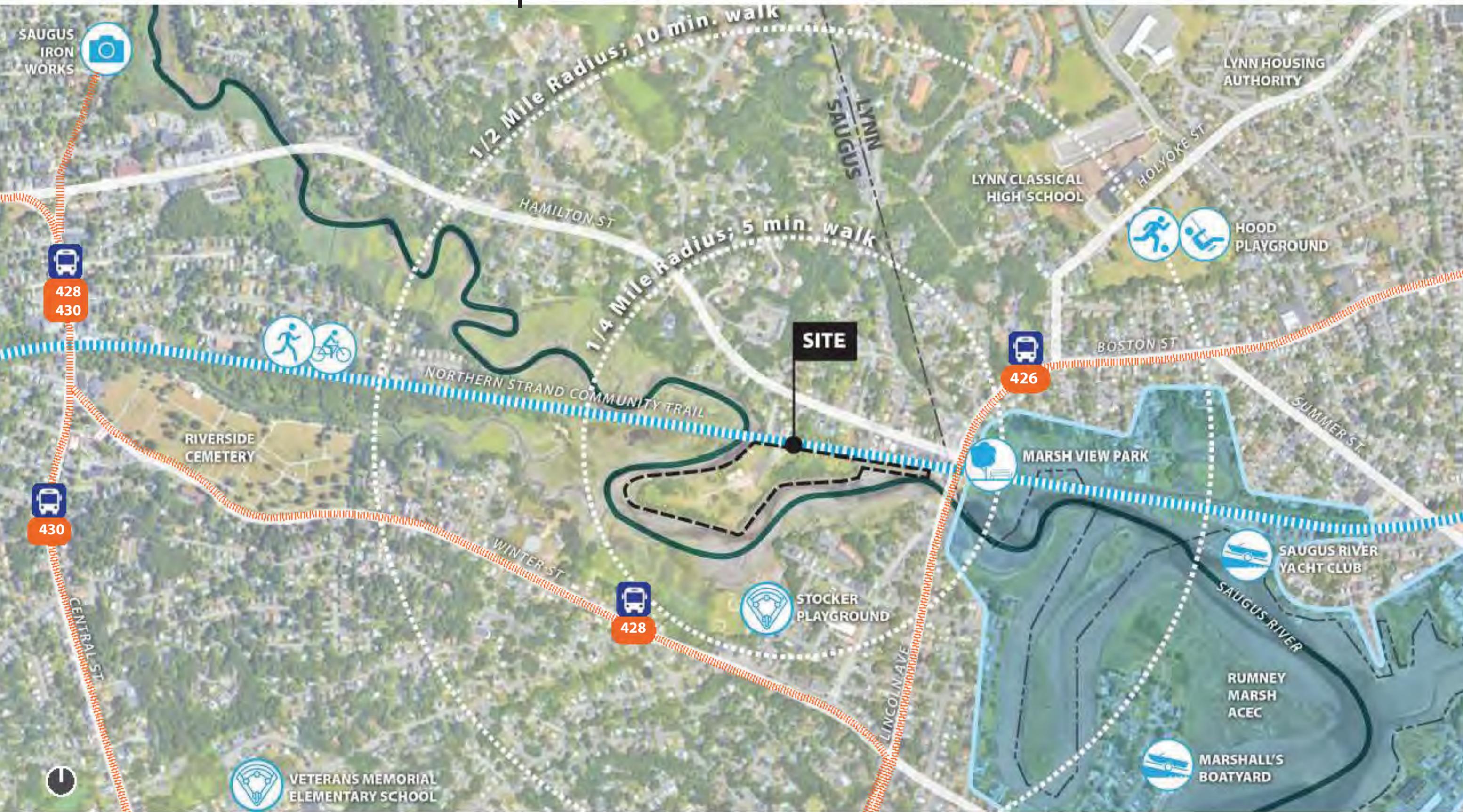
***Ecologically Valuable Location:***  
*Part of the larger estuarine ecosystem, the site provides bird and wildlife habitat due to its immediate adjacency to the Rumney Marsh Reservation and the Atlantic Flyway.*



***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.*

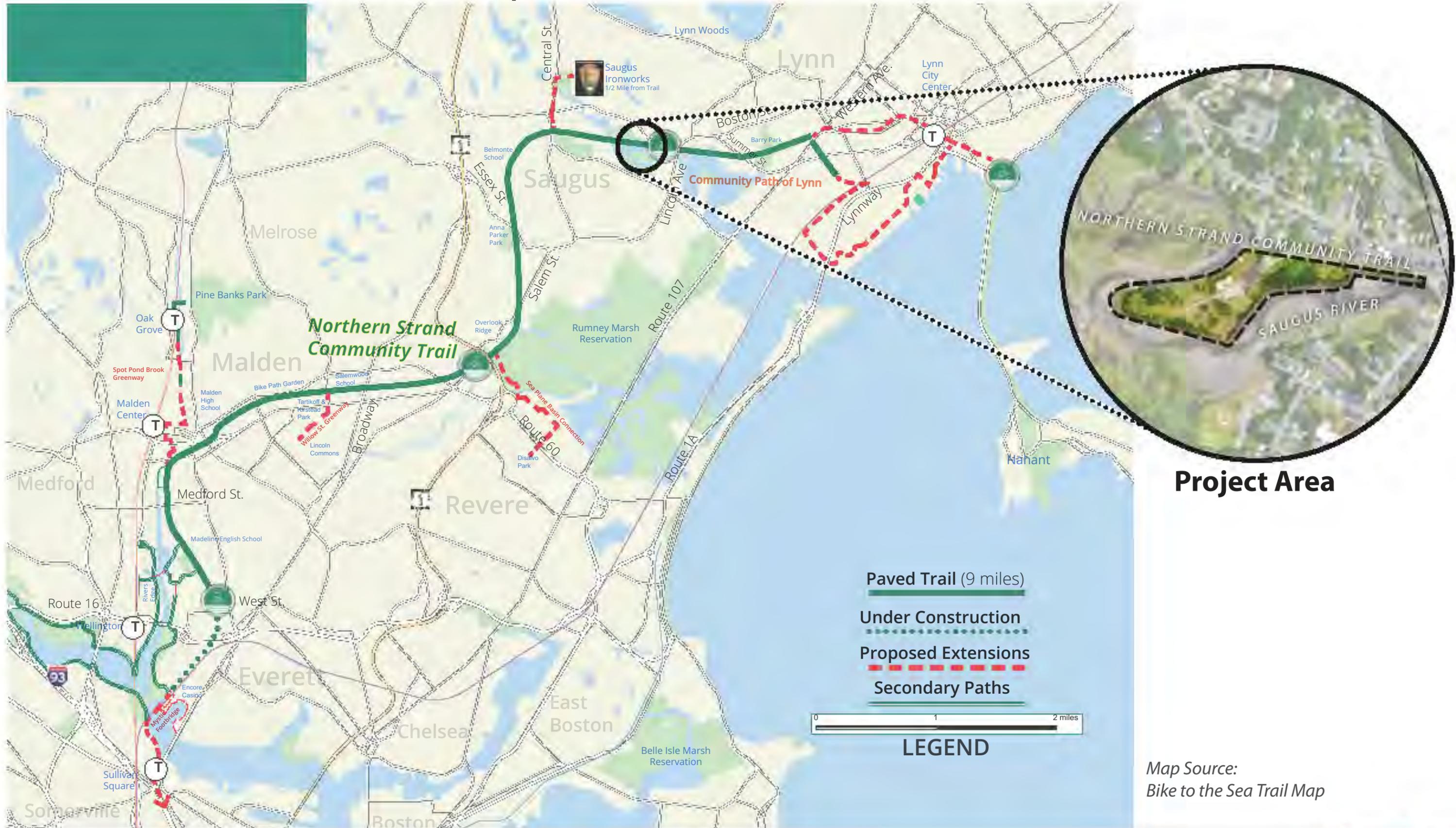
# PROJECT AREA & CONTEXT | NEIGHBORHOOD



**NORTHERN STRAND WAYSIDE - SAUGUS, MA**

PUBLIC MEETING 1 - MARCH 19, 2024

# PROJECT AREA & CONTEXT | NORTHERN STRAND COMMUNITY TRAIL



**Project Area**

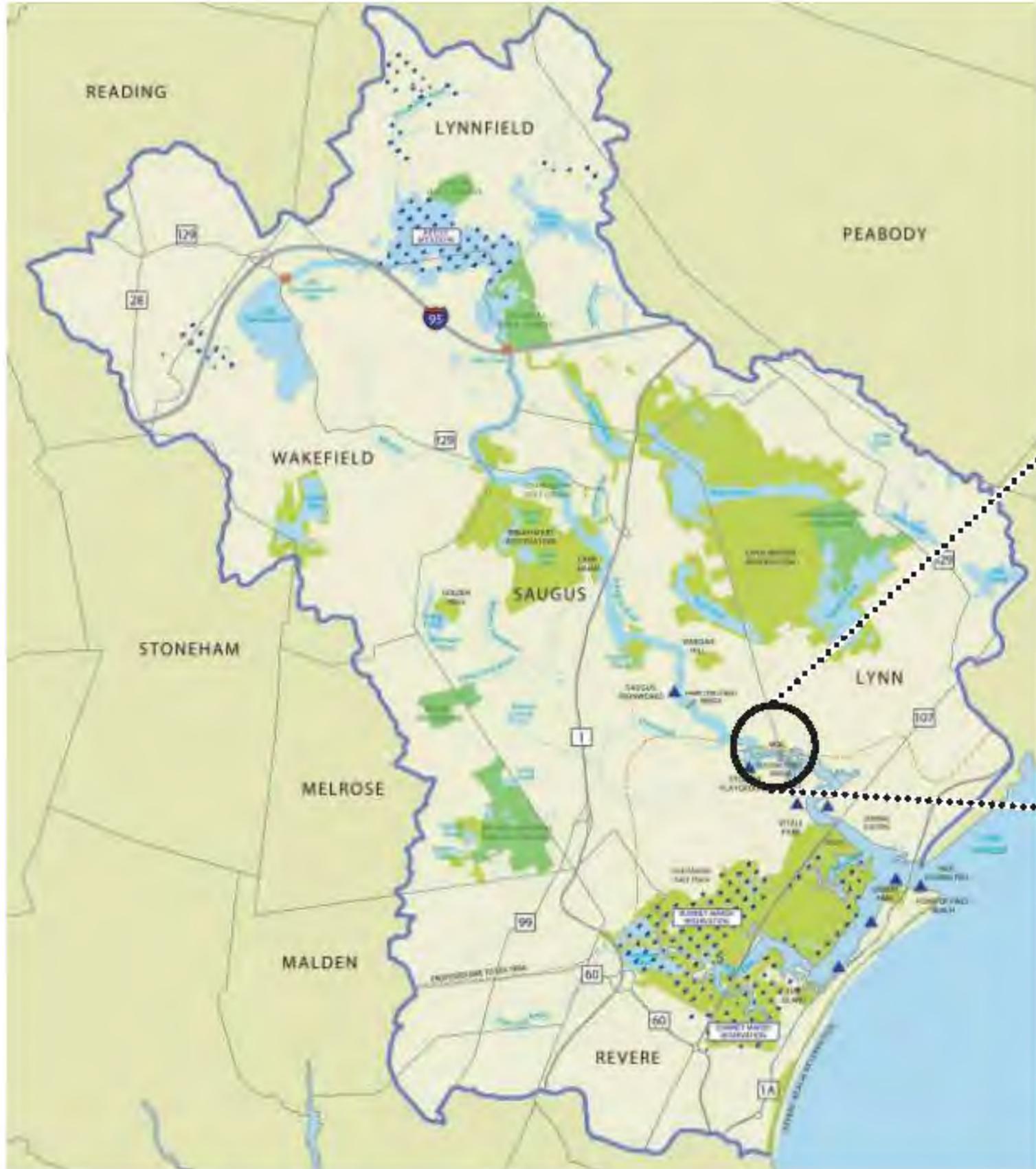
- Paved Trail (9 miles)**
- Under Construction**
- Proposed Extensions**
- Secondary Paths**



