

# Freshwater Wetland Restoration Strategy Kick-off Meeting

## Why are we doing this?

July 2010



# *EPA Core Elements Framework*

1. Monitoring and Assessment
2. Regulatory activities
3. Voluntary Restoration and Protection
4. Water Quality Standards

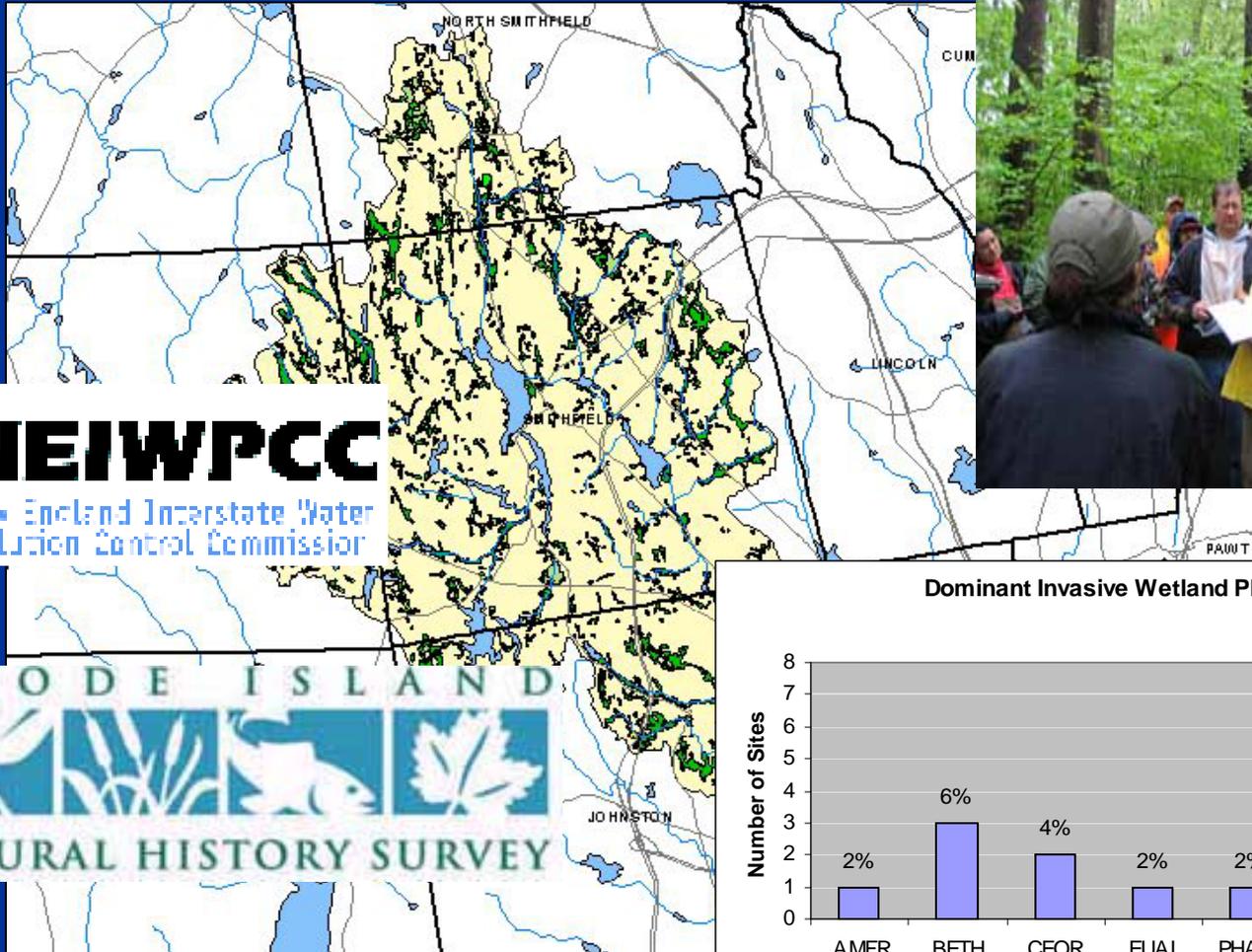


# *EPA Core Elements Framework*

- **Terms and Definitions**
- **Goals and Benefits**
- **Menu of Activities**

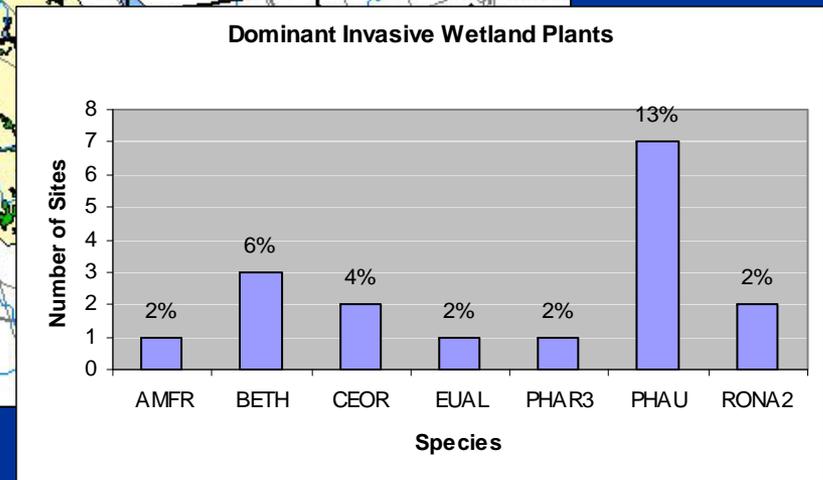


# Monitoring and Assessment CE



 **NEIWPCC**  
New England Interstate Water  
Pollution Control Commission

R H O D E I S L A N D  
  
N A T U R A L H I S T O R Y S U R V E Y



# *Regulatory activities*

- Rules
- Outreach materials
- Trainings
- Permit outcomes
- Mitigation policy
- Databases
- Sharing permits/plans



# *EPA Core Elements Framework*

1. Monitoring and Assessment
2. Regulatory activities
3. Voluntary Restoration and Protection
4. Water Quality Standards



# *Voluntary Restoration*

- ...manipulation of a former wetland's or a degraded wetland's characteristics to return its natural functions



# *Restoration Practices Include*

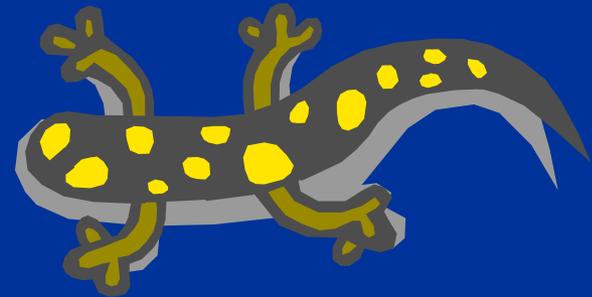
- Re-establishment of a former wetland
- Rehabilitation of a degraded wetland



# *Goals and Benefits*



- Maintain and restore wetland functions
- Help meet watershed goals
- Contribute to economic well-being



## *Also Rhode Island Context*

- Coastal habitat restoration
- Riparian buffer plans and projects
- Habitat restoration
