

# Designing and Operating Accessible Nature Trails

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# All Persons Trails

## How many of you...

- Are just now being introduced to APTs?
- Have visited an accessible nature trail?
- Have attended a training or presentation on accessible trails?
- Are likely to be planning an accessible trail soon?





# MAPLE

Mass Audubon Accessible Programs  
& Learning Experiences





- Adaptive Activities and Programs
- Inclusive Customer Service
- Partnerships and Collaboration
- Opportunities for Meaningful, Long-Term Engagement
- Universally-Designed Features and Experiences



# Adaptive Activities & Programs

- Public Programs
- Group Programs
- Self-Guided Experiences
- Events
- Sensory Days



# Opportunities for Meaningful and Long-term Engagement

- Vocational-Transitional Internships
- Inclusive Volunteering
- In-depth Education programs



# Universally-designed Features & Experiences

- Entrances and admission areas
- Restrooms
- Program spaces
- Exhibition spaces
- Boardwalks and Overlooks
- Wildlife viewing areas
- Specialized gardens
- ADA picnic tables
- Nature play features
- Multi-use seating areas
- All Persons Trails



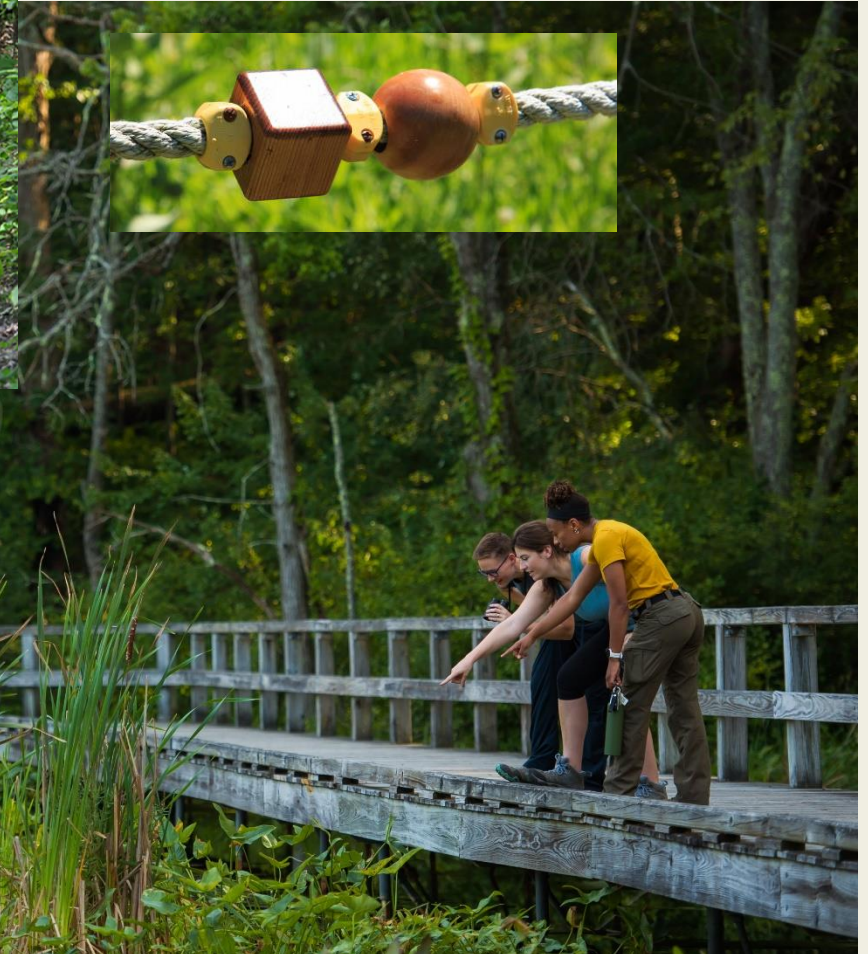
# APT Signage





# Physical Supports

- Navigation
- Multi-use Seating
- ADA Picnic Tables
- Beads

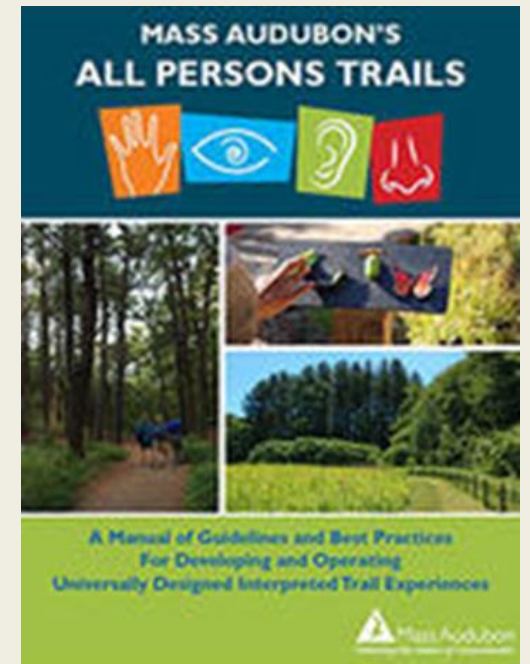
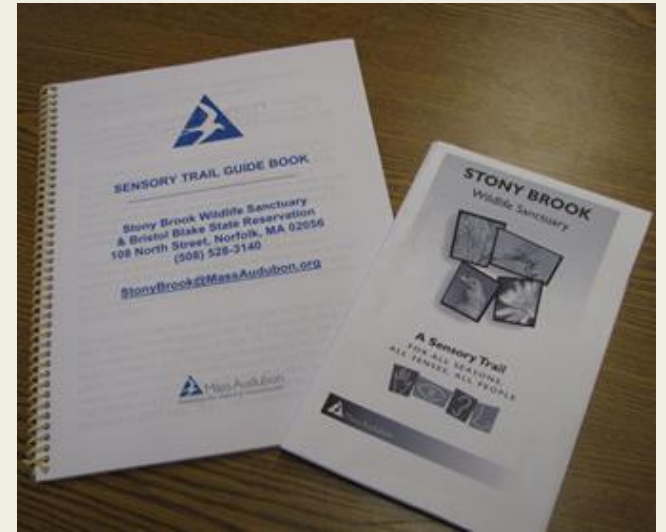


# Displays & Features



# Trail Resources

- **Tour booklets** – regular print, large print, braille, online
- **Trail maps** – printed and tactile formats
- **Audio tours** – online, audio players, cell phone
- Items to borrow
- Trained customer service staff
- Guidelines for other organizations



# APT Components

- Universal Design
- Trained staff and volunteers
- Transportation
- Materials in multiple formats
- Information available in advance
- Outreach and collaboration
- Collecting visitor feedback
- Networking
- Sharing information with others



# Inclusive Customer Service

## Staff capacity

- Awareness, humility, and sensitivity
- ADA regulations
- Accessibility etiquette and best practices
- Providing accurate information
- Policies and positions
- Accessible features
- Available visitor resources



# Partnerships & Collaboration





## Internal

- Site teams
- Volunteers
- Capital Projects
- Development
- Statewide Accessibility Team
- Accessibility Specialists
- Marketing & Communications

## External

- Accessibility consultants
- Community resource professionals
- Expert Users
- Funders and donors
- Trail design and construction teams
- Printers and fabricators
- Accessibility community of practice