**LEGEND**

Map Source:  
Bike to the Sea Trail Map

# 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**



**Project Area**



**Rumney Marsh ACEC**  
(Area of Critical Environmental Concern)

*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



# 3

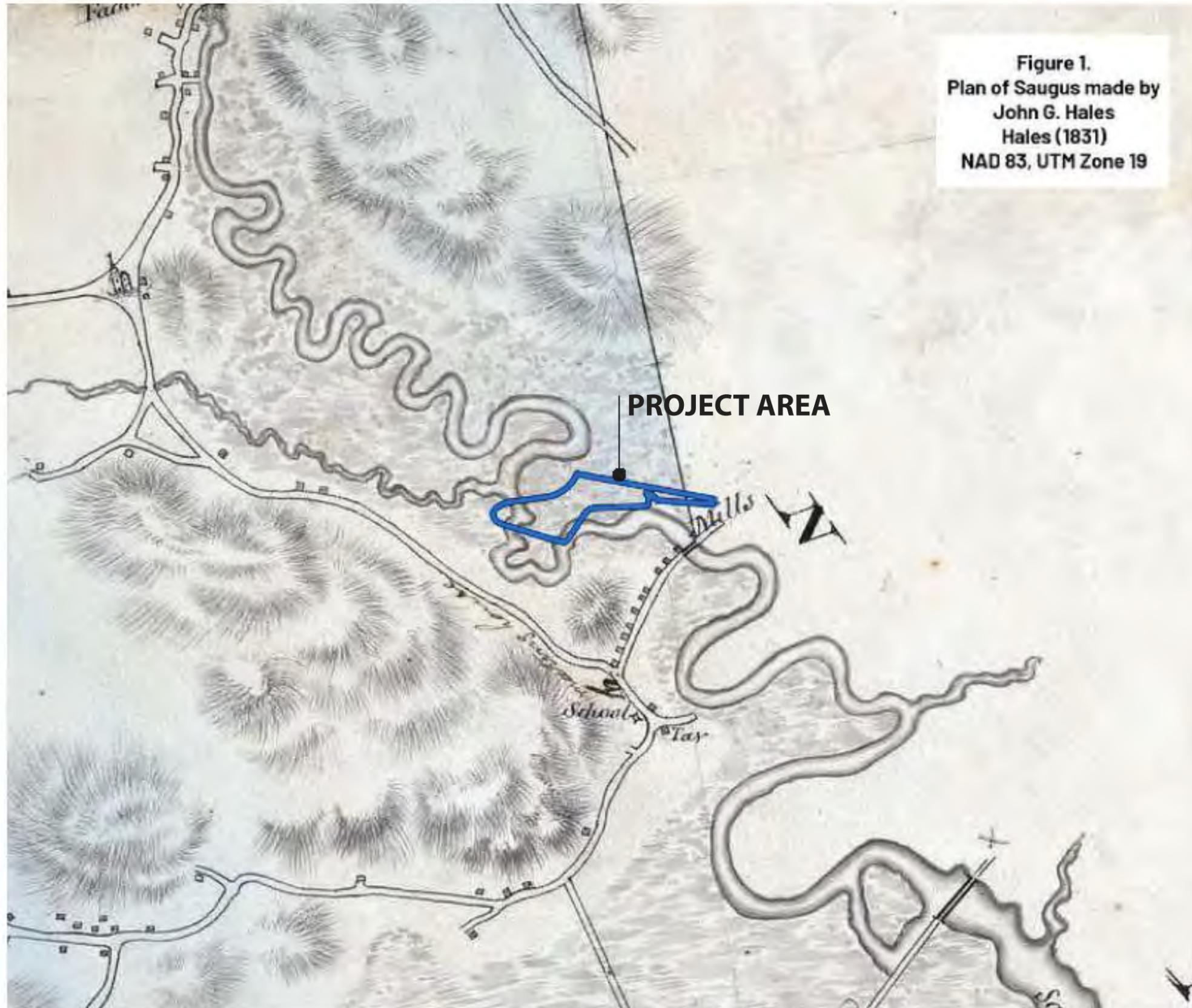
## **EXISTING CONDITIONS & SITE ANALYSIS**

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- **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.”

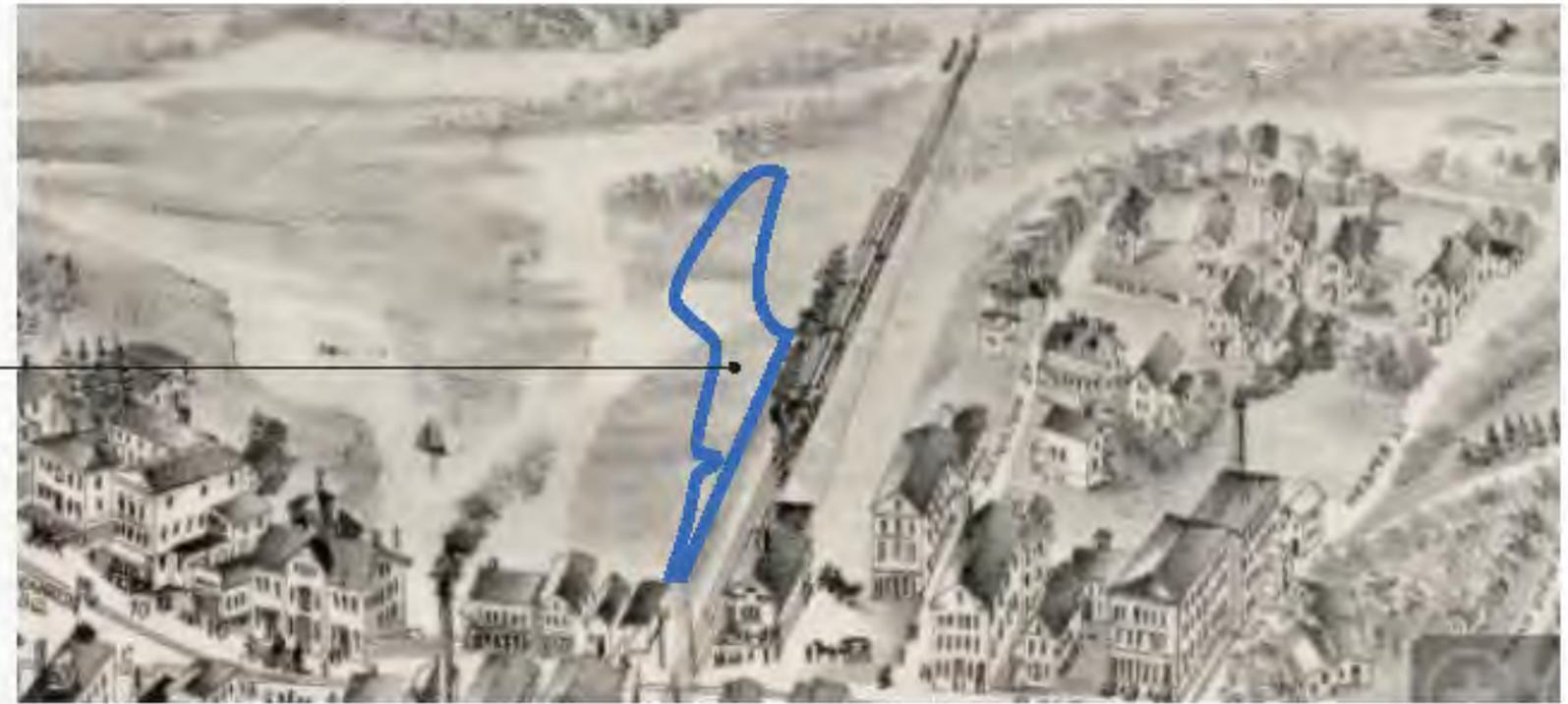
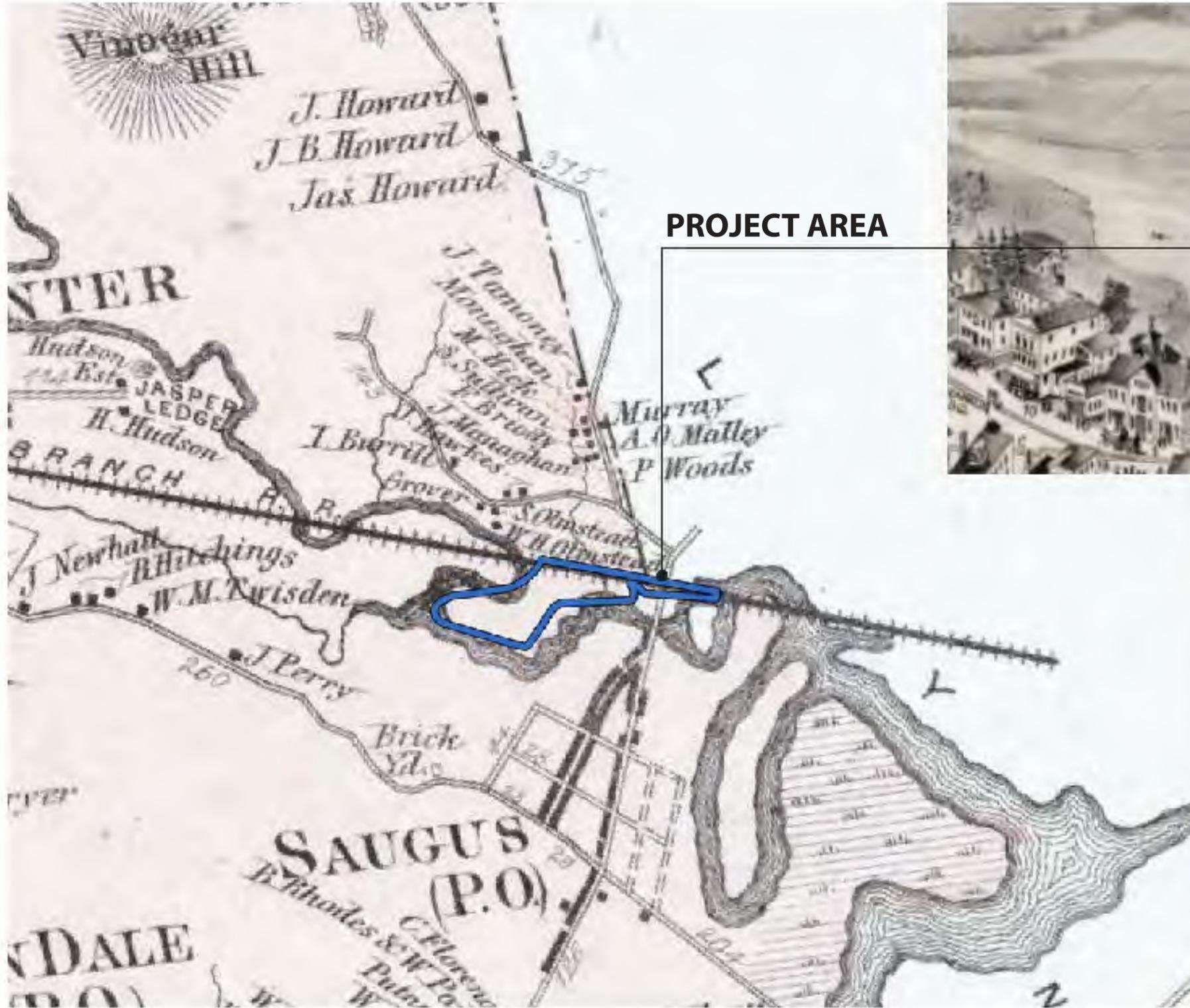