- Invasive species
- Stream continuity
- River restoration plan and projects



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## Previous work

July 2010



# Phase 1 - Site ID and Prioritization Methods (2001)



# Phase 2 – Woonasquatucket Wetland Restoration Plan with database (2003)



# Phase 1 – Tasks



**A. Review of other states**

**B. Freshwater activities in RI**

**C. Restoration opportunities**

**D. Status of wetlands per watershed**

**E. Methods to identify potential sites**

**F. Methods to prioritize sites**

# Phase 1 – Task C



**Table C2 – Restoration priority of impacts to freshwater wetlands**

**Table C3 – Restorability of freshwater wetland types**

# Table C2 :

## Priority of Impacts

- Filling or Draining
- Removal or adjacent vegetation
- Impedance of surface flow
- Removal of wetland vegetation
- Trash dumping
- Stream channelization
- Invasive species
- Sedimentation



# Table C3 :

## Restorability of Wetland Types

- High = Ponds and Marshes
- Moderate = Wet meadows, Streams, Vernal pools, and Shrub swamps
- Low/Moderate = Forested swamps
- Low = Fens and Bogs



# Phase 1 – Task E

## Methods to Identify Sites

- **Time lapse analysis**
- **Some stereo viewing**
- **RIGIS soils & wetlands coverages**
- **Stakeholder nominations**



# Phase 1 – Task F

## Methods to Prioritize Wetlands

- **Functional assessments and ranking**
- **Potential to restore 5 functions**
- **Ranked by single and multiple functions and tiered**



