



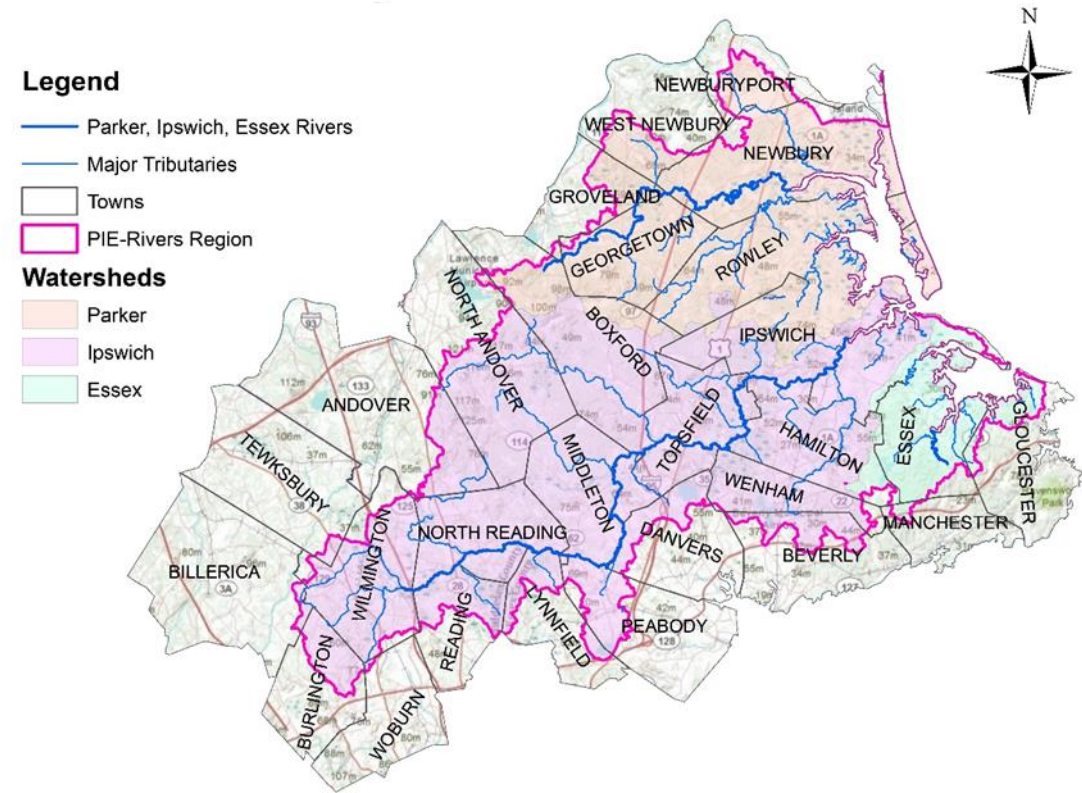
PIE-Rivers 2023 Annual Meeting

Thursday, December 7 2023

Parker River National Wildlife Refuge

Parker River + Ipswich River + Essex River = PIE-Rivers Partnership

The PIE-Rivers Restoration Partnership is the first cross-watershed collaborative in Massachusetts. We implement partner-driven measures that promote clean water and healthy ecosystems.



Agenda

8:30 am – Coffee + Arrival

9:00 am – Session 1: Getting Things Done

10:00 am – Networking Break

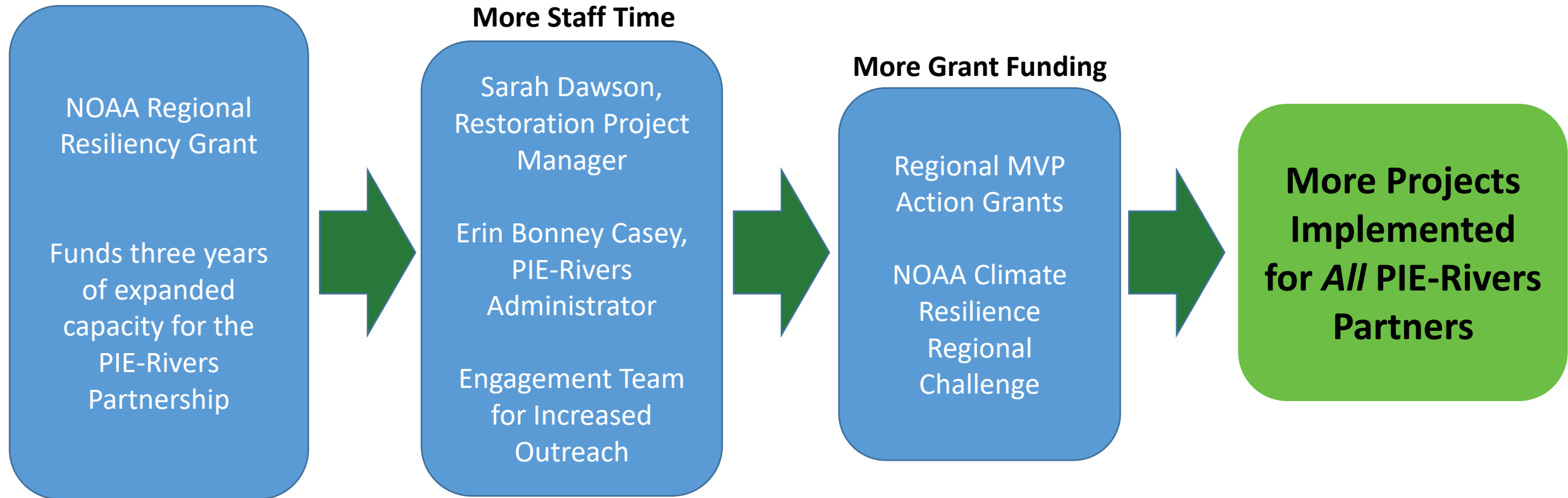
10:30 am – Session 2: Finding Resources to Meet Future Challenges

11:30 am – PIE-Partners Discussion: What do we tackle next?

12:00 pm – Lunch



What has the PIE-Rivers Partnership been up to?



Moving forward on our Action Plans

River & Stream Continuity

- ☐ Prioritize Aquatic Barriers
- ☐ Remove Migration and Flow Barriers

Water Conservation

- ☐ Incentivize Water Conservation
- ☐ Water Conservation Outreach
- ☐ Provide stewardship tools

Water Quality Management

- ☐ Identify Water Quality Problems
- ☐ Address Estuarine Pollution Sources
- ☐ Upgrade Stormwater Systems

Land Use

- ☐ Promote Low Impact Development
- ☐ Improve Land Use Bylaws
- ☐ Provide Stewardship Tools
- ☐ Address Flooding Risks using BMPs



