NEBAWWG Meeting Summary

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EPA Regional Lab, Chelmsford, MA

Participants

Greg Hellyer, EPA NERL
Patti Greene-Swift, VT DEC
Alan Quackenbush, VT DEC
Kristen Puryear Maine NAP
Jeanne Difranco, MaineDEP
Jan Smith, MA CZM
Bob Gilmore, CT DEEP
Jeanne Christie, ASWM
Jason Bried, OSU
James Sprague, MassDEP
Michael McHugh, MassDEP
Jennifer McCarthy, USACE
Ruth Ladd, USACE
Carol Murphy, RIDEM
Tom Kutcher, RINHS
Marc Carullo, MA CZM
Bill Nichols, NH NHB
Mark Kern, EPA Reg. 1
Sandi Mattfeldt, NH DES
Sandy Crystall, NH DES
Collis Adams, NH DES
Alan Anacheka-Naseman, USACE
Ted Walsh, NH DES
Karen Simpson, EPA Reg. 1
Beth Alafat, EPA Reg. 1
Lisa Rhodes, MassDEP
Matt Schweisberg, EPA Reg. 1
Diane Switzer EPA NERL
Ed Reiner, EPA Reg.1
Trish Garrigan, EPA Reg. 1
Theresa Portante, NEIWPCC
Jennifer Sylvester, NEIWPCC

State and Researcher Updates

Massachusetts

- Level 1 Assessment using the CAPS model
- Level 3 Assessment using SLAMS for both forested wetlands and salt marshes
    - Hopes to soon develop a RAM
- Currently developing IBIs in forested wetlands, and hope to have them developed for salt marshes by next year
- 2011 Reports include statistical analysis and tools for assessing wetland condition
- Determine degradation or important preservation sites based on IBI value and IEI- predicted values
- In 2006, MA developed guidance and MADEP is working to implement this guidance in regulations
- www.masscaps.org – link to statewide mapping
- Stream community project – prioritize improvements
    - Determines how severe a barrier is for stream crossing
    - Which crossings give the best ecological benefit?
    - Used CAPS to assess in 3 different watersheds (Chicopee, Shawsheen and Taunton)
- Assessment of Wetland Replacement Areas (compensatory mitigation)
    - Recently funded project
    - Sites were replaced between Jan 1, 2004 and Dec 31, 2008
        - Are these sites in compliance with wetland act standards?
    - Apply SLAM to 5 replacement sites over different periods of time within forested wetland areas

    - Sample salt marsh restoration sites that were historically sampled and compare the temporal changes
        - Resample and compare to determine biological progression/success

Maine

- 2010 Report of wetland condition
    - Used Narrative Aquatic Life Use Criteria
    - Developed tolerance values for macroinvertebrates (specific to Maine)
    - Community level tolerance index
        - Predict where priority stressor is with models
    - Developing linear discriminate model to predict class attainment
        - Stream algae model
- Annual monitoring on rotating basin approach
    - Incorporate vegetative condition assessment types with biocriteria
        - Monitor a wider range of wetlands
- Mitigation sites – descriptive vegetation monitoring

  ME's compensation planning framework – outlines threats, current condition and historic loss Annual monitoring on rotating watershed basins - 2012 wetland monitoring in Kennebec water basin.

  MNAP – support for in lieu fee and project specific reviews. Update and improve data on rare and exemplary community for northern Maine. Will now complete the rest of the state. Improve the data quality for old records. Provide information for environmental review and planning. Floodplain restoration – habitat is the focus but also looking at functions of the wetland overall.

- Model for identifying potential wetlands based on
    - low wet areas
    - hydric soils
    - Aquatic Resources Space Layer
        - Identified converted wetlands
- New project – mapping of Penobscot watershed
    - Removal/modification of 3 dams
    - find possible habitat restoration sites in flood plains

Rhode Island

- DEM working with the RINHS a nonprofit organization whose mission is to provide ecosystem science. DEM and NEIWPCC developed Wetland Monitoring Plan with advisory group (2006) and identified short and long term objectives for monitoring. Plan set a 5-year timeline.

- Developed a rapid method - RIRAM - for determining condition based on evidence of stress. Part A records wetland characteristics and classification and it is not scored. Part B describes buffer and landscape stresses (20 points). Part C is intensity and proportion of seven in-wetland stresses (70 points). And Part D sums the observed state of key characteristics that influence wetland functions.
- Another method uses adult Odonata species sensitivity to disturbance as a biological indicator to determine the odonata index of wetland integrity.
- Another method uses impervious surface area within 1000 feet of wetland assessment units as a landscape indicator of wetland condition.
- In 2011, RI tested FQA methods and the best fit were those that incorporated invasive species and NOT species richness. Tested at restoration sites.