## FINDINGS

- 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



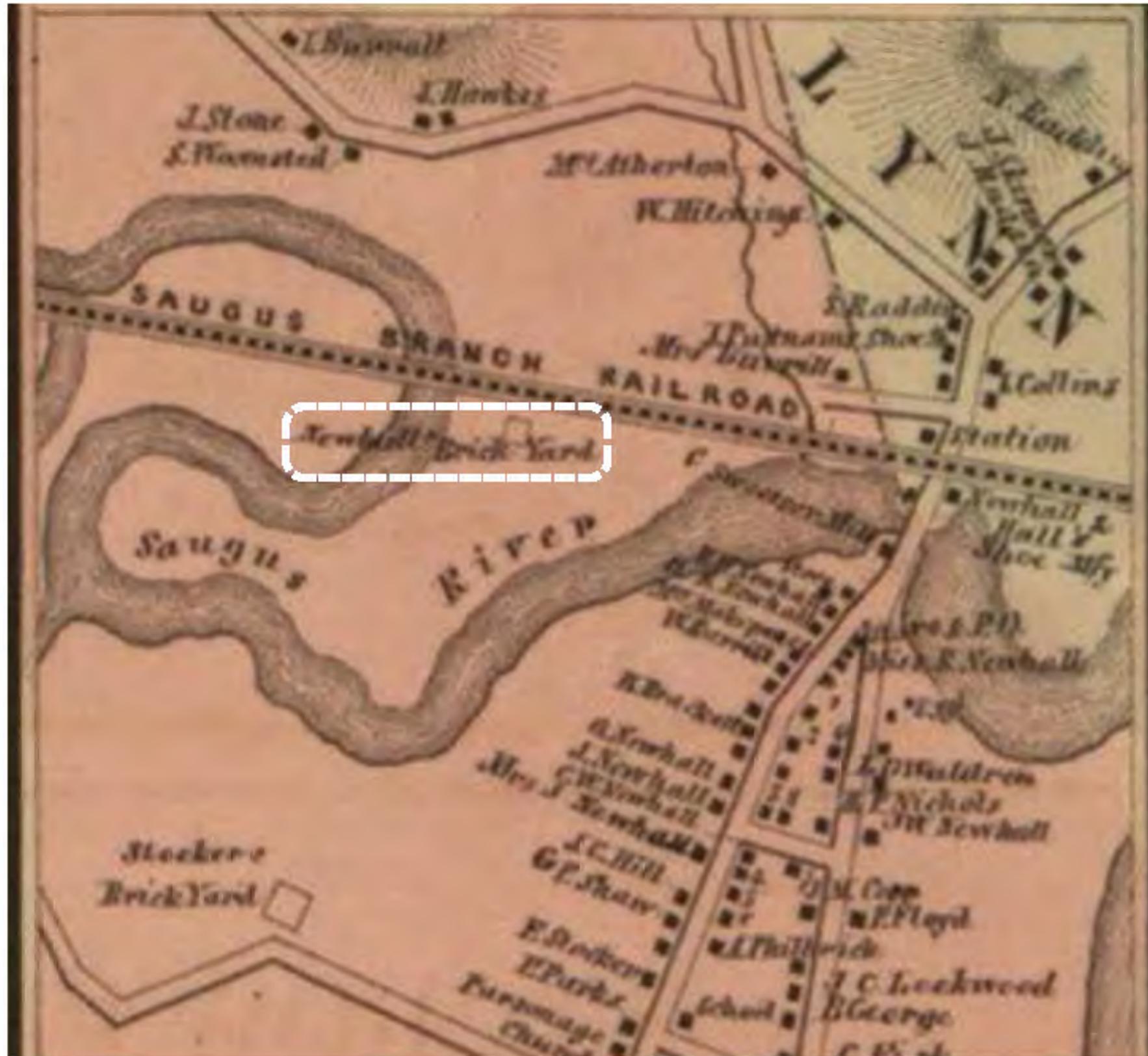
The 1896 bird's eye view of the East Saugus train depot shows the project area as unbuilt marshland as the railroad train is depicted passing by.



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

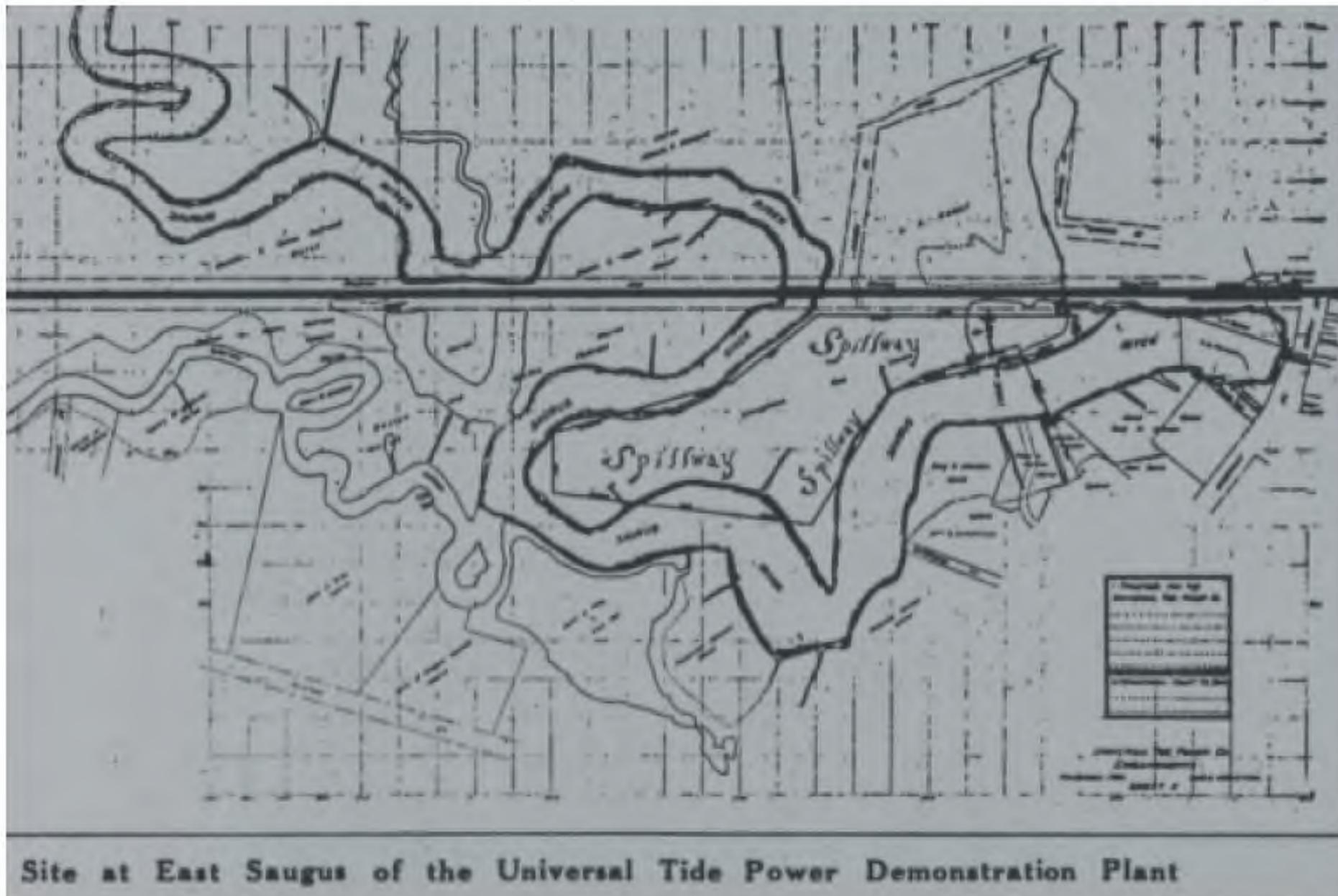


## FINDINGS

- 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.



