

Building Reference Wetland Networks in the Region to enhance assessment, conservation, restoration and mitigation

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Wetland Workgroup Meeting
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Project Title: Advancing State Programmatic Capacity to Develop Wetland Reference Networks for Assessment, Conservation, Restoration and Mitigation

Potential State Partners:

- Maine NHP
- New Hampshire NHP
- New Hampshire Department of Environmental Services
- New Jersey NHP
- New York NHP
- North Carolina NHP
- Pennsylvania NHP
- Tennessee DEC NHP
- Tennessee DEC Division of Water Resources
- Vermont NHP
- Vermont DEC Wetlands program
- Virginia NHP
- Wisconsin DNR – Bureau of Water Quality

NatureServe

New England Interstate Water Pollution Control Commission (NEIWPCC).

EPA National Priority Areas

*Monitoring and Assessment;
Voluntary Restoration/Protection;
Regulatory Approaches*



ADVANCING REFERENCE WETLAND NETWORK ACROSS EPA REGIONS 1- 4

- Local and regional reference wetland networks are critical to supporting wetland assessment, planning, and monitoring.
- Data from reference wetlands, particularly metrics that are informative of wetland condition, are the most defensible way to set standards by which mitigation, restoration, or protection projects can be evaluated and monitored over time.
- Vegetation valuable indicator of wetland condition:
 - Floristic Quality Assessment (FQA) method
 - EPA's Vegetation Multi-Metric Index)
- Hydrology, Landscape, Buffer - Ecological Integrity