Session 1: Getting Things Done

Neil Shea, Ipswich River Watershed Association

Robi Tobin, Friends of Hood Pond

Marissa Gast, Parker River National Wildlife Refuge

Sara Cohen, MA Department of Conservation and Recreation

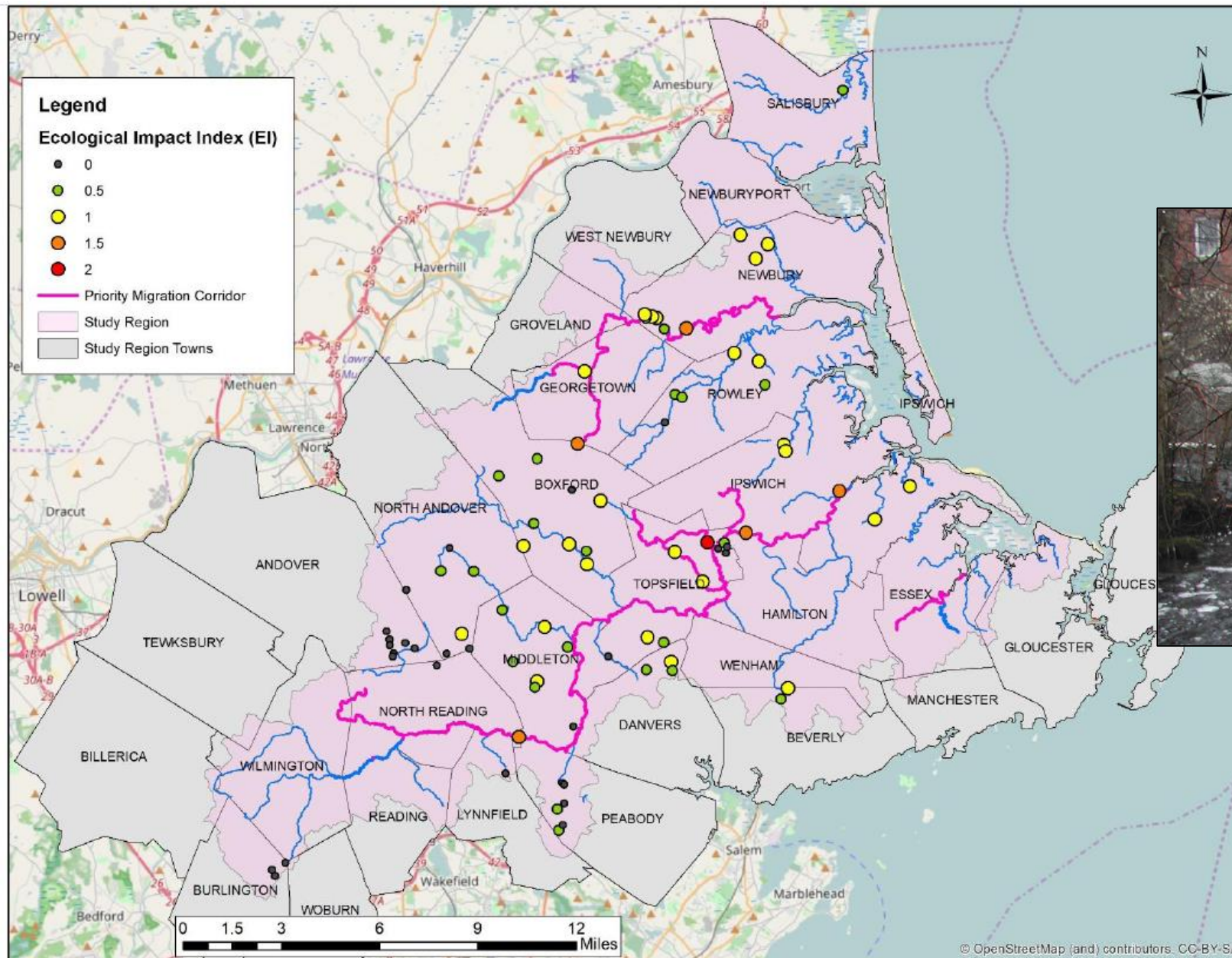


Session 1: Getting Things Done

Neil Shea

Restoration Program Director, Ipswich River Watershed Association



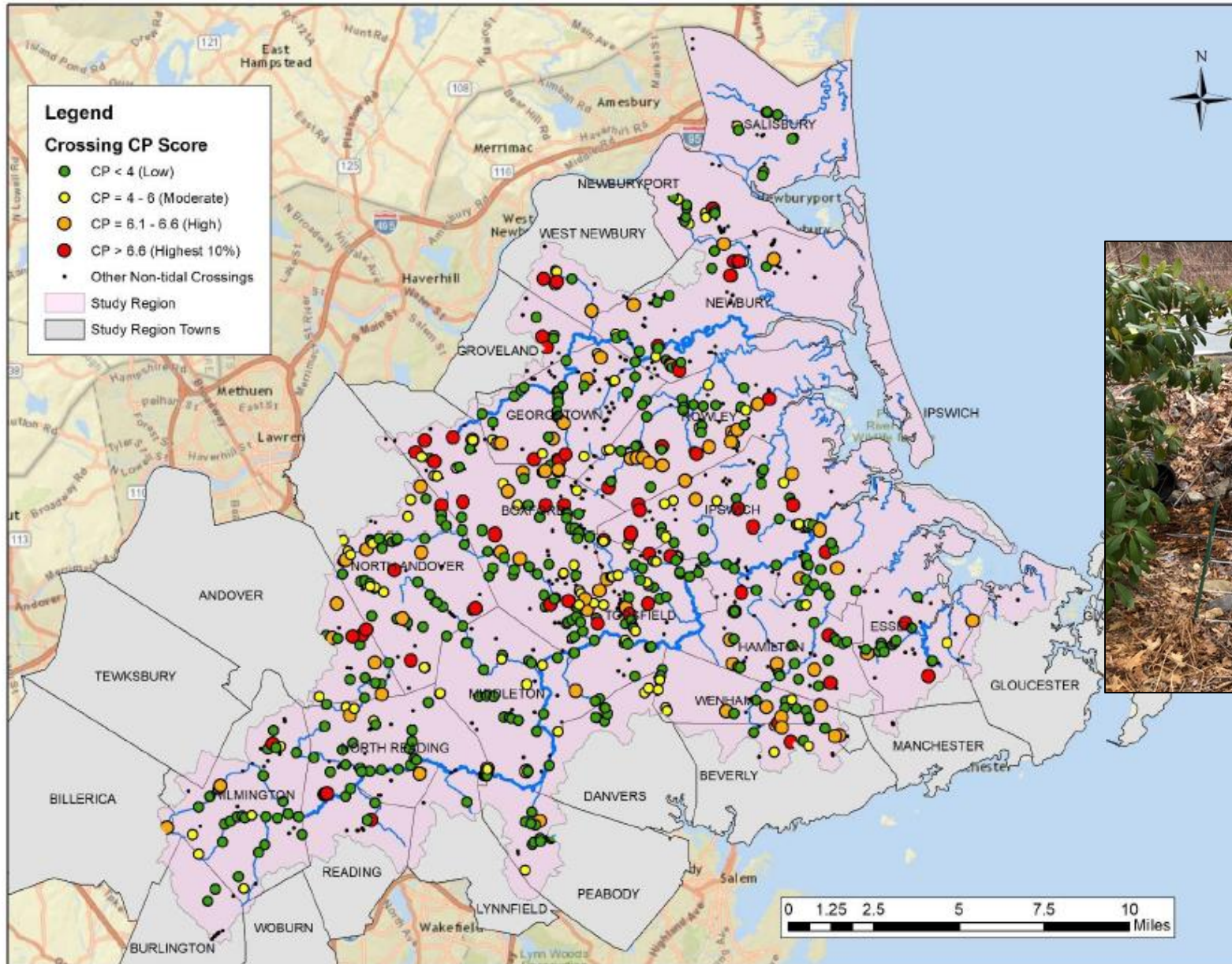


- 84 dams in the PIE region
- Varying ownership
- Prioritize mainstem dams



S Middleton Dam at Bostik

Figure 8. Map of Great Marsh study region showing dams prioritized by Ecological Impact Index scores.



- Over 1,000 non-tidal stream crossings identified
- Over 700 officially inventoried
- Prioritize based on mutual benefits



Before and after at Pond St, Topsfield



Figure 10. Map of the Great Marsh study region showing non-tidal road-stream crossings prioritized by Crossing Priority (CP) score.