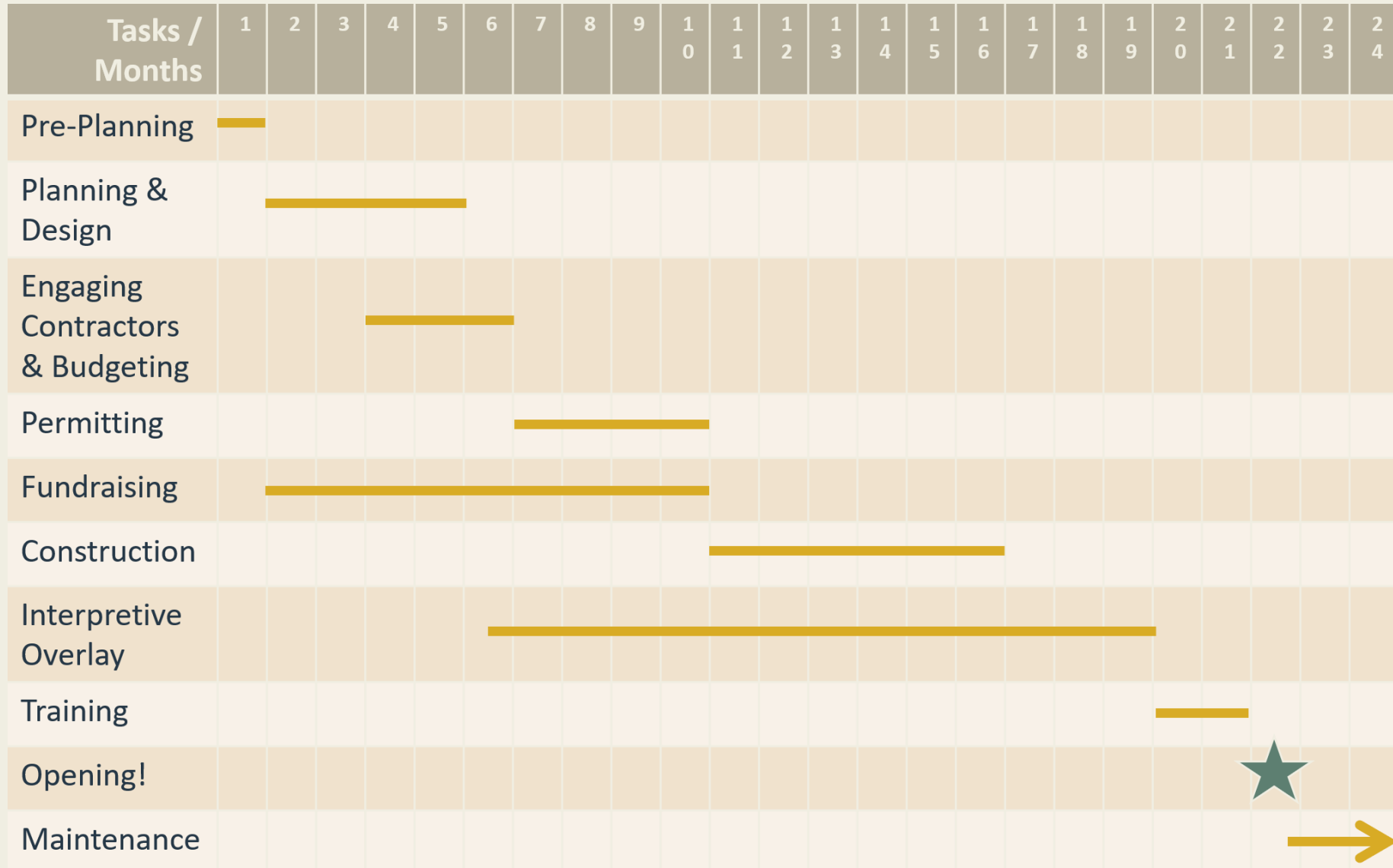


 All Persons Trail  
 Coming soon!

1. Stony Brook
2. Broadmoor
3. Arcadia
4. Attleboro Springs
5. Trailside
6. Pleasant Valley
7. Broad Meadow Brook
8. Wellfleet
9. Boston Nature Center
10. Drumlin Farm
11. Habitat
12. North River
13. Allens Pond
14. Wachusett Meadow
15. Tidmarsh
16. Cedar Pond
17. Brewster's Woods
18. Long Pasture
19. Pawtucket Farm
20. Oak Knoll – 2025
21. Felix Neck – 2025
22. Ipswich River – 2026
23. Museum of American Bird Art - 2026

# Statewide All Persons Trails

# How is an APT created?





# APT Cost & Budgeting

## BUDGET

- Surveying and Wetland Delineation
- Permitting
- Design & Engineering Services
- Trail Construction – In house or through contractors. Materials, labor, lodging, transport, training.
- Bridge, boardwalk, ponding platforms.
- Parking or associated construction.
- Landscape Improvements – soil, vegetation removal, new plantings
- Interpretive Elements
- Staff Time, Maintenance Endowment, Contingency, Marketing, Development

TRAIL BUDGET
<b>Scope</b>
<b>Project Prep / Planning</b>
Surveying
Wetland Delineation
Engineering / Design Services
Permitting - NOI (document prep & hearings)
<b>Subtotal</b>
<b>Trail Construction</b>
Trail Surfacing
Boardwalk Construction
Viewing or Ponding Platform
Benches / Multi-use Seating Areas
<b>Subtotal</b>
<b>Education &amp; Interpretive Elements</b>
APT Entrance Sign
Post & Rope Guide
Stop Markers
Interpretive Tactile Artifacts & Labels
Audio Tour Production
Audio Player
Printed Tour Book & Printed Tactile Map
Printed Tour Booklet
Consultants
<b>Subtotal</b>
<b>Trail Total</b>
Staff Time - 20%
Contingency - 10%
Maintenance - 5%

# APT Funding

## FUNDING

- Mass Trails Grant
- Community Foundations
- Public and Private Foundations
  - Mass Cultural Council
  - Tower Foundation
  - Reeve Foundation
  - Alvarium Foundation
  - IMLS Foundation
- Corporate Funders
- Individual Private Donors