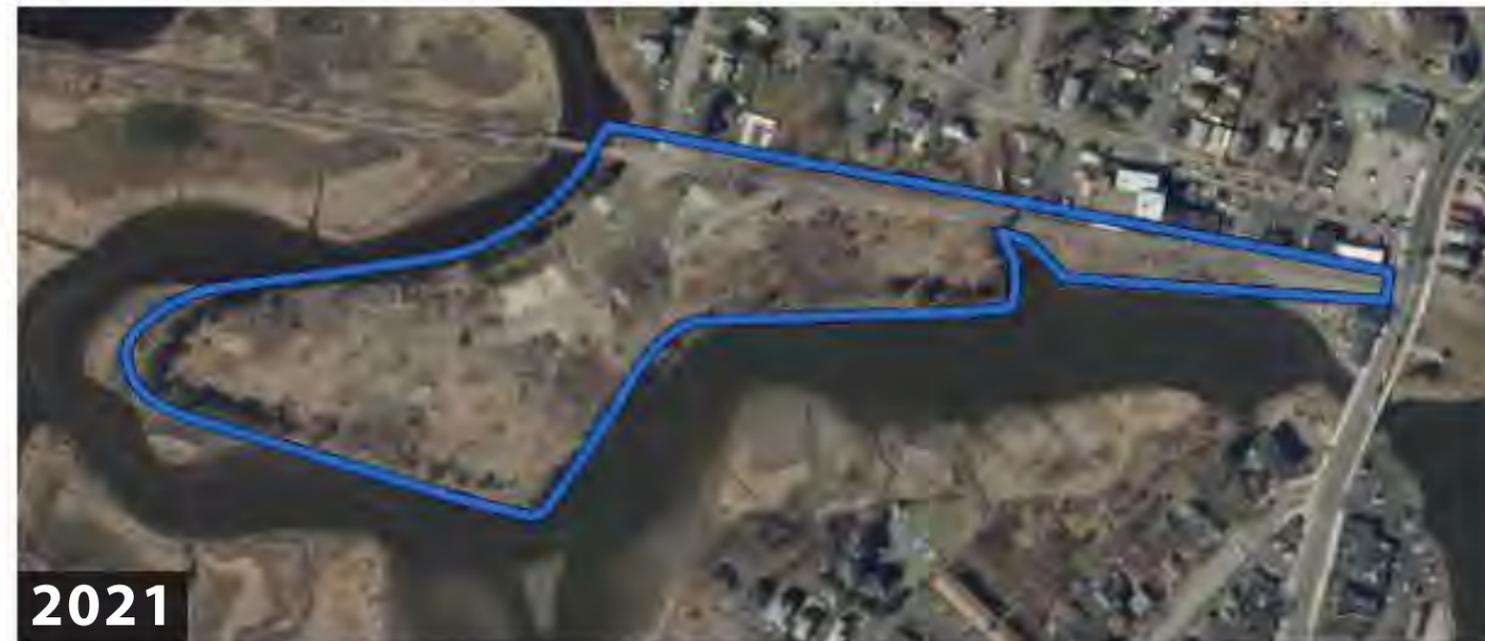
Property was under water at the time of aerial photo in 1955, remaining vacant until the 1960s.



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.



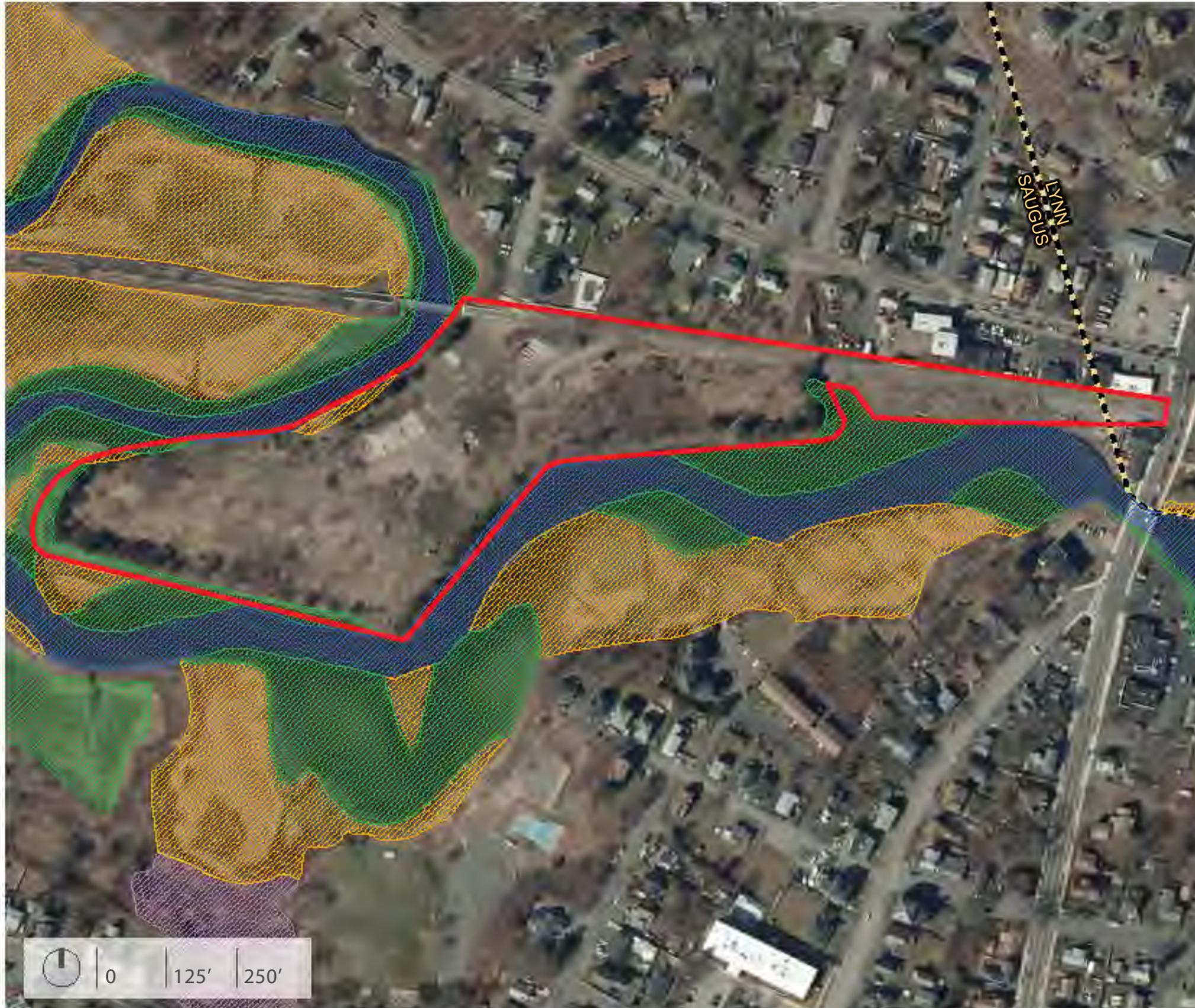
Closeup of wood plank fencing for erosion control.



**1970s-80s**

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

# TERRESTRIAL ECOLOGY | WETLANDS



## 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*

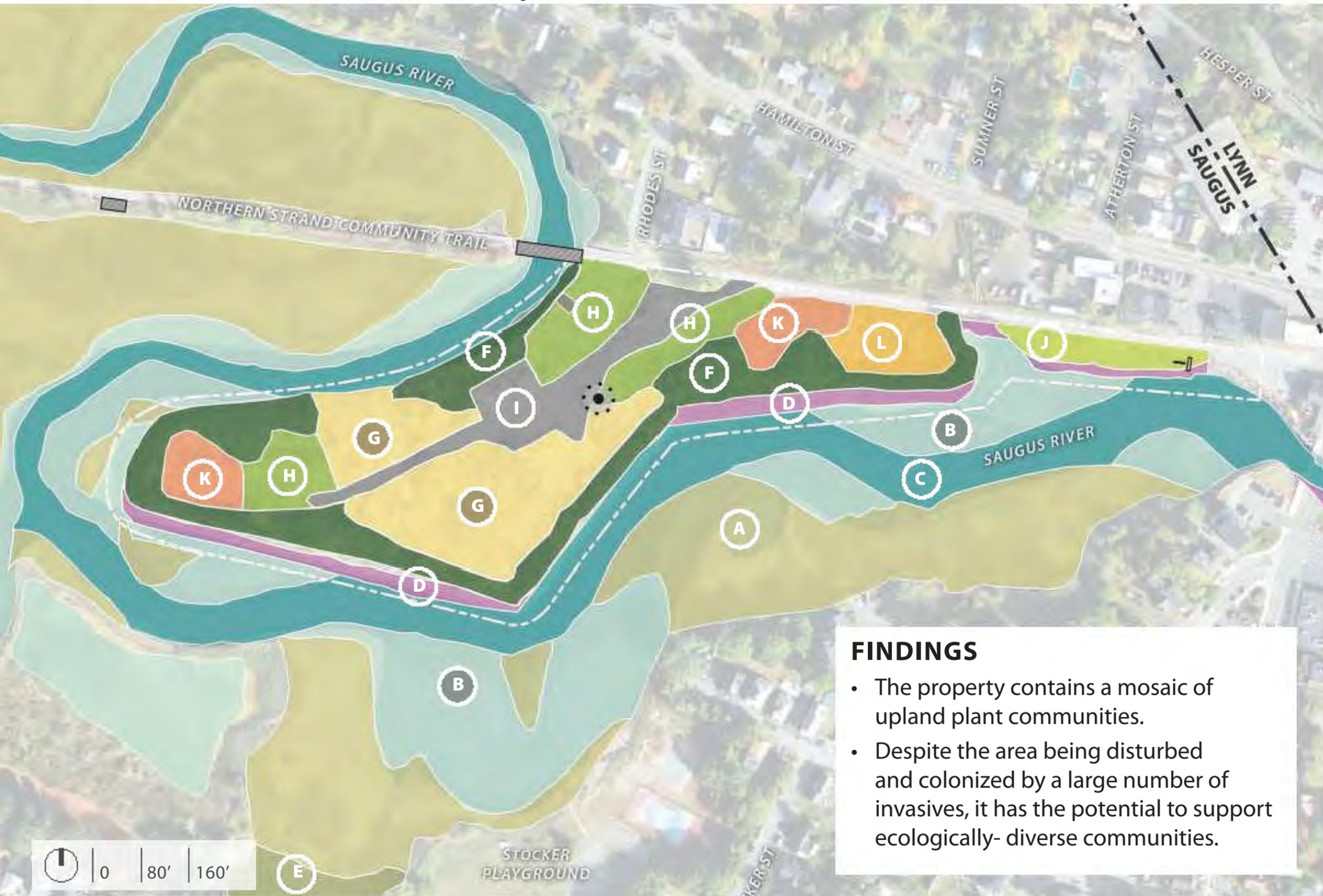


**Atlantic Flyway**  
A major north-south route for migratory birds that stretches from the Northern Atlantic Coast to South America