Session 1: Getting Things Done

Robi Tobin

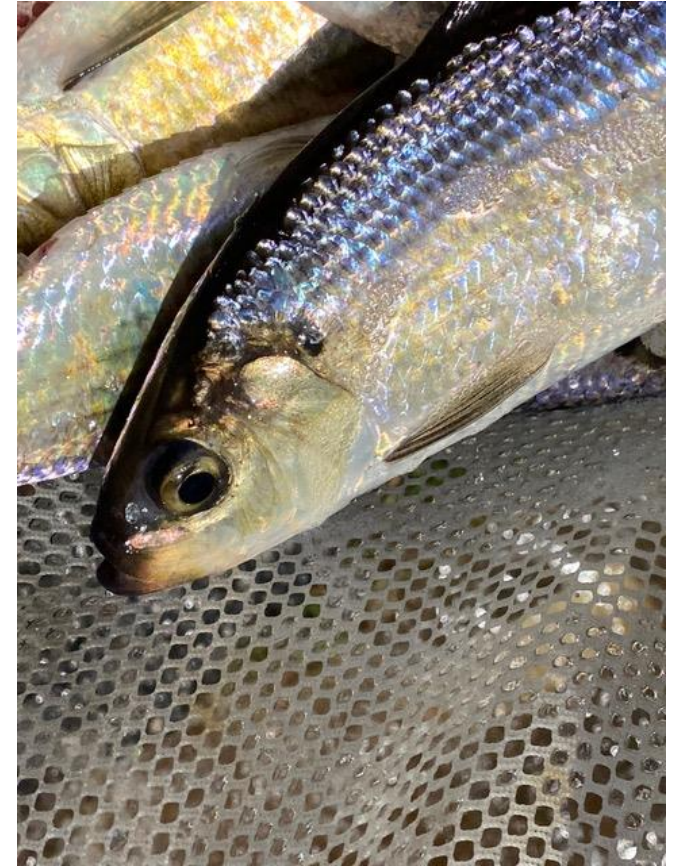
President, Friends of Hood Pond



Hood Pond, Topsfield / Ipswich



Alewife Restocking



Invasive Species Management

Friends of Hood Pond Invasive Species Alert



Variable Milfoil



Water Chestnut



Fanwort



Phragmites

Protect what you care about

- A beautiful, thriving ecosystem that supports aquatic life, birds and mammals
- Swimming
- Fishing



To learn more and to support efforts to restore and maintain Hood Pond go to:

www.friendsofhoodpond.org



Friends of Hood Pond is working with the Massachusetts Department of Conservation and Recreation to monitor and manage these invasive plant species and protect fisheries habitat, maintain boating and shore access, and allow continued recreational use of Hood Pond.



Session 1: Getting Things Done

Marissa Gast

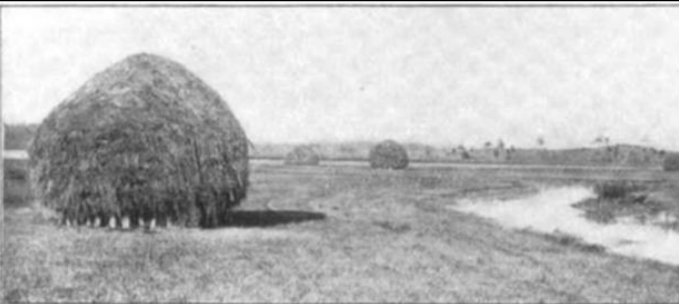
ACE Biotech, Parker River National Wildlife Refuge



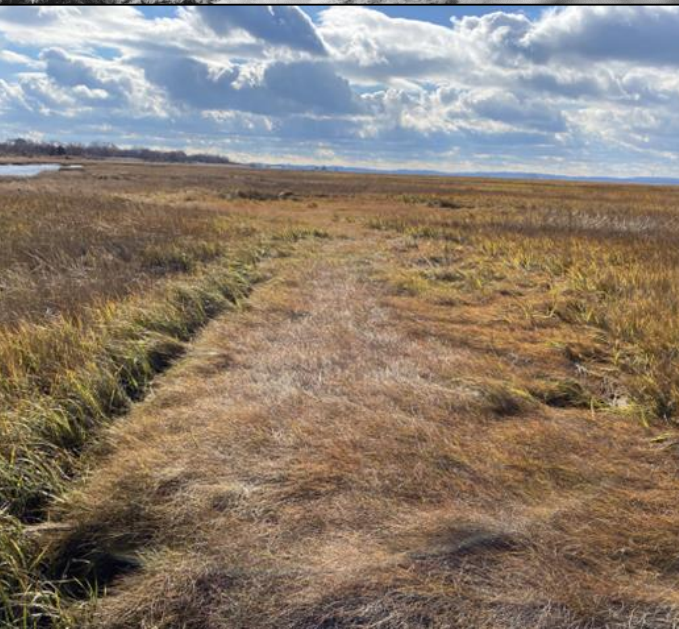
PIE Rivers Annual Meeting The Parker River Salt Marsh