**As a Long Pasture Discovery Center donor, you realize the power of supporting your neighborhood sanctuary.**

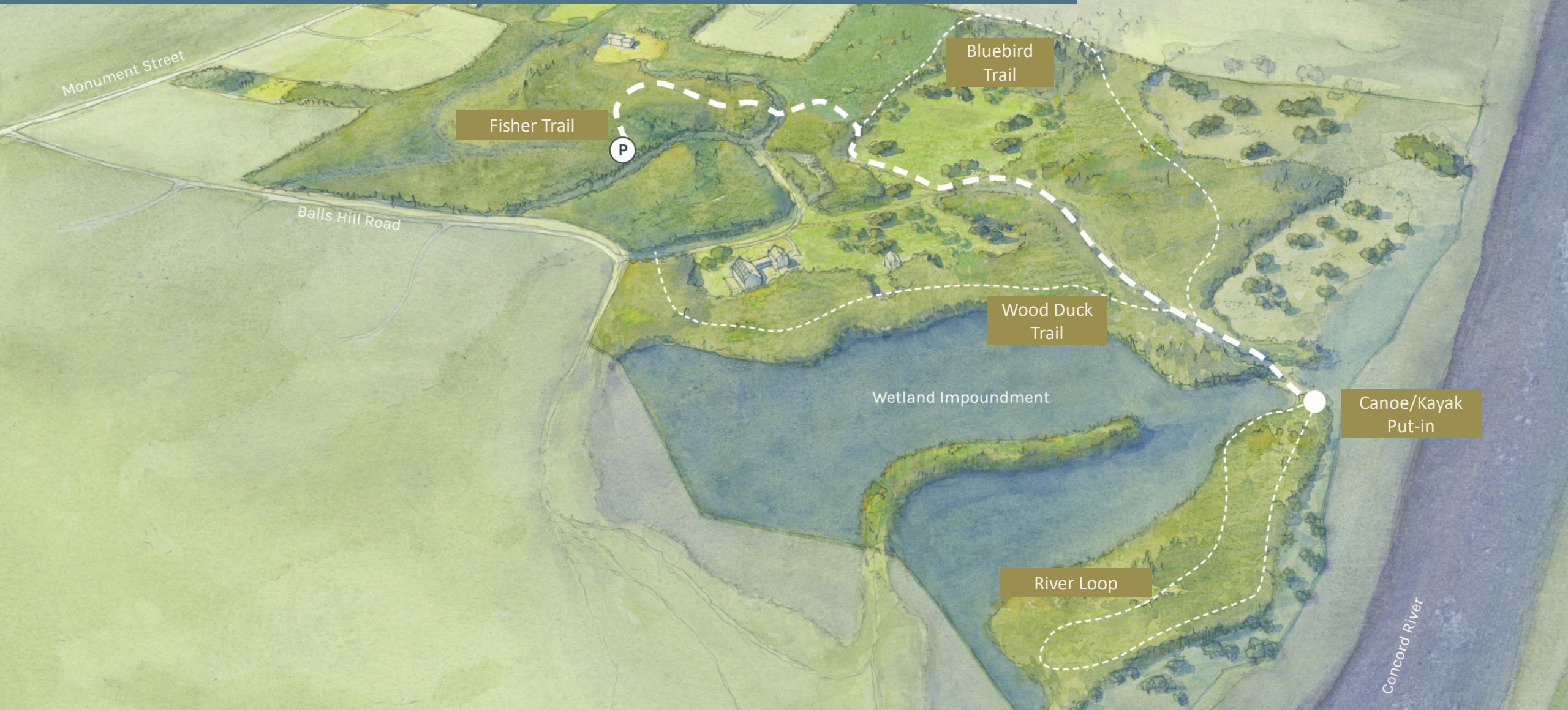
You can continue to make a difference in our community by supporting our next and most critical project,

**[The All Persons Trail at Long Pasture](#)**

Mass Audubon is creating the All Persons Trail at Long Pasture Wildlife Sanctuary to increase safe access to the outdoors, serve as a resource for our local community—especially the one-sixth of the general population that has some disability—and ensure that people of all abilities can experience the wonders of nature year-round.

We know that you also believe nature should be enjoyed by everyone. Please **make a gift today** to **your** neighborhood sanctuary!