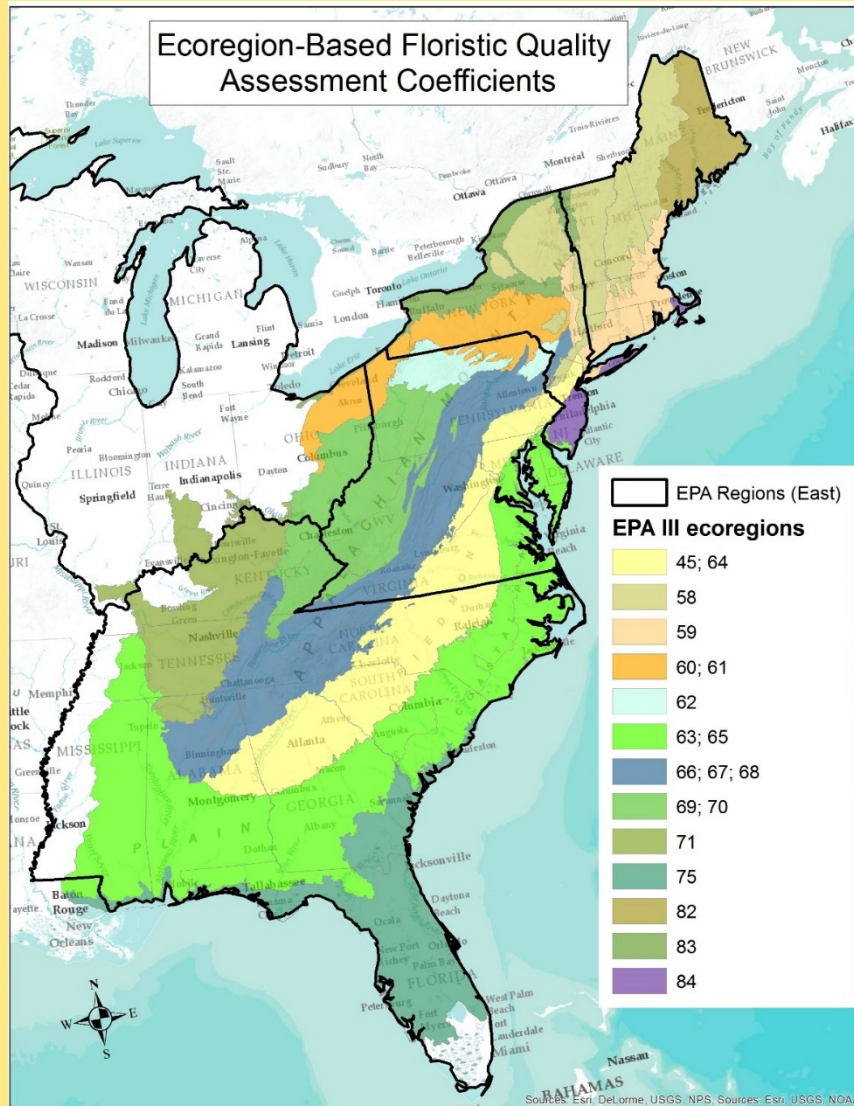
ADVANCING REFERENCE WETLAND NETWORK ACROSS EPA REGIONS 1- 4

**TASK A. IMPROVE FQA METHODS THROUGH
ECOREGIONAL APPROACH**

TASK B. CALIBRATE FQA METRICS BY WETLAND TYPE

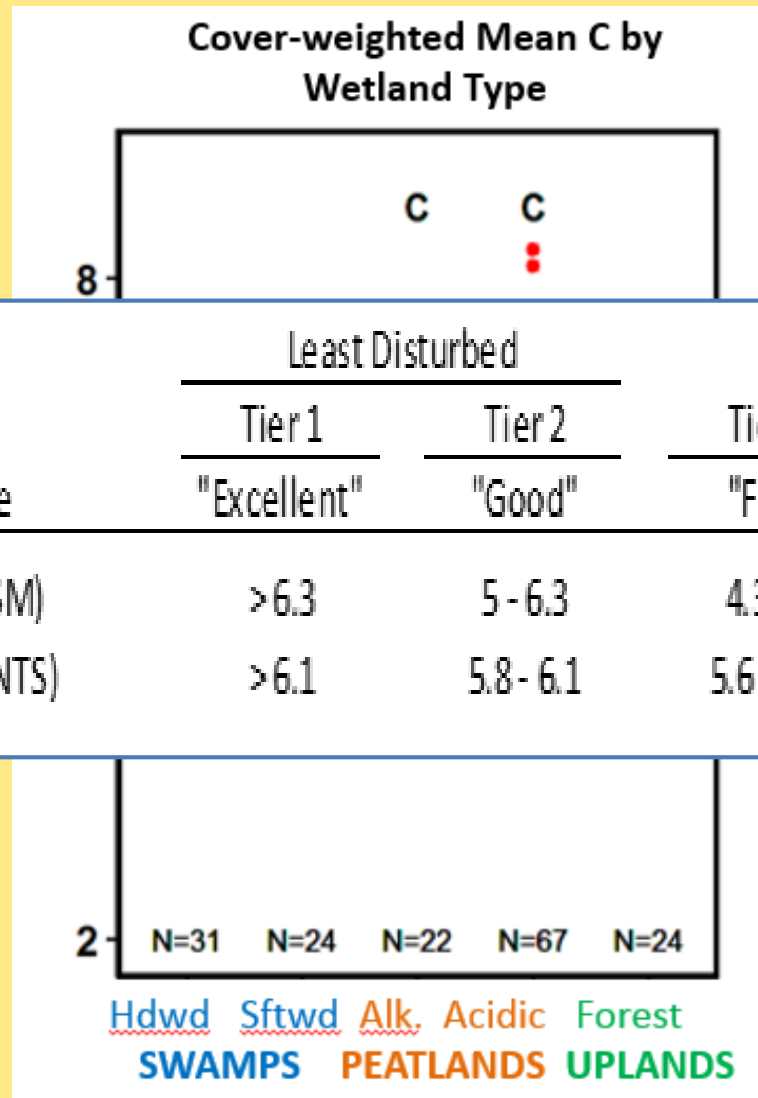
**TASK C. DEVELOP WATERSHED-BASED REFERENCE
WETLAND NETWORK**