- Applications of monitoring and assessment data and findings:
  - Inform the plan objectives;
  - Use for required reporting, policy development, and management;
  - Regarding regulatory applications, data can help plan future restorations and permitting will refer to the site specific data if it is available; and
  - Outreach and education.
- Next year – 2012 to 2013
  - Program evaluation, plan update, wetland/watershed indicators, bring in coastal monitoring, link to surface water program, get to more restoration sites
  - Haven't updated statewide wetlands coverage since 1988, that's the coverage still being used although wetland assessments units are head's up digitized.

New Hampshire

- Still recovering from the effects of Hurricane Irene
- Program Development Grant Activities
  - 2009
    - Aimed at aquatic resource mitigation and compliance
      - Stream crossing database
      - Conducted investigations, populated database
      - Training for stream crossing assessments
  - 2011 grants from EPA
    - 1. Integrated habitat restoration program
      - Location relative to important habitats

        - 2. Enhance NH program
            - Develop WQ standards for wetlands
            - Update GIS maps
            - Evaluate alternative assessment methods
- Participated in national assessment survey
    - was the first time they did intensive wetland sampling
- NH Natural Heritage Bureau
    - Level 2 EIA to wetlands, revised to "Level 2.5 EIEB Method"
        - Distinct set of metrics each with their own rating
        - Based on roll-up of scores from individual metrics
        - Metrics are explicit
        - 3 level approach
    - NHB rapid ground based approach was a little more field intensive than Level 2 method
    - Assessed entire wetland system instead of individual natural communities
    - Collected data for all plant species
    - Output is a letter grade
    - Goal is to provide a good set of reference sites and incorporate into regulatory developments

Vermont

- Participated in national assessment
- Report writing – 20-30 sites per year
- EPA grant to wetlands program
- Look at plant community, soils and water quality
- FQAI will be very helpful
- Continue past efforts, monitoring strategy in sync with other programs
- Set up sampling protocol
    - Have already scoped out sites for sampling
    - Work with heritage program and Green Mountain Forest people
- Have been some changes to wetland rules, as of 2010. Can now regulate without the use of maps

Connecticut

- Has not yet embraced M&A but are very much interested

Summary of the utility of Wetland Monitoring and Assessment Data – How the data is (or could be) utilized in State Programs

Identification of:

- Potential restoration sites (e.g. in lieu fee, stream crossings)

- Exemplary wetlands and/or important wildlife habitat
- Reference wetland population
- Priority floodplain areas for restoration and/or increased protection

Mapping:

- Development of aquatic life use base layer (NWI+)
- Updates to wetland maps used in regulatory review

Monitoring and Assessment

- Monitor effects of climate change
- Assessment of mitigation sites (restoration, replication, etc.)

Water Quality Standards

- Development of narrative and numeric Aquatic Life Use criteria for macroinvertebrates, algae, plants, etc.
- Reporting wetland condition in 305(b)/303(d) reports

Other Uses:

- Regulatory review/permitting decisions
- Inform Comprehensive Planning Framework
- Outreach and Education
- Inform management of point and non-point sources
- Identification of stressors and their contribution factor
- Defining a continuous or categorical stressor gradient to evaluate ambient condition

Northeast Floristic Quality Assessment

- Objective index
- Not a multimetric approach, most powerful in combination with other indicators
- Gives a sensitivity value
    - Average conservatism
- Based on panel of experts
- The tool can be useful to determine reference sites , assist in ID of high quality natural areas and evaluate restoration and mitigation success. Measures the propensity for species to occur in minimally altered systems.
- Wrap up meeting in February 2011 in Vermont – went through 100 species that overlapped all of the states.
- All vascular plants 4091 accepted nomenclature – assign confidence rating
- Discussion followed focusing on how CoC's were assigned, their uses and how differences were addressed across state lines. One option would be to average two scores together (for states

with two botanist). At a minimum the states could work on preliminary CoC's , test them and define where there are problems. NY study will be averaged. Suggestion made not to dwell on problematic species unless they are dominant. The group wants to use it by habitat type or physiographic type not by state. Will guidance come out? Yes.

- MA CZM Comment – scores for coastal area's were not well developed because the experts did not have a lot of knowledge of plants. Some plants do respond to disturbance.
- Alan Q – regional CoC's – commented that it is good to have a set of numbers for implementation across the states.
- Review of the lists will continue in the next phase of the project.