- \* 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

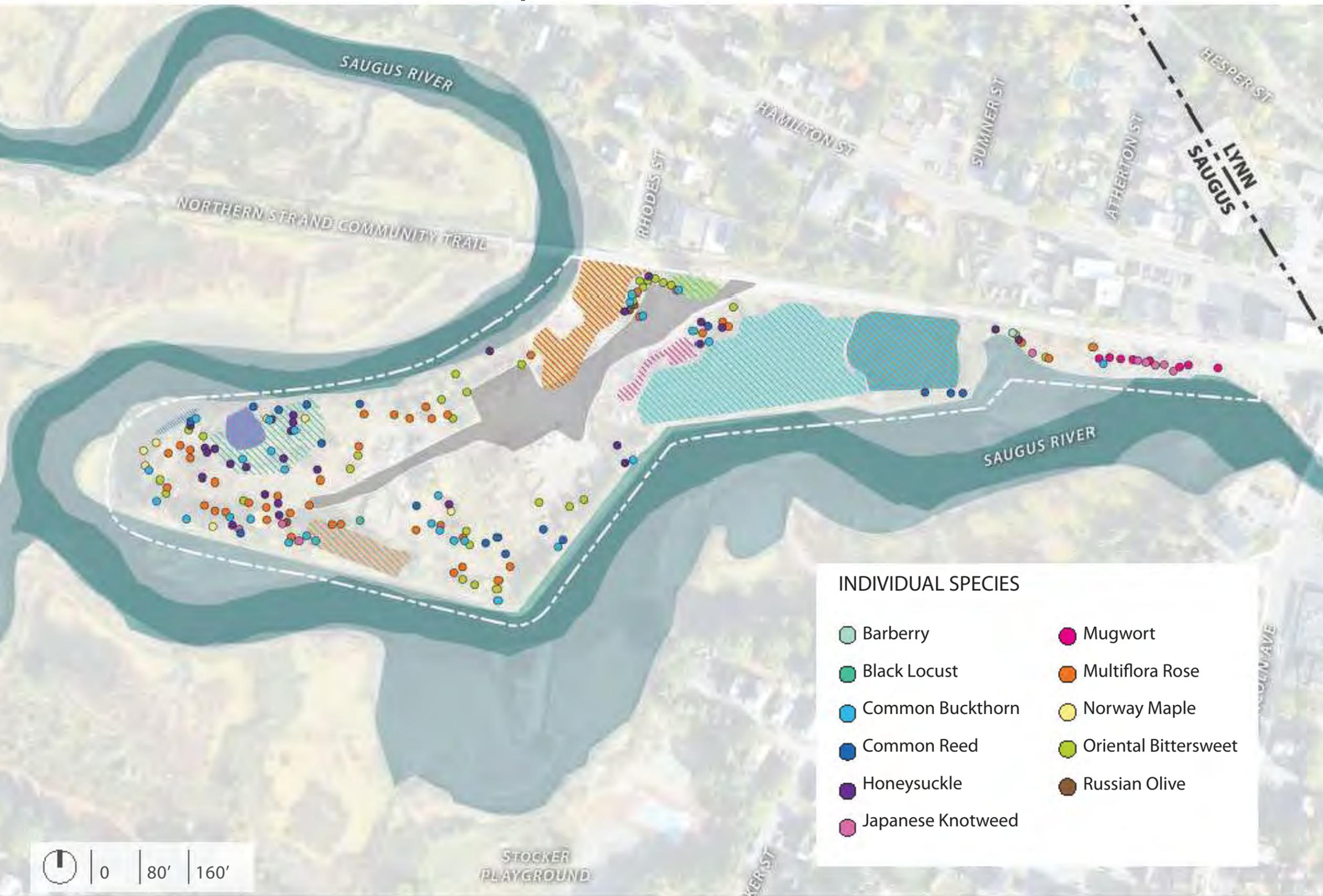
### UPLAND TYPES

- (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



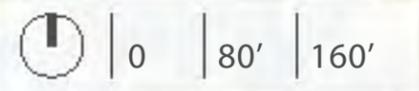
## LEGEND

HIGHER-DENSITY INVASIVES AREAS

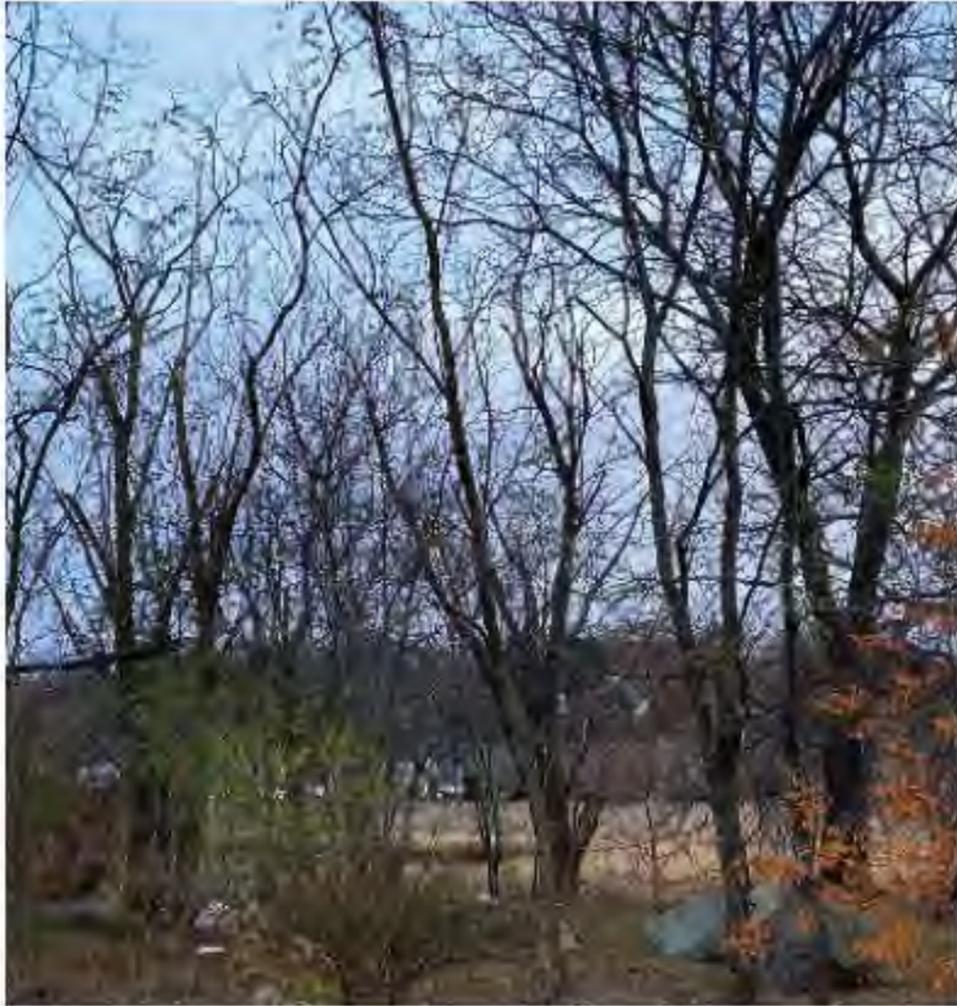
-  **Black Locust**
-  **Buckthorn Dominant** with Bittersweet and Multiflora Rose
-  **Buckthorn Dominant** with Multiflora Rose and Honeysuckle
-  **Buckthorn Dominant** with Honeysuckle, Multiflora Rose, and Bittersweet
-  **Buckthorn Dominant** with Black Locust, Multiflora Rose, Norway Maple, Bittersweet, and Garlic Mustard
-  **Common Reed**
-  **Multiflora Rose Dominant** with Buckthorn, Honeysuckle, and Japanese Knotweed
-  **Mugwort**
-  **Mugwort Dominant** with Garlic Mustard