# #17 Brewster's Woods



Monument Street

Balls Hill Road

Fisher Trail

P

Bluebird Trail

Wood Duck Trail

Wetland Impoundment

Canoe/Kayak Put-in

River Loop

Concord River





**FLOOD ZONE:**  
Zones VE Elev. 13', AE Elev. 13', AE Elev. 12', & X (Min. Flood Haz.)  
Community Panel No. #250001 0559 J  
July 16, 2014



**ZONE:**  
RF-1  
Area (min.) 87,120 SF (RP)  
Frontage (min.) 20'  
Width (min.) 125'  
Setbacks:  
Front 30'  
Side 15'  
Rear 15'

**DIRECTIONS:**  
From Hyannis - Follow Main Street and turn right onto Bassett Lane. Continue straight onto Barges Way. Turn right onto Enterprise Road and straight through the intersection onto Independence Drive. Turn left onto Mary Dana Road and right onto Main Street (Rt. 6A). Turn left onto Bone Hill Road.  
#345 is at the end on the left.

# #18 Long Pasture

PROPOSED ALL PERSONS TRAIL IMPROVEMENTS  
APT CONNECTOR - 175'  
APT LOOP 1 - 725'  
APT LOOP 2 - 400'  
APT LOOP 3 - 100'  
TOTAL = 2,025'

Night Heron Pond

PROPOSED INVASIVES MANAGEMENT / BUFFER RESTORATION\* (TYPICAL)

PROPOSED APT LOOP 1  
5' X 725'

APT LOOP 2  
5' X 400'

CONNECTOR TRAIL  
5' X 175' ADJACENT LANDWARD

PROPOSED ADA PICKING AREA







# #19 Pawtucket Farm







Public bus stop  
Parada del autobús  
de servicio público

Elevation (feet)  
Altura (pies)