TASK A. ECOREGIONAL FQA



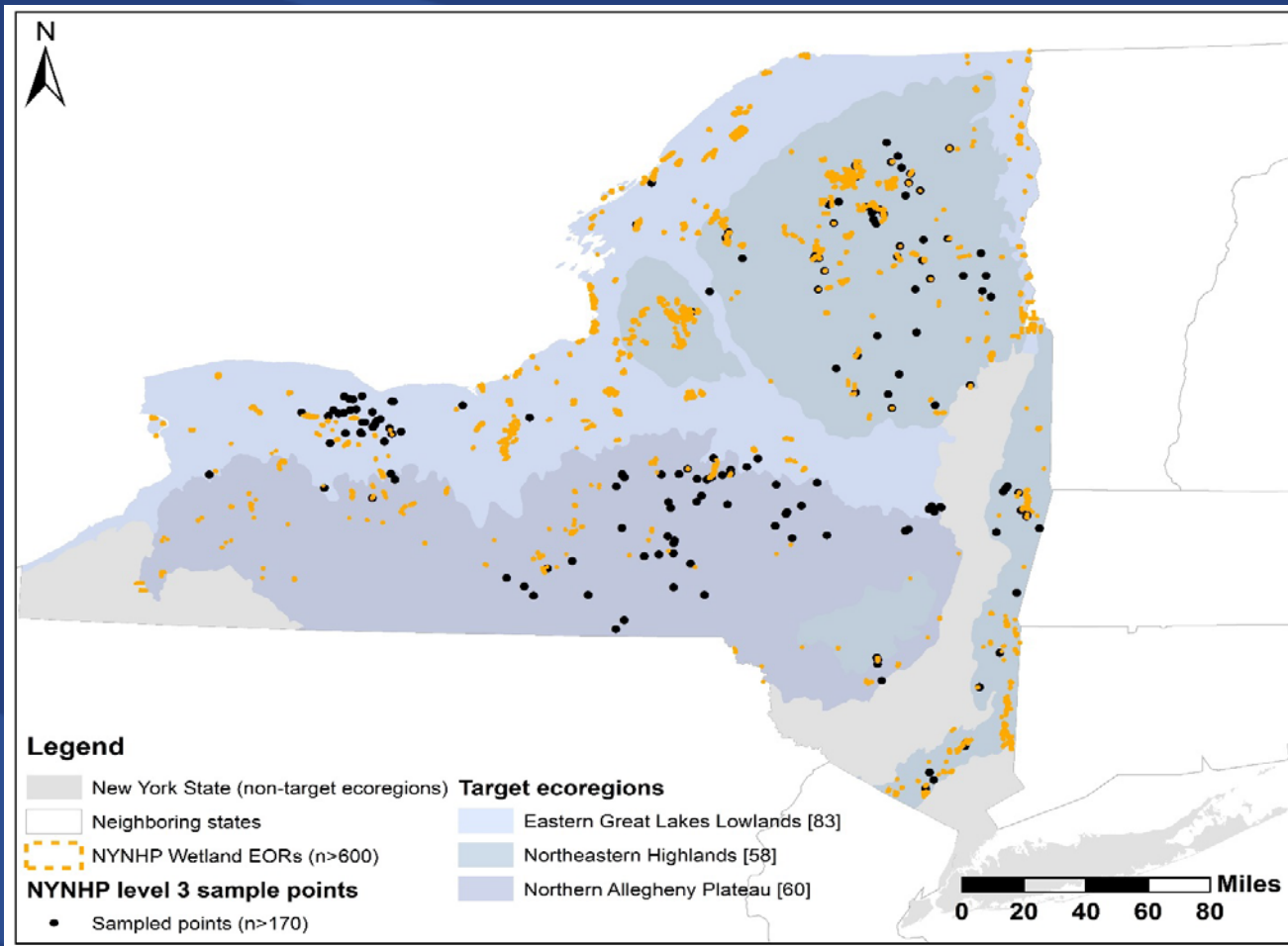
- Map of ecoregion units used to develop ecoregion-based C-values across EPA R1 -R4.
- The three working group project areas that assigned these C-values covered EPA R1, R3, R4.
- Ecoregion units comprise one or more Omernik (EPA) Level III ecoregions.