# Phase 1 - Task F

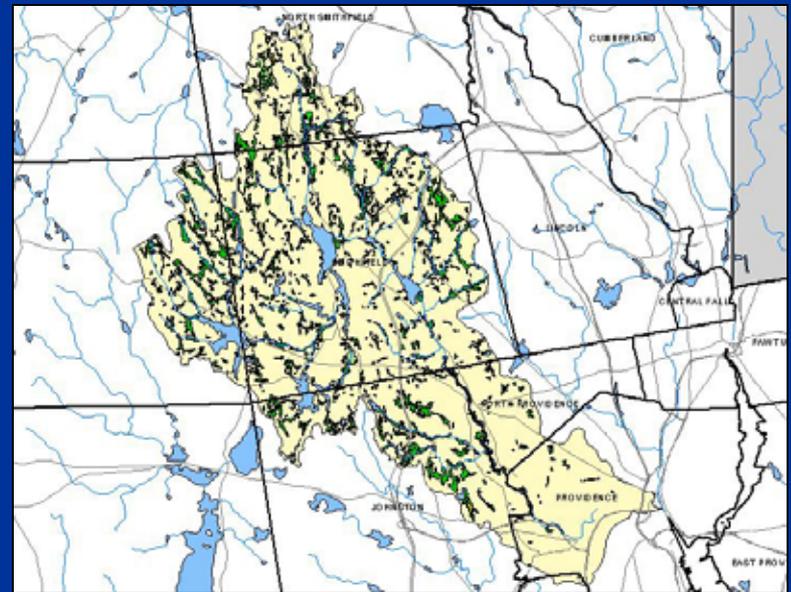
## Methods to Prioritize Buffer Sites

- Is the site vulnerable to human impacts?
- Is the wetland type highly sensitive to such impacts?
- Sites tiered 1, 2, and 3



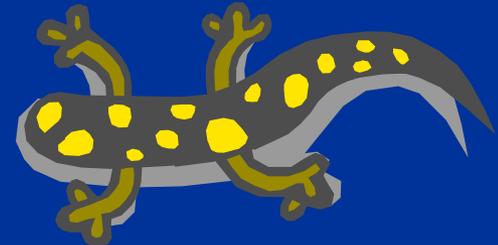
## ***Phase 2: In the Woonasquatucket***

- **Focused on 2 major impact types in a watershed**
  - **Filling of wetlands (i.e. destroyed)**
  - **Removal of upland buffer vegetation (i.e. degraded)**
- **Provide most restored functions**



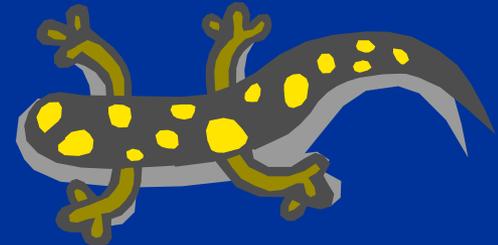
# ***Phase 2: In the Woonasquatucket***

- **Wetland Fill Sites**
  - **77 potential restoration sites**
  - **11 publicly owned; 66 private**
  - **Located in 7 clusters**
  - **42 sites had enforcement flags**
  - **Tier 1 = 24 sites**
  - **Tier 2 = 22 sites**
  - **Tier 3 = 31 sites**



# ***Phase 2: In the Woonasquatucket***

- **Upland Buffer Vegetation Sites**
  - **239 potential sites**
  - **221 private; 18 public**
  - **Located in 7 clusters**
  - **Tier 1 = 40 sites**
  - **Tier 2 = 103 sites**
  - **Tier 3 = 96 sites**



# Smithfield DPW



# Ongoing Support of Restoration

- Rule revisions
- Survey
- The “Team”
- Case studies
- Training
- The “Kit”



RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
**FACT SHEET**

### WATER QUALITY & WETLAND RESTORATION TEAM

Are you planning a water quality improvement or wetland/habitat restoration project?  
Do you know the answers to the following questions?

- *Do I need a permit for a restoration project?*
- *What permits do I need?*
- *How do I get started with DEM?*
- *Who should I talk with?*
- *What are the application requirements?*

To help obtain answers to these questions, the Department of Environmental Management has formed a Water Quality and Wetland Restoration Team. The objectives of the Team are to support and encourage water quality improvement and wetland restoration projects in Rhode Island.

The Water Quality & Wetland Restoration Team seeks to:

- *Create an effective partnership between project proponents and regulators*
- *Help ensure that projects are successful and meet regulatory requirements*
- *Streamline the DEM permitting process*

The Team offers enhanced preapplication assistance by working with applicants during project planning and design to help advance restoration projects to the application stage, including the identification of any necessary permits. Application review and communication with applicants are coordinated through the Team. The Team will also coordinate with CRMC and the U.S. Army Corps of Engineers as necessary.

The Team educates applicants and others about issues of concern to DEM and will over time develop written guidance and policies regarding water quality improvement and wetland restoration projects. The Team, as resources allow, will track the progress of projects during construction and afterwards.

The Team is comprised of:

- Water quality (TMDL), wetlands restoration, sustainable watersheds, and policy staff;
- Regulatory permit staff from DEM Wetlands, Water Quality Certification, Underground Injection Control (UIC), and RI Pollution Discharge Elimination System (RIPDES) programs.

To learn more about the Team, or if you are planning a restoration project, please contact Lisa McGreavy at [Lisa.McGreavy@DEM.RI.GOV](mailto:Lisa.McGreavy@DEM.RI.GOV) or (401) 222.4700, Ext. 7611.



***Photographs by Christine Caron, Deb Pelton, & Dexter Miller. Photo Collage by EPA.***