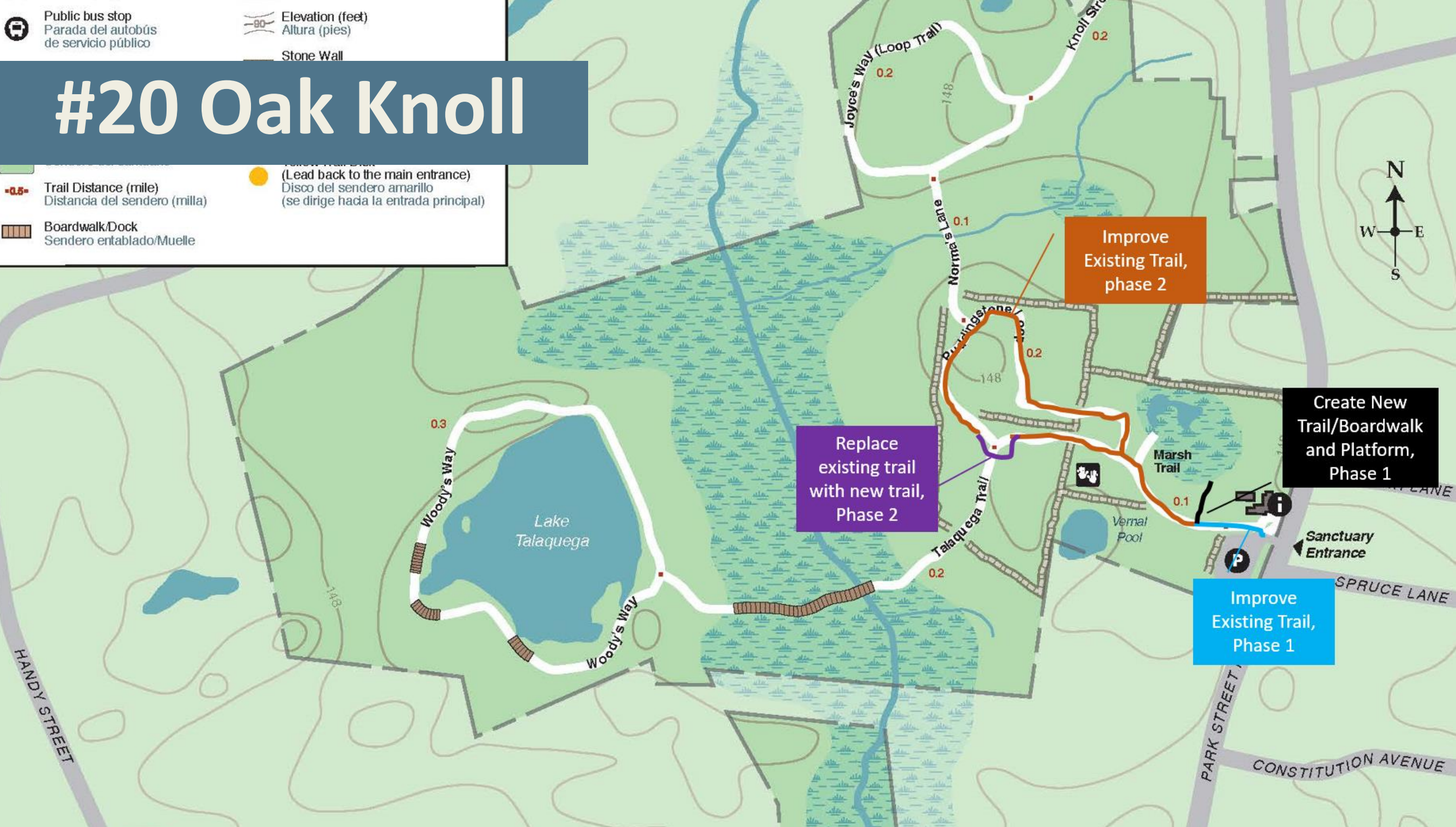
Stone Wall

# #20 Oak Knoll

Trail Distance (mile)  
Distancia del sendero (milla)

(Lead back to the main entrance)  
Disco del sendero amarillo  
(se dirige hacia la entrada principal)

Boardwalk/Dock  
Sendero entablado/Muelle



Improve Existing Trail, phase 2

Replace existing trail with new trail, Phase 2

Create New Trail/Boardwalk and Platform, Phase 1

Improve Existing Trail, Phase 1

HANDY STREET

PARK STREET

CONSTITUTION AVENUE

SPRUCE LANE

Woody's Way

Lake Talaquega

Woody's Way

Joyce's Way (Loop Trail)