## INDIVIDUAL SPECIES

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



# 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:

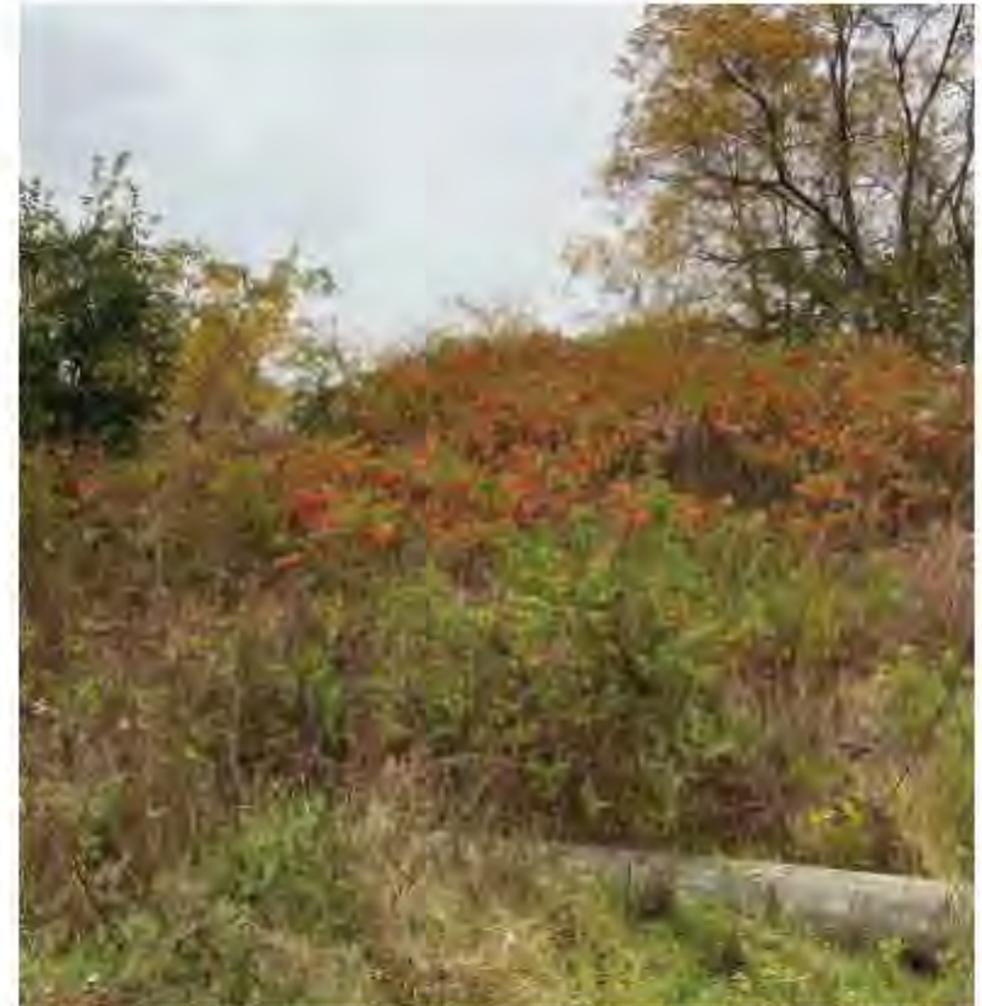
- Austrian Pine** *Pinus resinosa*
- Black Locust** *Robinia pseudoacacia*\*
- Eastern Poplar** *Populus deltoides*
- Norway Maple** *Acer platanoides*\*
- Norway Spruce** *Picea abies*
- Honey Locust** *Gleditsia triacanthos*



## (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** *Erigeron 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

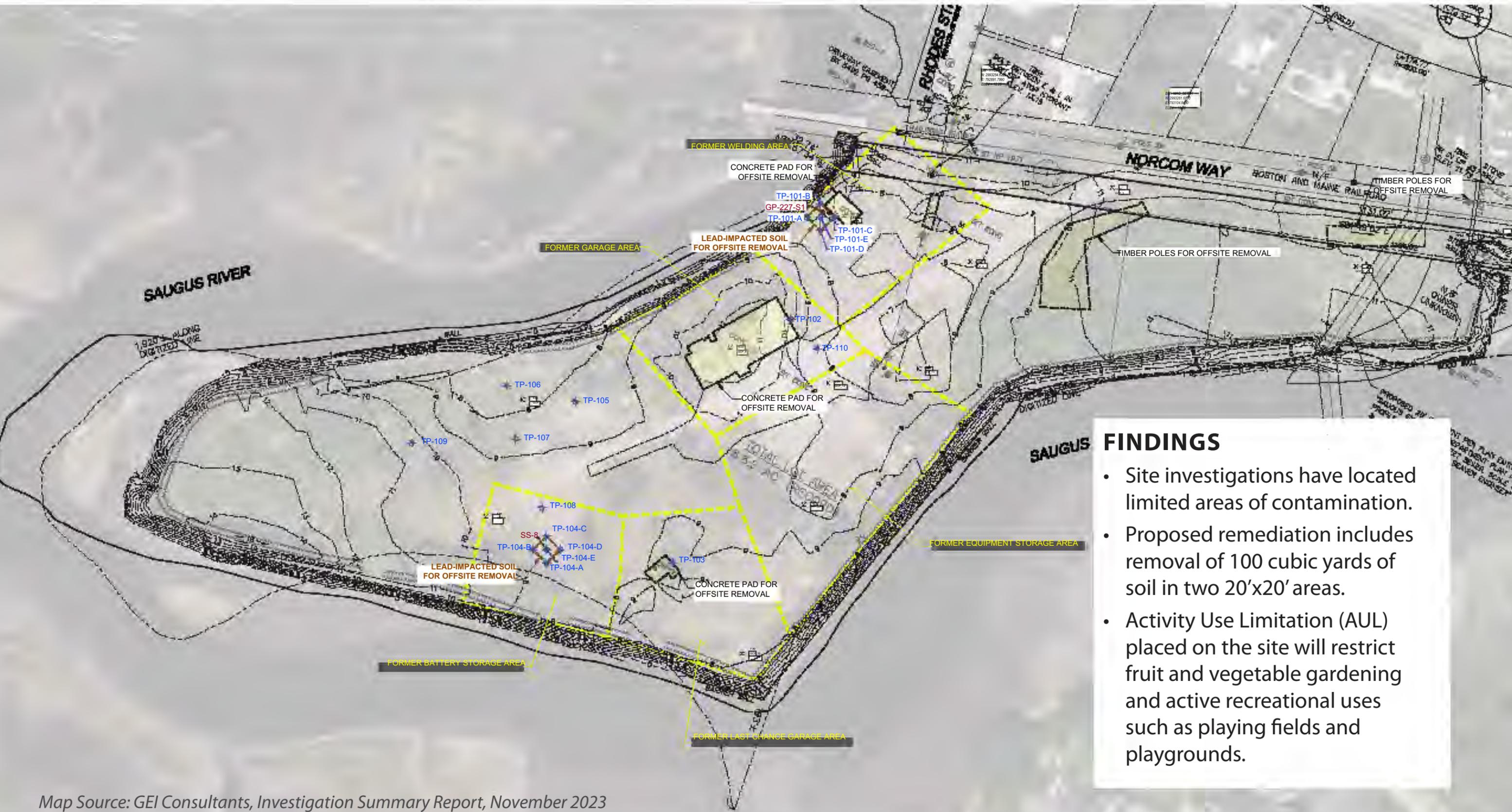


**NORTHERN STRAND WAYSIDE - SAUGUS, MA**

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# SITE ANALYSIS | 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

**NORTHERN STRAND WAYSIDE - SAUGUS, MA**

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# SITE ANALYSIS | ACCESS AND CIRCULATION



A pedestrian path from Rhodes Street, a private road, to the community bike trail.

Site access will likely be mostly by foot /bike via the Community Path

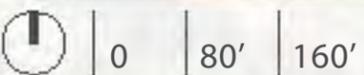


Vehicular access is limited; the closest parking belongs to the adjacent cannabis business.



## LEGEND

- P Private / business parking
- B Bus Stop
- Dense Vegetation

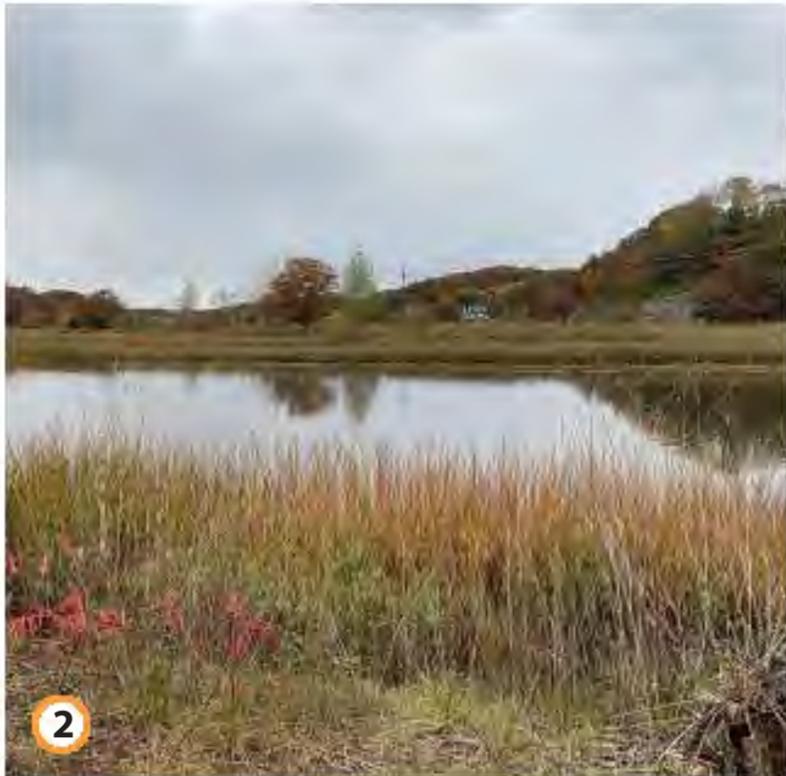


Dense vegetation obstructs visual and physical access into the site and along the riverbank.



The current entry reflects an abandoned site with its closed vehicular gate.