TASK B. CALIBRATE FQA BY WETLAND TYPE



TASK C. DEVELOP WATERSHED-BASED REFERENCE WETLAND NETWORK

- Build reference wetland networks in and across states in EPA R1-R4 that incorporate the FQA metrics with related multi-metric methods from EPA and NatureServe,
- thereby ensure consistent evaluation of reference conditions in these networks and filling in gaps/holes in the reference network where they exist.
- Successful completion of this project will accelerate the establishment and application of reference wetlands in the eastern United States.



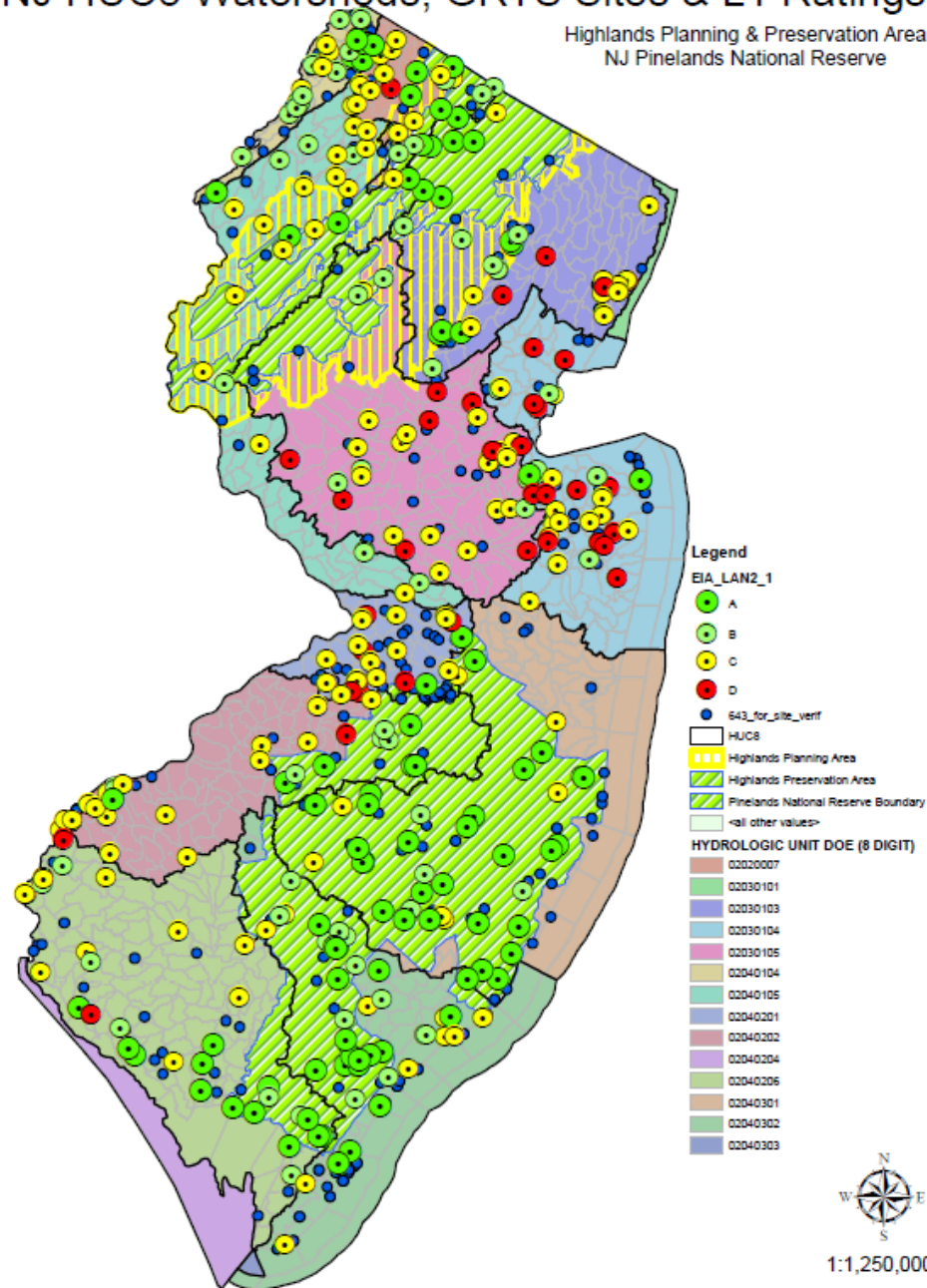
Black dots: Plot data available for FQA calibration