Norman's Lane

Burroughstone

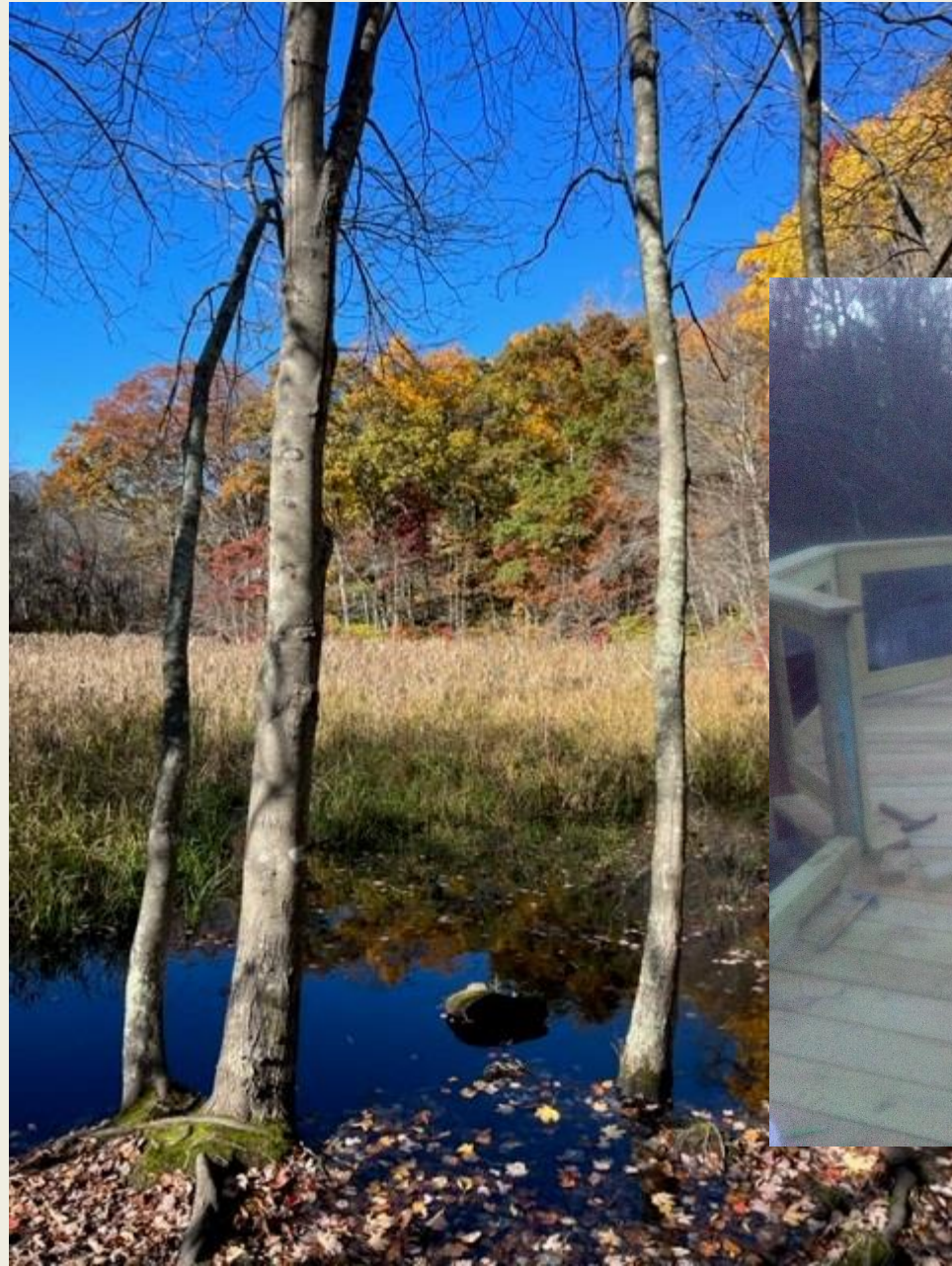
Talaquega Trail

Marsh Trail

Vernal Pool

Sanctuary Entrance





# Maintaining and updating existing APTs

## Challenges and Barriers

- Staff availability and knowledge (planning, permitting, construction)
- Additional ongoing and long-term maintenance and oversight requirements