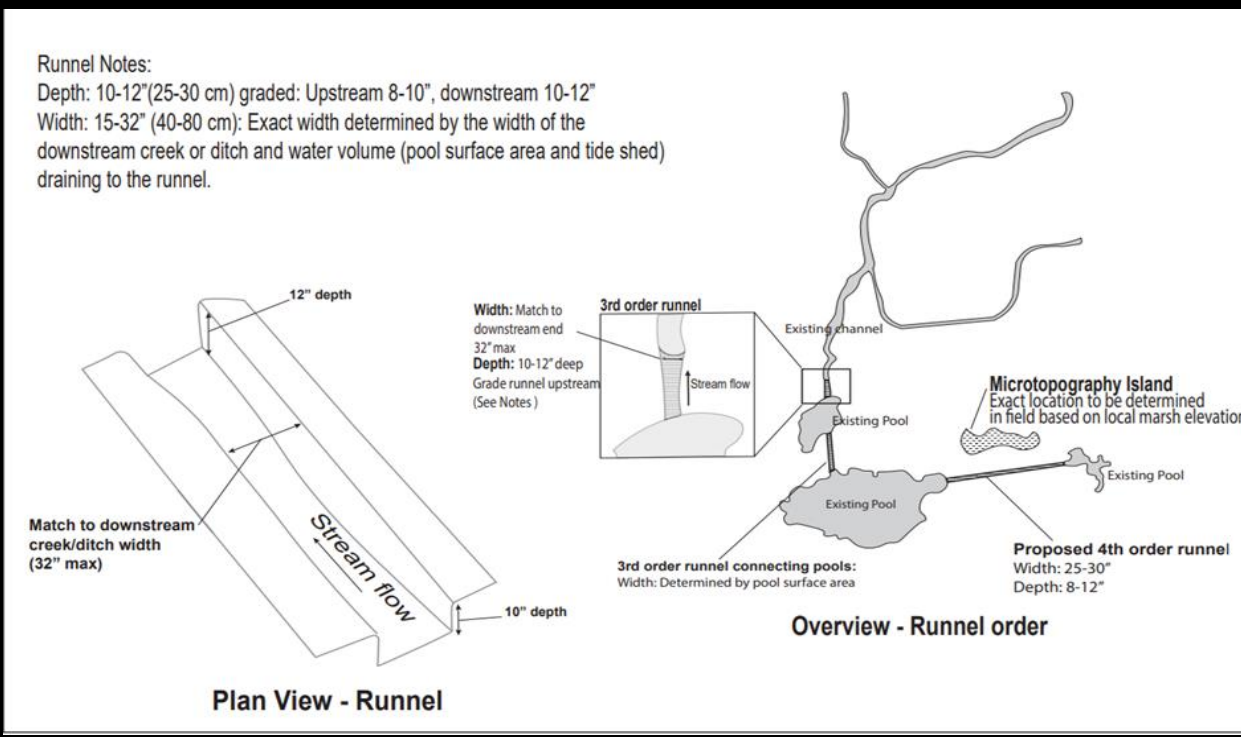
December 2023





PLUM ISLAND RIVER AND MARSHES







2017



2019



2022



April 2017

Google Earth



April 2018

Google Earth



April 2023

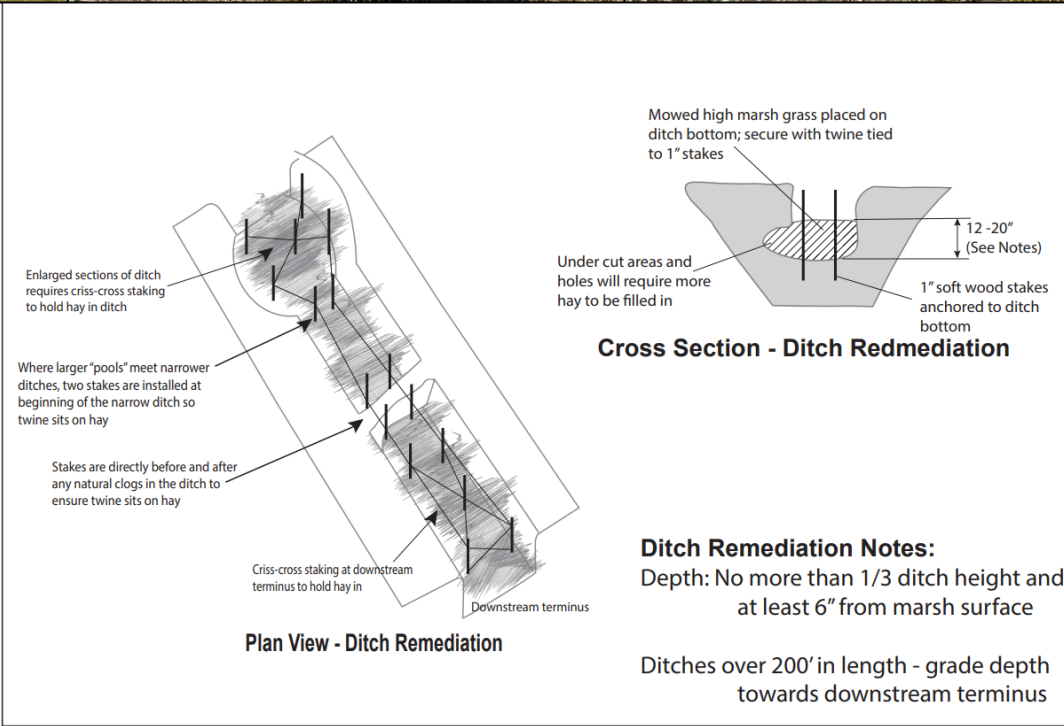
Image © 2023 Airbus

Google Earth



2022

2023





U.S. Fish & Wildlife Service

1450 Marsh Restoration

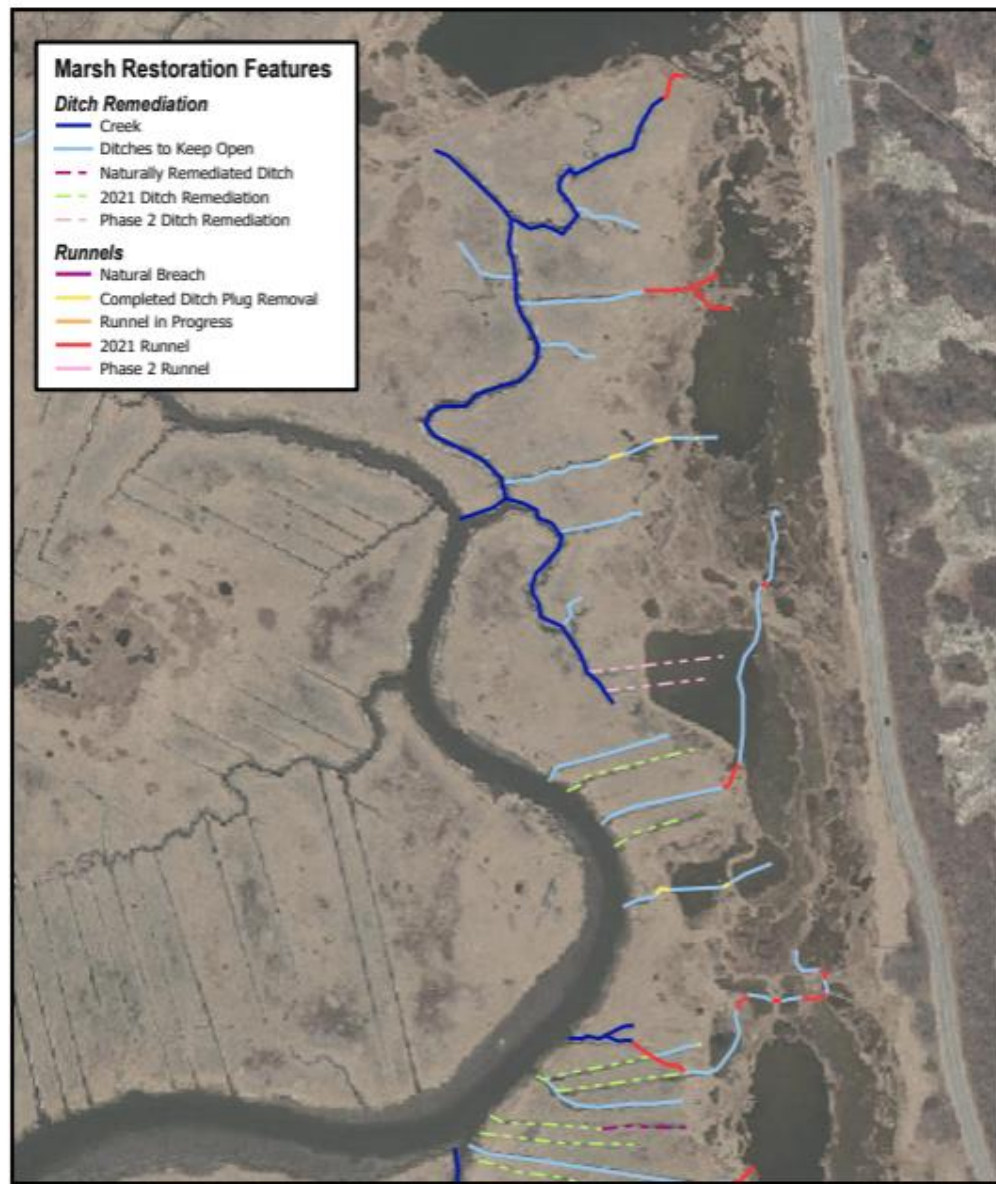
Overview



U.S. Fish & Wildlife Service

Parker River NWR 100 Acre Marsh Restoration Plan

Sub-Map 1 (North)



Produced by Parker River National Wildlife Refuge
Newburyport, Massachusetts
Produced: March 5, 2021



This map indicates planned restoration techniques as part of the '100 Acre Marsh' salt marsh restoration project at Parker River National Wildlife Refuge. See accompanying legend description for more details.



Session 1: Getting Things Done

Sara Cohen

Water Resources Specialist, MA Department of Conservation and
Recreation; Facilitator of the North Shore Water Resiliency Task Force





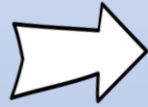
North Shore Water Resilience Task Force

Consensus Building in a Complex Watershed



Assessment for Collaborative Potential

Confidential
interviews initial
round of
stakeholders



- What matters most to you? What responsibilities or goals drive your decisions the most?
- What challenges in your role concern you the most? What keeps you up at night?
- How would you characterize the regional political landscape?
- What outcomes would you hope for in a regional collaborative conversation?
- What concerns do you have about a regional collaborative conversation?
- Who are the decision makers in your community on matters of water resources?
- What else should we know?

Early Progress

Charter:

Mission

Members

Additional Stakeholders

Conveners

Facilitators

Initial Topics of Focus

Roles and Responsibilities

Measures of Success

Member Agreements

Mission

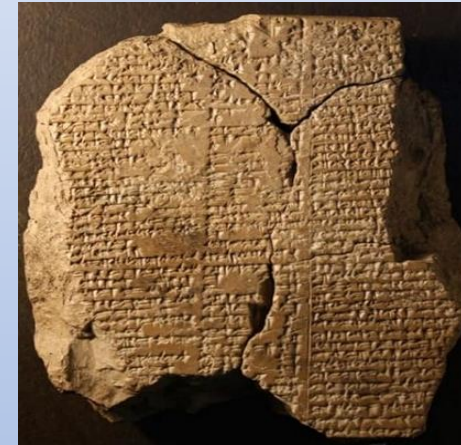
The North Shore Water Resilience Task Force aims to identify and advance long-term solutions to improve water supply resilience and ecosystem health in the Ipswich River Watershed. We will do this by:

- Working to understand one another's important challenges and goals;
- Engaging meaningfully and in good faith in discussions determined by the group as key to regional success;
- Working to reach a common understanding of the best potential solutions to achieve water supply resilience and ecosystem health; and
- Seeking full consensus on actions to support the most promising solutions.