# 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

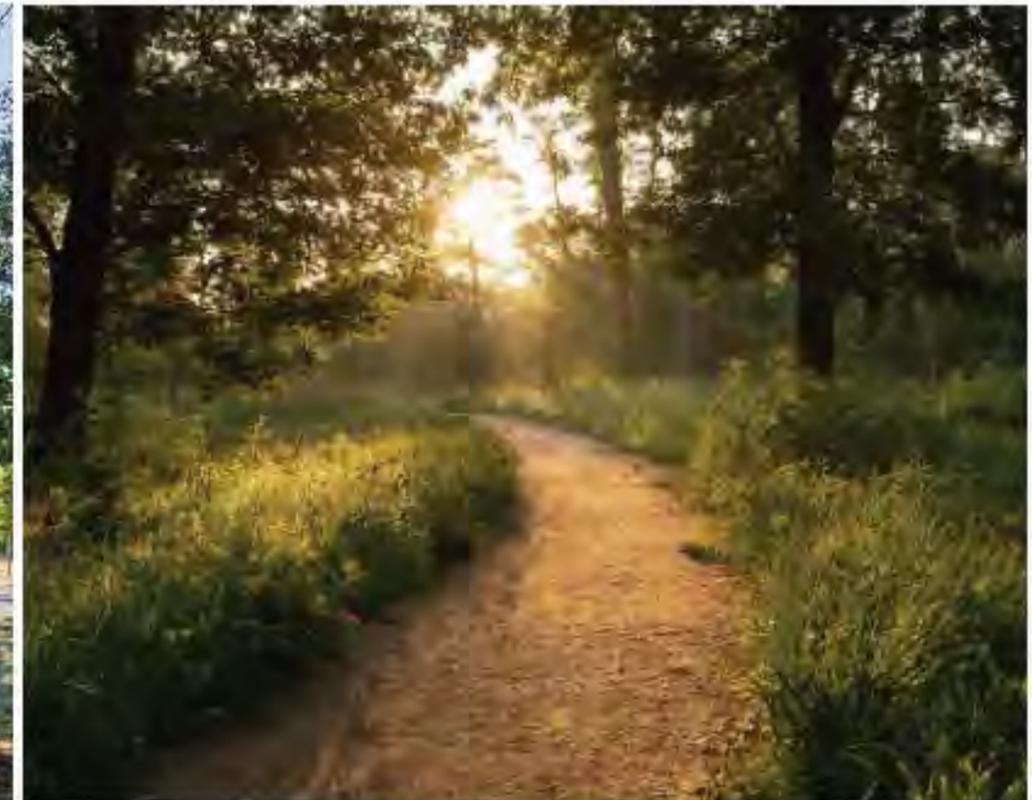
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## **INITIAL DESIGN CONCEPTS**

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- Potential Site Character and Program
- Concept Designs