- Availability of partnering companies for construction
- Availability of equipment
- Fundraising



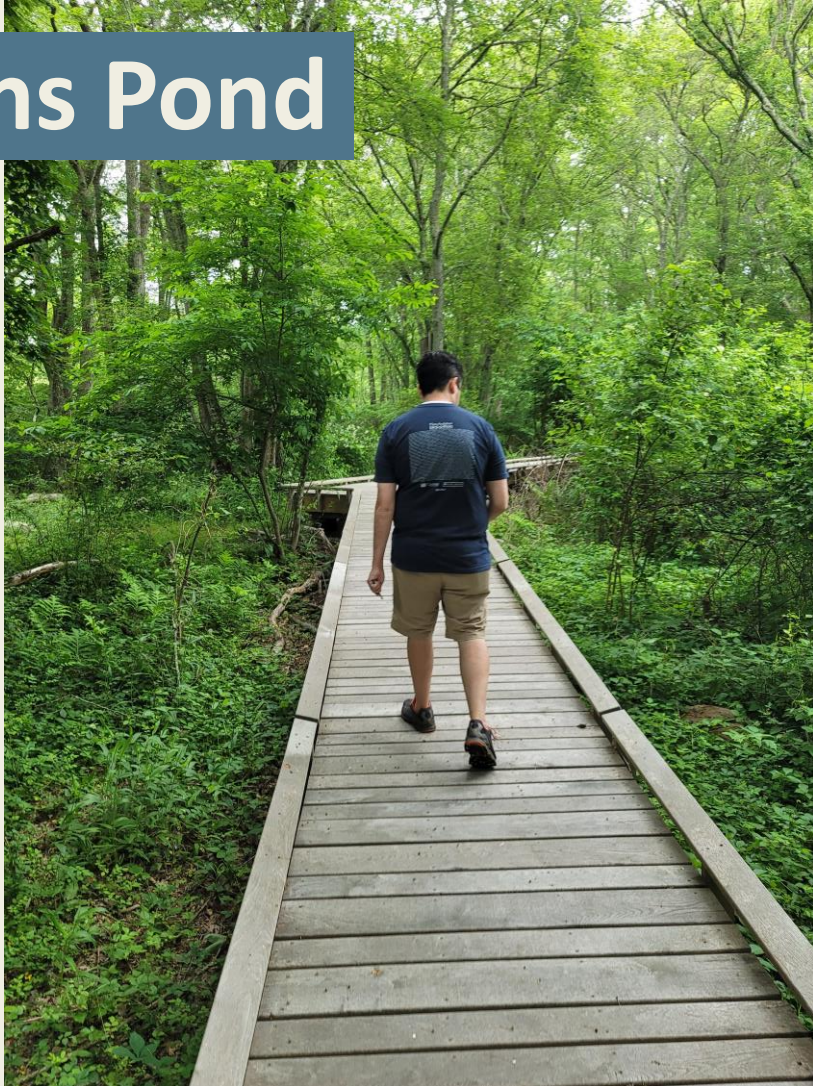
# Ongoing Maintenance Needs

- Resurfacing
- Weeding, edge maintenance
- Erosion control
- Repair/replacement of rope guide
- Repair/replacement of tactile elements
- Updates to audio tours