Earmark Subcommittee



Joint Narrative Subcommittee



Conservation and Demand Management Subcommittee





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Session 2: Finding Resources to Meet Future Challenges

Kathryn Glen, MA Office of Coastal Zone Management

Hanna Mogensen, Merrimack Valley Planning Commission (MVPC)

Leah Robins, Metropolitan Area Planning Council (MAPC)

Alicia Geilen, MassDEP Northeast Regional Office



Session 2: Finding Resources to Meet Future Challenges

Kathryn Glen

North Shore Regional Coordinator, MA Office of Coastal Zone
Management



CZM Regional Program

- CZM's regional program is central to CZM's mission to balance the impacts of human activity with the protection of coastal and marine resources:
- PIE-Rivers Contact: Kathryn Glenn, North Shore Regional Coordinator
2 State Fish Pier Gloucester MA 01930 kathryn.glenn@mass.gov
 - Coordinates with regional initiatives (eg. PIE-Rivers)
 - **Provides direct technical assistance to coastal communities** (resource area impact, coastal hazards and resilience, water quality, habitat, planning, etc.)
 - Performs [Federal Consistency Review](#) and **review of coastal projects through MEPA.**
 - Serves as a **liaison between federal and state programs and municipal authorities** on key initiatives within the coastal zone.
 - Facilitates local initiatives that are consistent with CZM program goals, such as resource management and watershed and [port/harbor planning efforts](#)
 - **Provides guidance and support from development of grant proposals to final implementation of grant projects.**

CZM Grants

[Coastal Resilience Grant Program](#): CZM administers the Coastal Resilience Grant Program to provide financial and technical support for local and regional efforts to increase community understanding of coastal storm and climate impacts, evaluate vulnerabilities, conduct adaptation planning, redesign and retrofit vulnerable public facilities and infrastructure, and restore shorelines to enhance natural resources and provide storm damage protection. Grants are available for a range of coastal resilience approaches—**from planning, public outreach, feasibility assessment, and analysis of shoreline vulnerability to design, permitting, construction, and monitoring**. The FY24 funding limit was \$2,000,000.

[Coastal Habitat and Water Quality Grants](#): Coastal Habitat and Water Quality (CHWQ) Grants provide financial resources for projects that assess and treat stormwater impacts and support comprehensive habitat restoration planning and implementation activities. Municipalities within the [Massachusetts coastal watershed](#) are eligible to apply, along with certified 501(c)(3) nonprofit organizations, regional planning agencies, and stormwater collaboratives in partnership with municipalities. Eligible project activities include, but are not limited to:

- Efforts to assess, identify, and characterize **nonpoint source (NPS) pollution impacts** from stormwater runoff to coastal waterbodies.
 - Design and construction of **stormwater structural Best Management Practices (BMPs)**.
 - **Capacity-building activities**—including trainings for municipal staff, bylaw development, and case studies—that support future implementation of green stormwater infrastructure (practices that mimic natural processes to treat contaminants in runoff prior to reaching local waterbodies).
 - **Development of habitat restoration plans**, including data collection and synthesis, natural resource assessments, and restoration prioritization work.
 - **Implementation of activities included in a habitat restoration plan completed under previous CHWQ funding**, including planning, design, permitting, and construction of priority restoration actions identified in an approved comprehensive restoration plan.
 - **Public outreach** as a component of a larger project.
-
- FY24 project limits were \$100,00 for assessment, planning and design, and \$800,000 for implementation
 - Requests for Responses for CZM grants are **typically released in early spring**.

For more information on these grant programs, contact Kathryn Glenn, CZM North Shore Regional Coordinator, at kathryn.glenn@mass.gov.

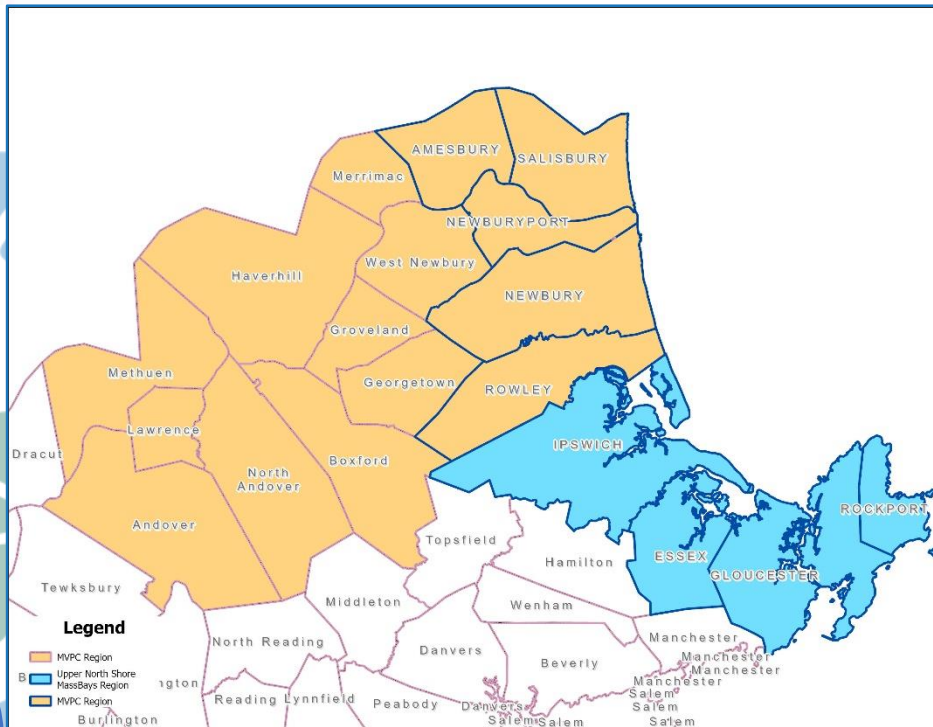
Session 2: Finding Resources to Meet Future Challenges

Hanna Mogensen

Coastal Resource Planner & MassBays Regional Coordinator, Merrimack
Valley Planning Commission (MVPC)



Merrimack Valley Planning Commission & MassBays National Estuary Partnership



Hanna Mogensen, Coastal Resource Planner and
MassBays Upper North Shore Regional Coordinator

Support/Assistance we offer Communities:

- Hazard Mitigation Planning
- **Municipal Vulnerability Planning**
- Coastal Resiliency Restoration
- Coastal Monitoring Work
- **Eight Towns and the Great Marsh**
- Stormwater and MS4
- Open Space Planning
- Brownfields Program
- **Water Resource Management**
- Master Planning
- Bylaw Revisions
- Net Zero Energy Planning
- **Greenscapes**
- Green Communities

Session 2: Finding Resources to Meet Future Challenges

Leah Robins

Director of Government Affairs, Metropolitan Area Planning Council
(MAPC)



Session 2: Finding Resources to Meet Future Challenges

Alicia Geilen

Wetlands Circuit Rider, MassDEP Northeast Regional Office



Tools and Resources for Projects in and near Wetlands



Alicia Geilen, Wetlands Circuit Rider
MassDEP NERO



Massachusetts Wetlands Protection Act (WPA) presumes wetlands protect Eight Public Interests

Protection of

- Public and Private Water Supply
- Groundwater Supply
- Fisheries
- Wildlife Habitat
- Land Containing Shellfish