Orange dots: Sites where exemplary wetland occurrences are found (NY NHP wetland EORs (Element Occurrence Records)).

Map prepared by NY Natural Heritage Program, June 14, 2018. Laura Shappell

NJ HUC8 Watersheds, GRTS Sites & L1 Ratings

Highlands Planning & Preservation Area
NJ Pinelands National Reserve



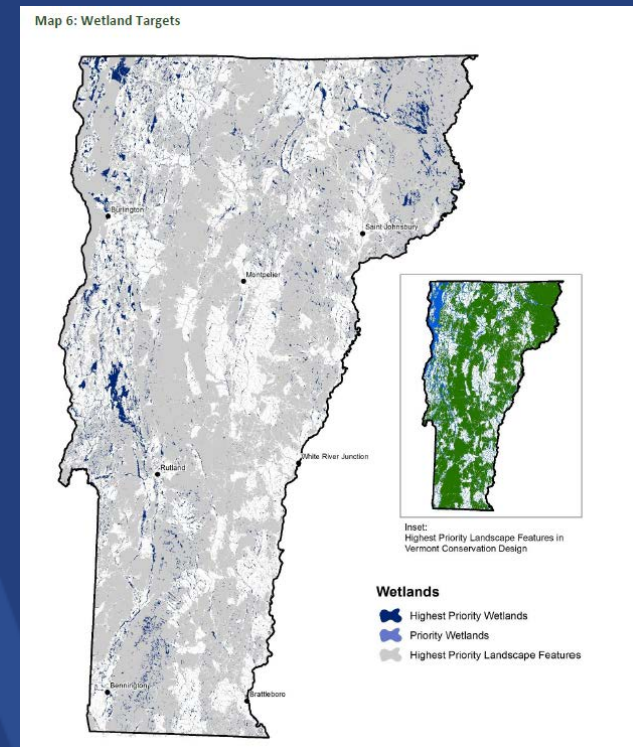
Map prepared by
Kathleen Walz 2018

Priority Targets for Ecologically Functional Landscape

All wetlands in Vermont with significant functions (Class 1 or 2).

Highest Priority Wetlands:

- Class 1 wetland, or likely to meet Class 1 standards (Potential Class 1)
- Exemplary (state-significant) wetland natural community occ., or adjacent occ.
- Wholly or partially within priority landscape scale elements of VT Conservation Design
- Wholly or partially within a small watershed with >50% of the land area developed
- Wholly or partially within important watershed for Lake Champlain WQ:
 - Missisquoi River watershed
 - South Lake A & B watersheds



SUMMARY OF GOALS

Build reference wetland networks in and across states in EPA R1-R4:

Reference conditions consistently evaluated by:

- Improved FQA metrics
- Related multi-metric methods from EPA and NatureServe

Reference sites screened through a watershed/landscape design

- Fill in gaps/holes in the reference network where they exist.

Successful completion of this project will accelerate the establishment and application of reference wetlands in the eastern United States.

Questions?

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