# Maintaining and updating existing APTs

## Allens Pond



BEFORE



AFTER

# Maintaining and updating existing APTs

## Allens Pond



BEFORE



AFTER



# Maintenance Assessment

- Assess current maintenance needs.
- Develop estimate of cost associated with current maintenance needs and annual costs moving forward.
- Establish annual funding source for APT maintenance.



# Maintenance Communications

## Stony Brook



# Maintenance Communications

Mass Audubon | Stony Brook Wildlife Sanctuary

https://www.massaudubon.org/places-to-explore/wildlife-sanctuaries/stony-brook

## Stony Brook Wildlife Sanctuary

Norfolk 107 Acres

- Visit Stony Brook
- Trails
- Programs & Activities
- Camp
- Support

A section of our All Persons Trail is currently flooded and difficult to pass with a mobility device.

### Plan Your Visit

Known for its extensive boardwalk system that goes through forest, fields, and wetlands, Stony Brook offers up-close views of

56°F Light rain | 11:02 AM 5/8/2024

# Maintaining and updating existing APTs

## Pleasant Valley



BEFORE

# Maintaining and updating existing APTs

## Pleasant Valley Repairs



# Maintaining and updating existing APTs

## Pleasant Valley Repairs in Progress



# Maintaining and updating existing APTs

## Pleasant Valley Repairs in Progress

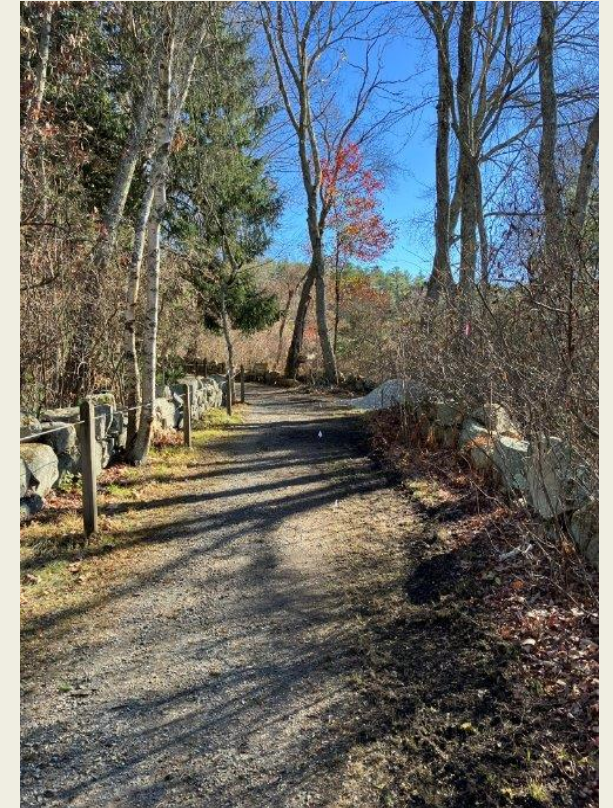


# Maintaining and updating existing APTs

## Stony Brook Repairs – an opportunity

### APT Before Work

- Poor drainage
- Widened by visitors to avoid wet spots
- Build up of material on the edges





# Maintaining and updating existing APTs

## Training opportunity



# Maintaining and updating existing APTs

## Work Plan

Trail Segment	Stony Brook Sensory Trail (All Persons Trail)		
Length:	820 ft		
Distance	Location	Condition	Comments/Work Needed
0	End of pavement, start of gravel	6'-8' wide, packed gravel	
22	Trail intersection, 90° turn to west; start pooling	Degradation of tread leading to pooling	(22-60) Add material to tread to reestablish grade. ≥2" thick needed
60	End pooling		
140	Start pooling	Degradation of tread leading to pooling	
154	End pooling		(140-154) Add material to tread to reestablish grade where applicable, crown where no side slope present. ≥2" thick needed
175	Begin channelizing	Degradation of tread leading to water channeling	
210	Roots	Roots exposed on tread	Remove roots

# Maintaining and updating existing APTs

Geotextile cloth folded over coarse stone creating a drainage lens



# Maintaining and updating existing APTs

## Use of electric equipment