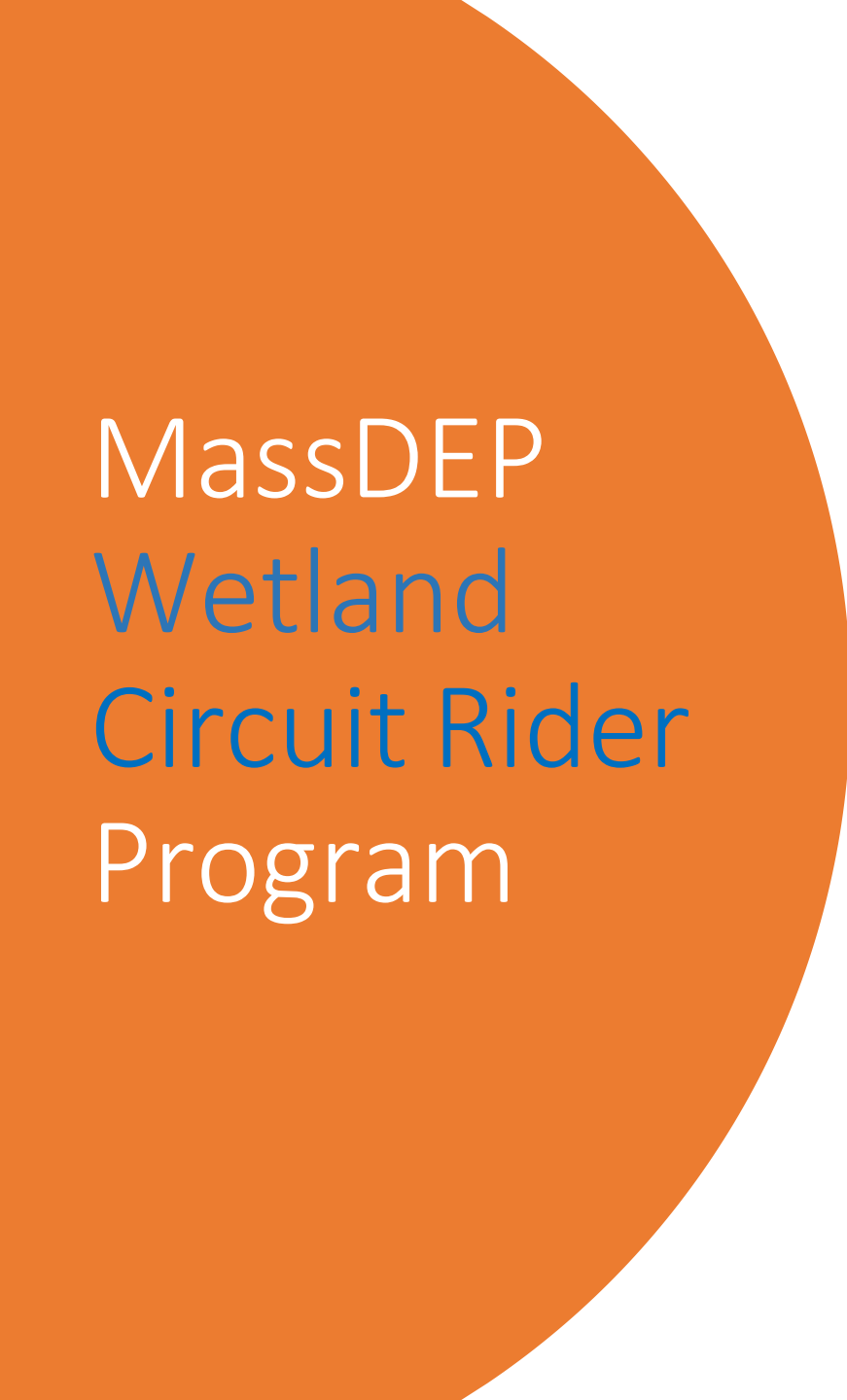
Prevention of

- Pollution
- Storm Damage


Control of

- Floods

WPA is a state law administered by municipal Conservation Commissions

A large orange circle on the left side of the slide, partially cut off by the edge.

MassDEP Wetland Circuit Rider Program

- Each MassDEP region has a Circuit Rider
 - Liaison between Municipalities and MassDEP
 - Technical outreach and training programs for Commissioners and staff
 - Can answer WPA regulatory questions from applicants, abutters, concerned residents
 - Can't say if project is approvable by ConCom or offer legal advice, but can point to applicable parts of the regulations
- 
- A yellow dashed line in the bottom right corner, consisting of several curved segments.

Work in/near wetlands requires approval of local Conservation Commission *even if work is intended to restore wetlands*

Request for Determination of Applicability (RDA)

- Typically used to approve simple projects in 100' Buffer Zone to wetlands or 200' Riverfront Area
- ConCom may determine work requires additional review

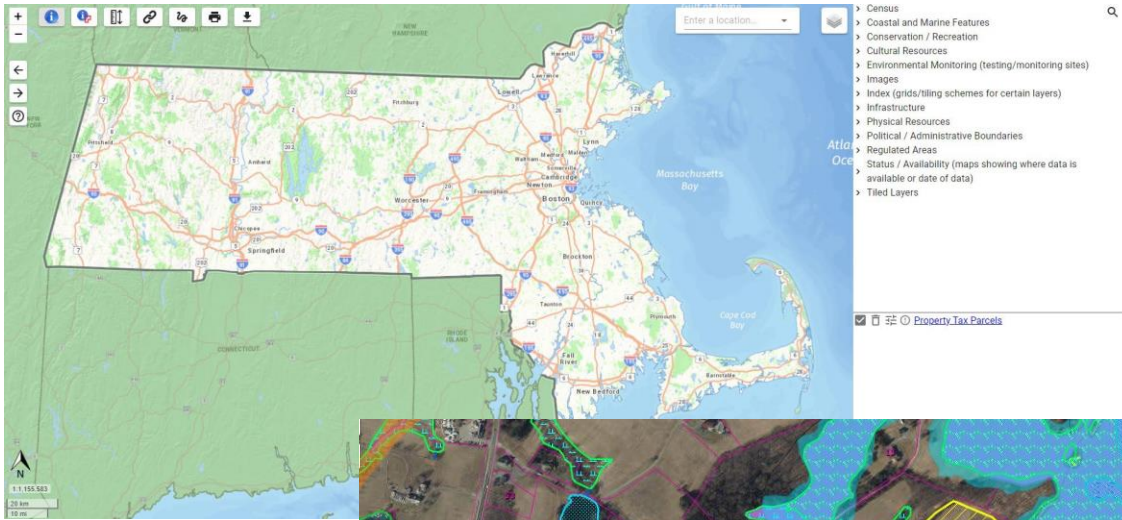
Notice of Intent (NOI)

- To approve projects *in* a resource area or large/complex projects in 100' Buffer Zone
- Projects approved if regulatory performance standards met

Now, some on-line tools and regulatory contacts to help plan projects in/near wetlands



MassMapper- MassGIS Online Data Viewer




- Enter address & zoom to site
- Turn on MassGIS data layers: property lines, (most) wetlands, FEMA Floodplain, Outstanding Resource Waters, rare species habitat, etc.
- Estimate distances and areas with Measure Tool
- Print or save a PDF of a map
- Identify Tool for parcel information
- [MassMapper User Guide](#)