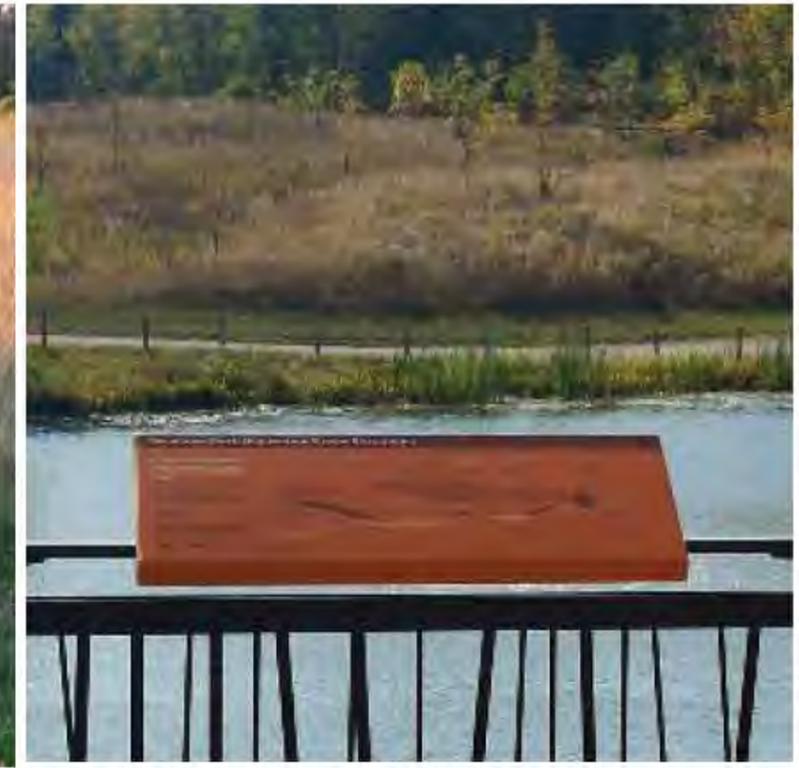
# POTENTIAL SITE CHARACTER & PROGRAM | LANDSCAPE EXPERIENCES



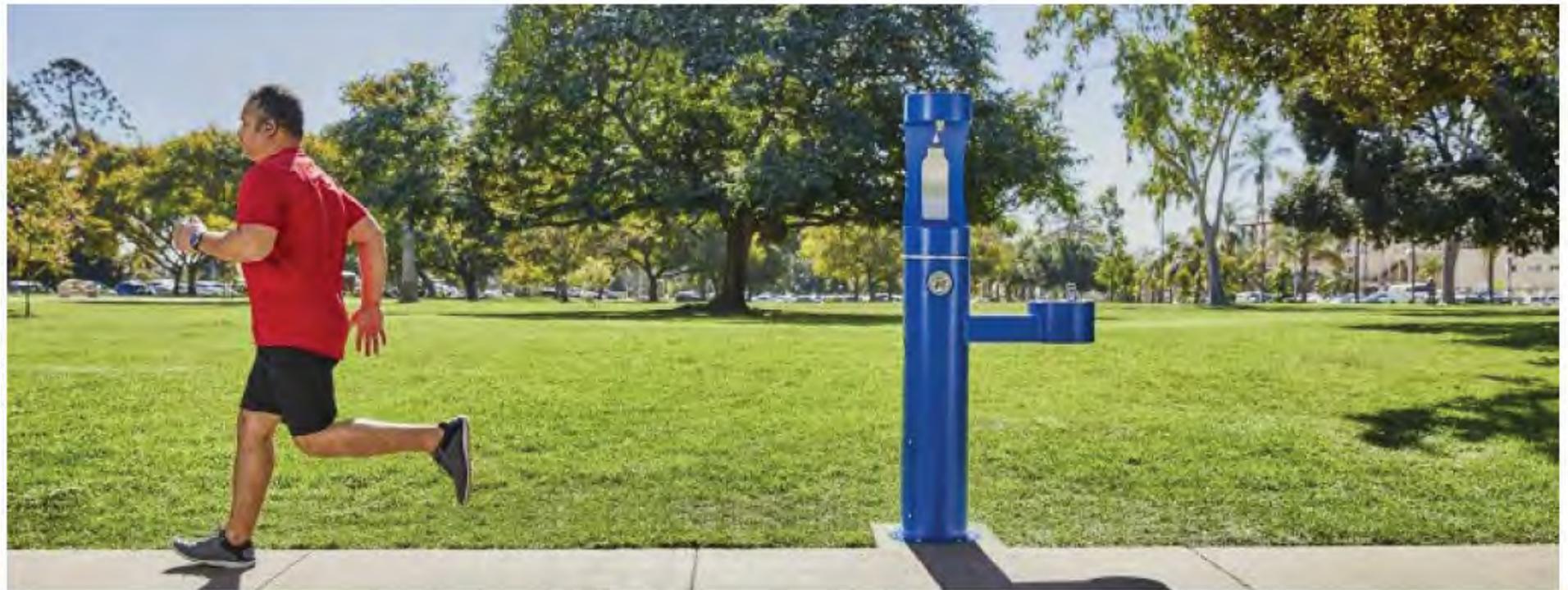
# POTENTIAL SITE CHARACTER & PROGRAM | BIRD-RELATED FEATURES



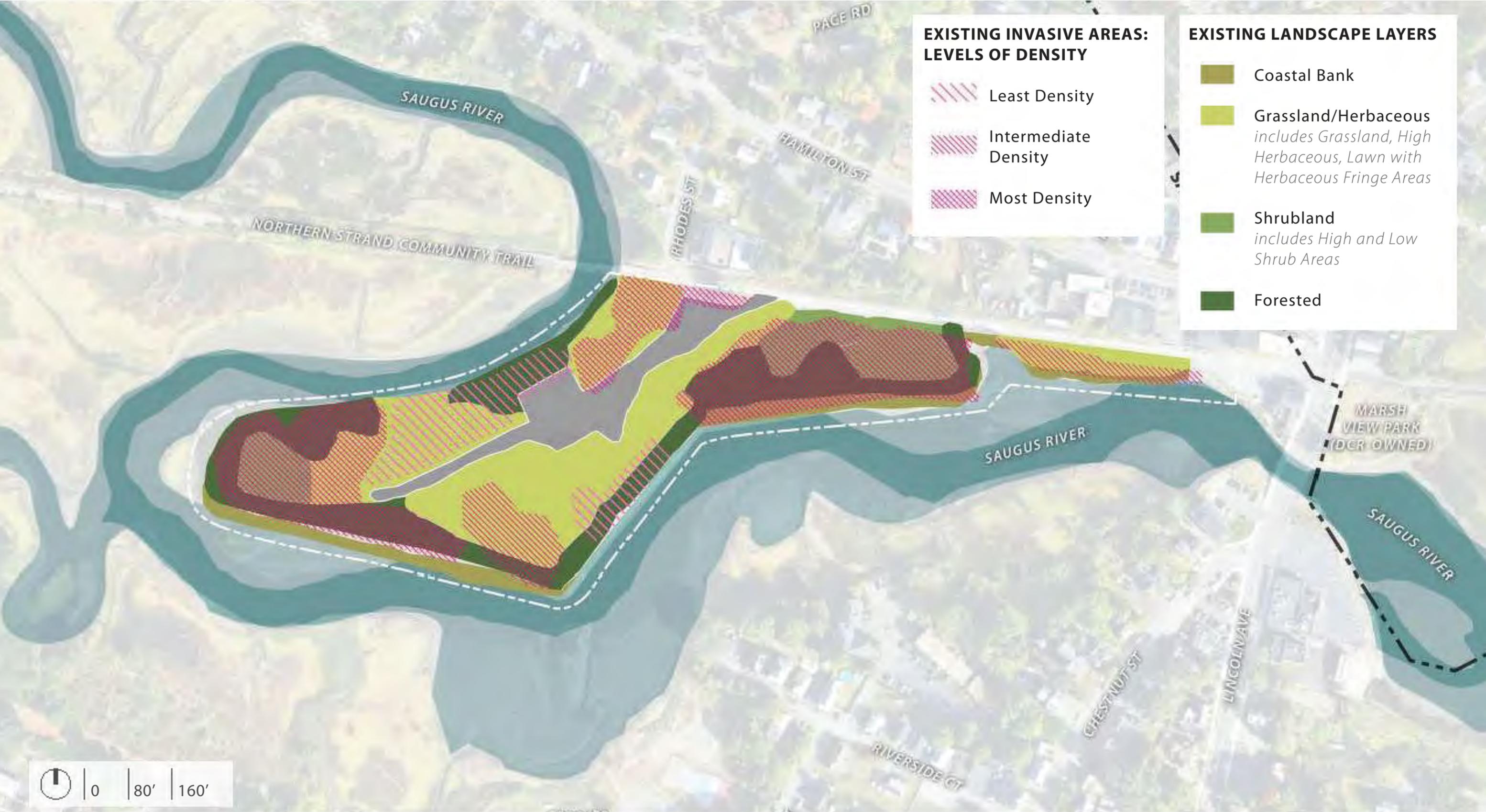
# POTENTIAL SITE CHARACTER & PROGRAM | EDUCATIONAL OPPORTUNITIES



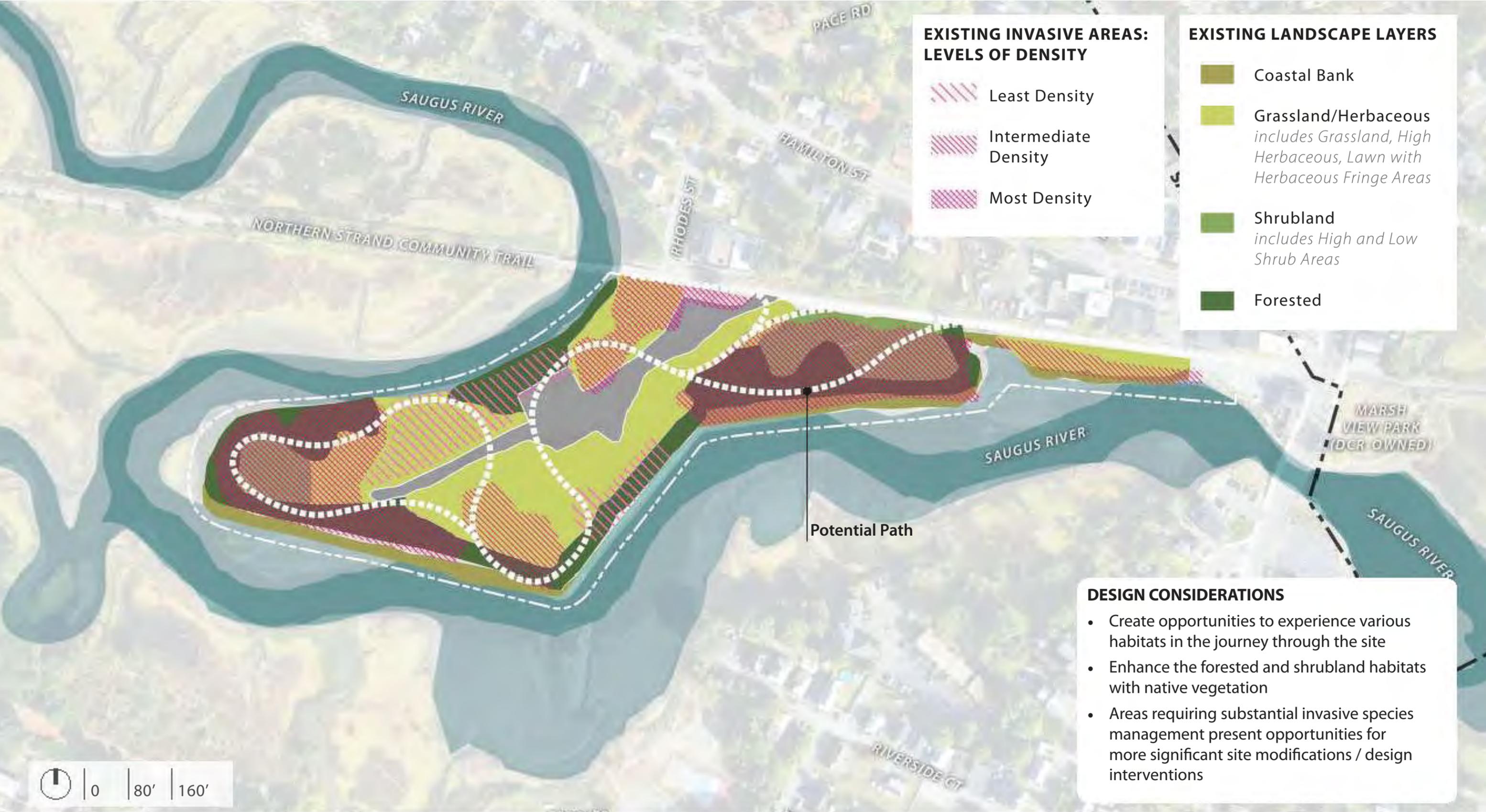
# POTENTIAL SITE CHARACTER & PROGRAM | AMENITIES ALONG THE TRAIL



# CONCEPT DESIGN INFLUENCES | EXISTING LANDSCAPE CONDITIONS



# CONCEPT 1 | POTENTIAL PATH OVERLAY



**EXISTING INVASIVE AREAS:  
LEVELS OF DENSITY**

-  Least Density
-  Intermediate Density
-  Most Density

**EXISTING LANDSCAPE LAYERS**

-  Coastal Bank
-  Grassland/Herbaceous  
*includes Grassland, High Herbaceous, Lawn with Herbaceous Fringe Areas*
-  Shrubland  
*includes High and Low Shrub Areas*
-  Forested

**DESIGN CONSIDERATIONS**

- Create opportunities to experience various habitats in the journey through the site
- Enhance the forested and shrubland habitats with native vegetation
- Areas requiring substantial invasive species management present opportunities for more significant site modifications / design interventions



# CONCEPT 1 | MEANDERING LANDSCAPE & ENVIRONMENTAL FEATURES



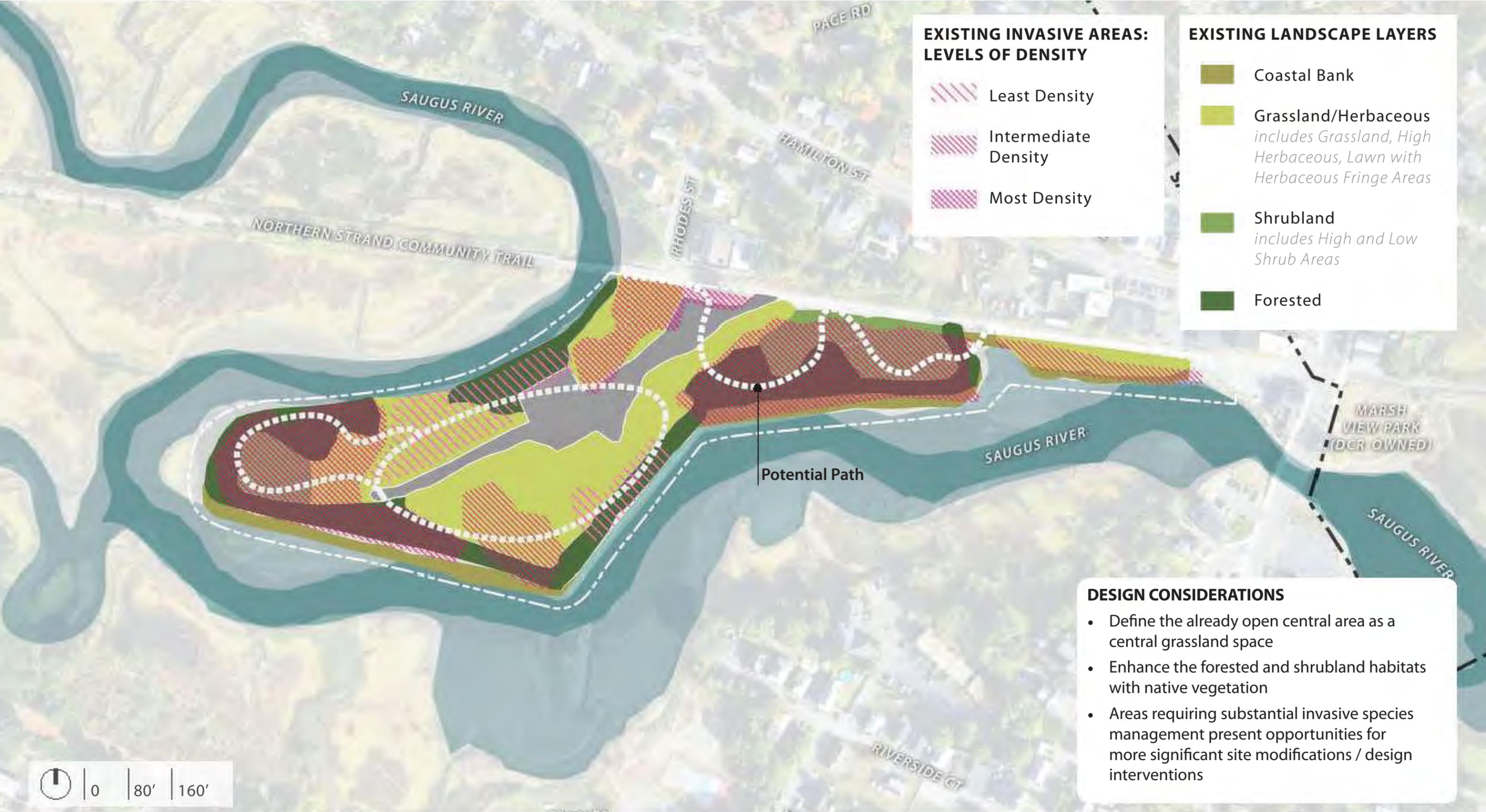
**LEGEND**

- Coastal Bank
- Grassland/Herbaceous
- Shrubland
- Forested
- Entry Area
- ↗
 Overlook
- Bird-related feature
- Accessible Path

**DESIGN CONSIDERATIONS**

- Create opportunities to experience various habitats in the journey through the site
- Enhance the forested and shrubland habitats with native vegetation
- Areas requiring substantial invasive species management present opportunities for more significant site modifications / design interventions

# CONCEPT 2 | POTENTIAL PATH OVERLAY



**EXISTING INVASIVE AREAS:  
LEVELS OF DENSITY**

-  Least Density
-  Intermediate Density
-  Most Density

**EXISTING LANDSCAPE LAYERS**

-  Coastal Bank
-  Grassland/Herbaceous  
*includes Grassland, High Herbaceous, Lawn with Herbaceous Fringe Areas*
-  Shrubland  
*includes High and Low Shrub Areas*
-  Forested

**DESIGN CONSIDERATIONS**

- Define the already open central area as a central grassland space
- Enhance the forested and shrubland habitats with native vegetation
- Areas requiring substantial invasive species management present opportunities for more significant site modifications / design interventions



# CONCEPT 2 | OUTDOOR ROOMS & RECREATIONAL PROGRAMMING





# 5

## **WE WANT TO HEAR FROM YOU**

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