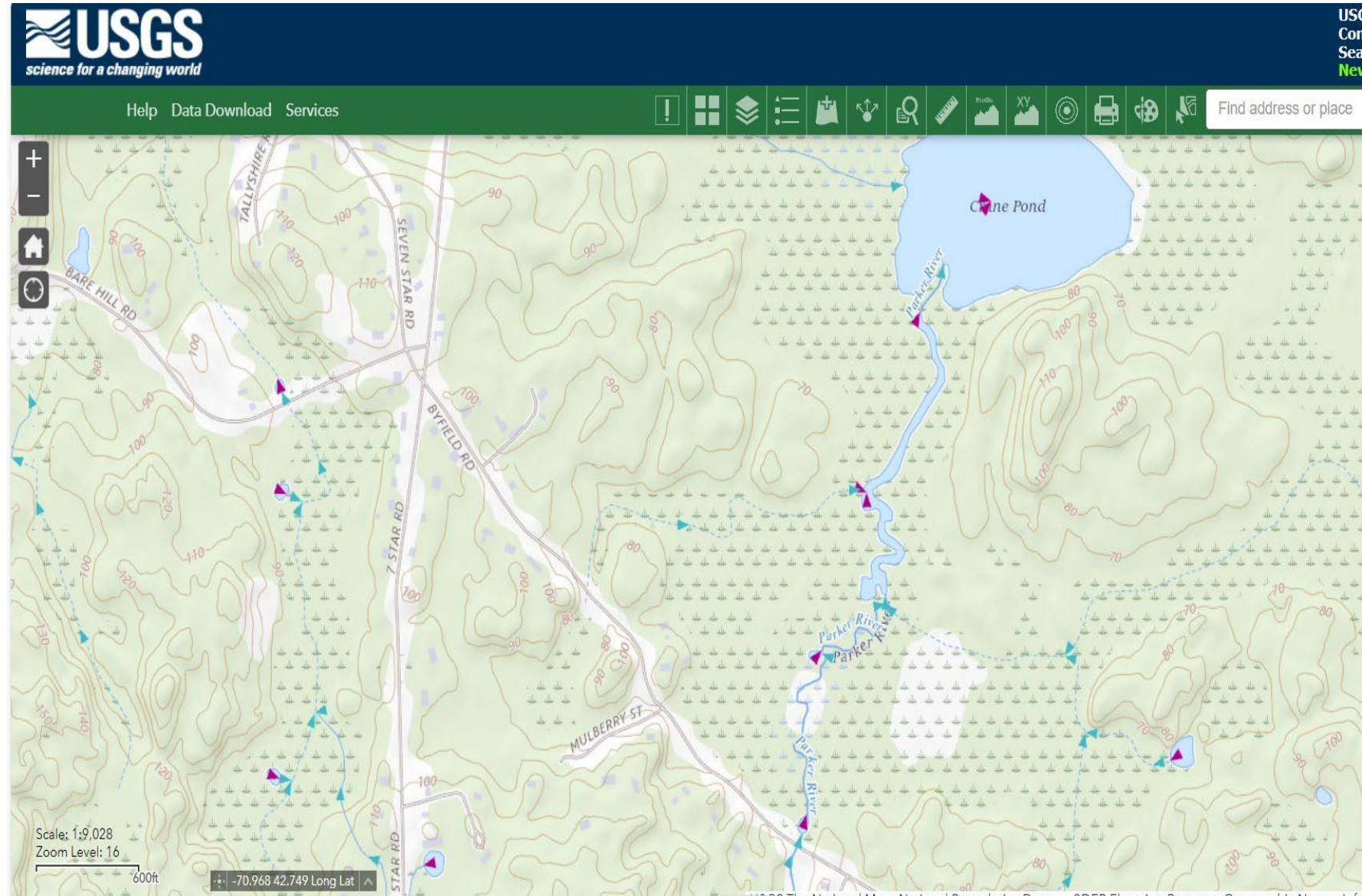
US Geological Survey [National Map](#)

Enter address then scroll out (-) until image is visible

- Solid line is perennial stream
- Dashed line is **usually** intermittent stream

Understand slope of the land (steep vs. flat) and how water moves across the land

See flow direction click  then scroll to “National Hydrography Dataset” and check “Flow Direction”



FEMA Flood Map Service Center

Search Results—Products for IPSWICH, TOWN OF

[Show ALL Products »](#)

The flood map for the selected area is number **25009C0283G**, effective on **7/16/2014**

DYNAMIC MAP



MAP IMAGE



Changes to this FIRM [?](#)

- Revisions (4)
- Amendments (0)
- Revalidations (1)

You can choose a new flood map or move the location pin by selecting a different location on the locator map below or by entering a new location in the search field above. It may take a minute or more during peak hours to generate a dynamic FIRMette.

[Go To NFHL Viewer »](#)



- Enter address & zoom to site
- View Flood Insurance Rate Maps (FIRMs) with floodplain elevations (if determined)
- View FEMA products (preliminary maps, historic maps, Flood Insurance Study reports, Letters of Map Change).
- Create, save, and print a FIRMette map (PDF)

MassDOT's Pictometry Viewer

Enter address & zoom to site.
Note date of photo

massDOT Pictometry Viewer
Massachusetts Department of Transportation

Help | Go to Massachusetts State House | Go to Address: Go

04/09/2017 1 of 32 Select Date

Zoom in or out

Click arrow to rotate view (N, S, E, W)

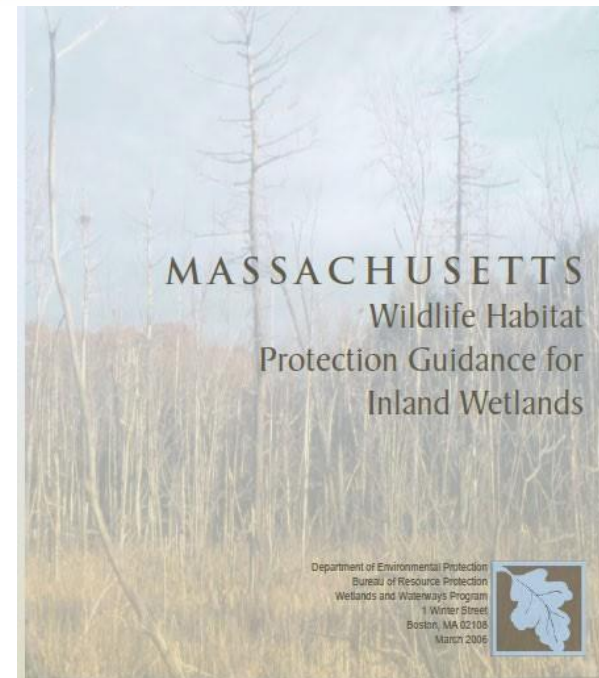
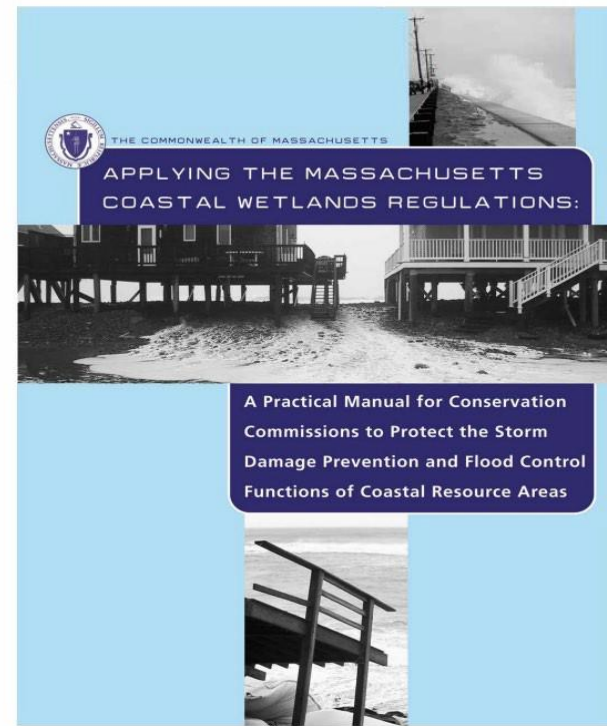
Change date of photo (2002 – 2023)



The screenshot displays the MassDOT Pictometry Viewer interface. At the top, there is a search bar with the address "50 Presidential Way, Woburn" entered. Below the search bar, a date selector shows "04/09/2017" and "1 of 32" images. A "Select Date" button is also visible. The main area shows an aerial photograph of a residential area with a pond and surrounding fields. A blue outline highlights a specific area of interest in the aerial view. Three red arrows point to the date selector, the navigation controls, and the search bar. A third red arrow points to the search bar. A blue outline highlights a specific area of interest in the aerial view.

Other Resources

- [Applying the Massachusetts Coastal Wetlands Regulations \(aka The Coastal Manual\)](#)
- [MA Wildlife Habitat Protection Guidance for Inland Wetlands](#)
- [Guidance For Aquatic Plant Management In Lakes And Ponds](#)
- [Massachusetts Buffer Manual](#)
- [Massachusetts Inland Wetland Replacement Guidelines](#)
- [Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands](#)



Other Environmental Regulations *that could apply*

MA Endangered Species Act - Work in Estimated and Priority Habitat (rare plants/animals) regulated by Natural Heritage Program at MassWildlife. Melany.Cheeseman@mass.gov

401 Water Quality Certificates - Dredge or fill of wetlands, including any amount of dredge/fill of Outstanding Resource Waters, Rare Species Habitat, Salt Marsh. *Fill:* Kyle.Lally@mass.gov.
Dredge: David.W.Wong@mass.gov or Derek.standish@mass.gov

Army Corps of Engineers: §404, Rivers & Harbors Act - Permit required for temporary and/or permanent work or structures in non-tidal navigable waters below ordinary high water mark of rivers, streams, lakes, ponds, FEMA Floodway. Paul.J.Sneeringer@usace.army.mil

Chapter 91 Public Waterfront Act – Permit/license for work in flowed tidelands, land below the high water mark of [Great Ponds](#), non-tidal portion of Merrimack River, navigable non-tidal river/stream where public funds have been used for certain activities, and more.

DEP.Waterways@mass.gov

MA Environmental Policy Act (MEPA) - If [MEPA thresholds is exceeded](#) **and** the project requires a state permit/receives state funding. *Not a permit.* mepa@mass.gov

Pre- Application Meetings



Request consultation with MassDEP regional office before starting the permitting process

Typically for highly complex projects and/or that involve more than one wetland permit. **Preliminary plans required for pre-application meetings with MassDEP**

Meeting can include other state and federal agencies: MassDEP Boston, Natural Heritage, MEPA Office, Army Corps, etc.



Last, but *certainly* not least:
Municipal Conservation Office

Most important contact and source of information for work in/near wetlands!

Many municipalities local wetland bylaws/ordnances that go beyond WPA

Often have additional submittal requirements

When planning a project, make sure you contact the Conservation Office of the municipality(ies) where you plan to work

Thanks for listening!

MassDEP NERO

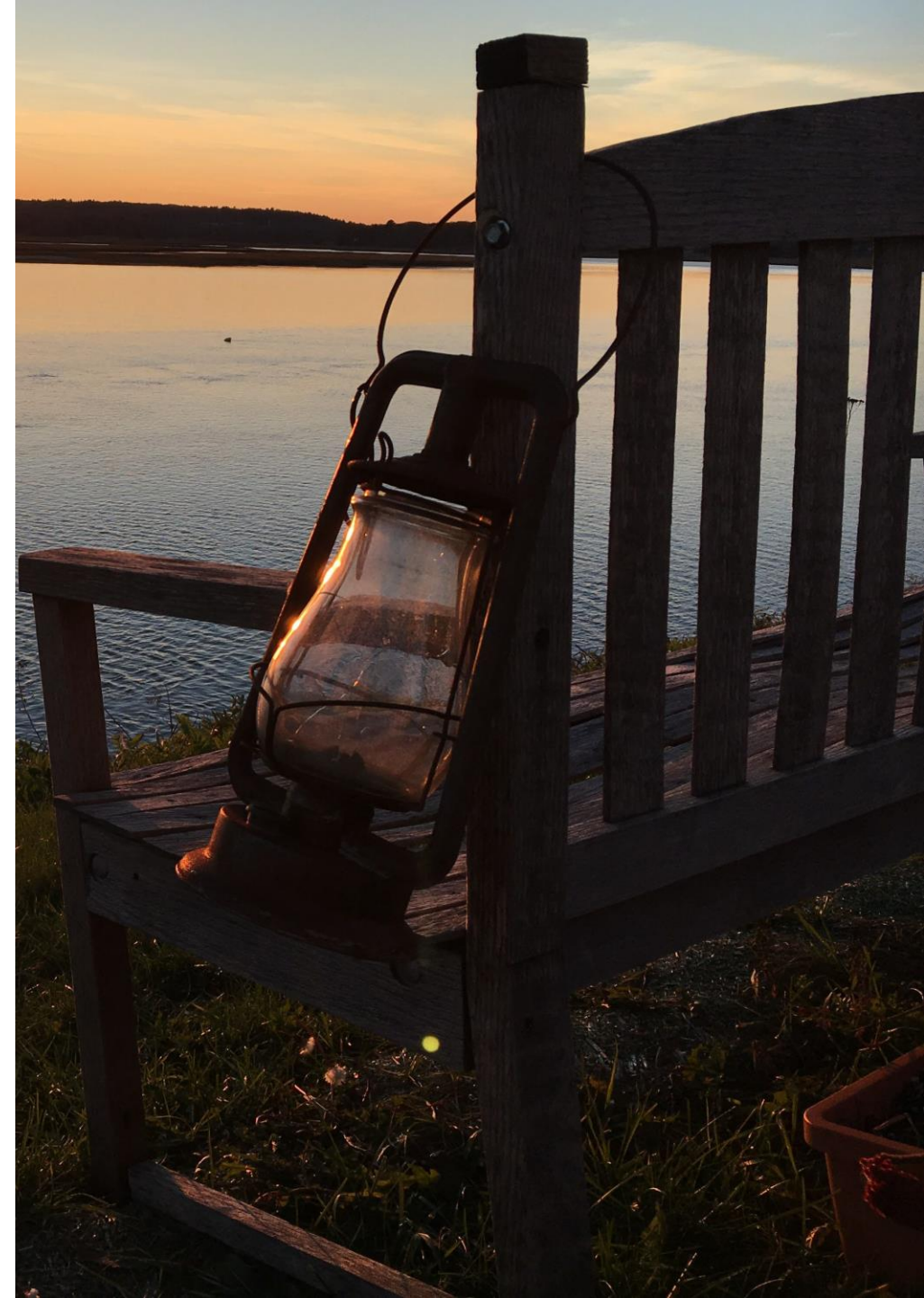
Wetland Circuit Rider

Alicia.Geilen@mass.gov

617-519-7389 (cell)

NERO Wetlands Help Line

978-694-3405

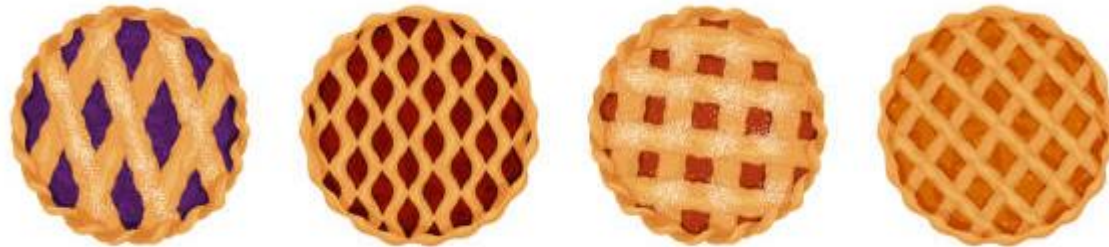


Mark your calendars

PIE-Rivers Networking Happy Hour Event

Thursday, March 14, 2024

Details to follow. There **will** be pie.



Facilitated Discussion

Discussion Prompts

1. Share a project you are working on or something that interests you in the PIE priority areas.
2. What problems/projects do you think the partnership should focus on in the future?
(1-3 years)
3. What resources would help you to more effectively address the restoration and climate resiliency changes in our region?