Wetland Assessment in the §404 Regulatory Program (Presentation by Jennifer McCarthy)

- Now use default method of ratios to determine mitigation needs
    - Ratio categories are arbitrary
- Want to compare sites and alternatives but also look at effects to function and condition. Even a wetland in poor condition could still provide very important functions. A wetland that has a low condition scale may still need to look at function. The Corps is not looking for one method necessarily and they do not want to re-invent the wheel. Workload – need to apply the method, parameters and values that can be applied on a regional basis.
- Hydrogeomorphic (HGM) approach speaks only to function (quantitative) and not value (ecological services) which is subjective
- Incorporate individual state assessment into regional approach
- Conditional assessment should vary amongst state but functional assessment doesn't have to be state specific especially because each state has different water quality standards
- There is a difference between monitoring and assessment but the same data could be used in different ways
- In lieu fee programs – prioritize sites, look at the success in the long term
- We need to stop looking for a perfect solution and focus on making improvements
- Wildlife isn't incorporated, secondary impacts are often ignored

National Wetland Condition Assessment

- Led to very long days in the field, so keeping shorter days in mind (especially if travel time is required)
- Low tech equipment turned out to be very useful – 8 pages of veg forms hard to work with and the paper forms often got wet – consider PDA
- Not enough sites in each wetland type
- Access was a big issue that knocked some sites out
- USA RAM is useful for those states that do not have a RAM
- Some questionable sites- flood plains and salt marshes

- Will data be available regionally – Yes – it will be summarized at the national and region level and states will be given data
- States want input on what data to use and how it is being compiled
- Need different design to fill in data- too time consuming (use USDA plant list)
- Roles shifted among teams because of lack of resources and time
- Useful work relative to planning future monitoring efforts
- Helped with adjusting methods- Adjust methods to have shorter days
- Time estimates were way off in Maine (took much longer to get to and sample sites)
- Sites under water at the time of sampling (VT)
- Landowner contact is time intensive
- Value in seeing layout
- Very interested in seeing results
- Unclear if the work was a cost effective exercise if the data is not useful to the states
- Some wetland types were missed
- States felt they were not compensated for all of the work involved on the assessment

Wetland Water Quality Standards

- Difficult to come up with standards that apply to all types of wetlands
- 14 states enable and acknowledge wetlands generally and vaguely
- Some states maintain certain parameters for cold water fisheries
- 401 certification – is a way to reach wetlands
- Landscape changes allowing for making progress in wetland standards
- Develop and pursue standards that may be adopted nationally similar to dredge and fill permitting programs
- Wetland standards address non-dredge and fill activities (stormwater, for example)
- "impaired waters" – wetlands aren't reported on 303(d) list
- 404 and 402 are coming together in court cases because some activities have the same components (i.e. stormwater and dredge & fill)
    - Opportunity to figure out what WQ wetland standards look like
- Can use standards to address secondary impacts
- Developing a model regulation
    - Pros and cons of a specific approach
    - Anti-degradation – alternatives analysis used in 402 and 404 programs (Tennessee and Texas)
- Standards give basis for enforcement cases, provide technical information used in court cases
- Numerical values in standards should be derived from narrative from monitoring and assessment
- This issue was the original motivator for forming NEBAWWG
- Barriers

    - politically different to change water quality standards
    - Staff available in 401 program
    - Data available
- Good methodology addresses political environment
    - Results in discomfort from upper level management because it may lead to TMDL's and more regulatory work
    - There is a push for numerical standards for nutrients in freshwater and marine waters
- The watershed approach is a good one because it looks at things holistically

Where are we going with wetland M&A?

- Information flow at the national level is lacking
- Need to raise the level of awareness with other programs. Challenge to integrate WQ programs; problem at both Fed and State level. Need to identify ways to establish communication and dissemination of information among programs to integrate water programs.
- EPA is making some shifts in where people sit within the agency
- Could integrate wetland workgroup with NEAEB
- NEAEB conference – might be a good opportunity to bring together wetlands and water
- General outreach needs to be increased. Website updates are needed.
- More education and outreach (internal and external)
- Interest in a functional assessment that incorporates condition – assist Corps.
- Need to upgrade mapping
- Interest in sharing wetland assessment methods developed in the region.
- Use data in state and federal regulatory – mitigation programs
- Use data to update regulatory maps and incorporate field assessments into review (VT)
- Identification of significant wetlands for protection (VT)
- Establish links with surface water and coastal programs (RI, NH, VT)
- Identify potential restoration sites (ME, RI, NH)
- Validation/calibration of rapid assessments (RI)
- Outreach and education

Next Steps:

- NEIWPCC will conduct a technical workshop in May 2012. The States will demonstrate wetland condition assessment methods (both rapid and intensive assessment methods). In addition, a webinar series will be conducted prior to the workshop. The series will likely include presentations on wetland condition assessments in the region and approaches to data analysis and management. The method presentations will likely include an overview of the field protocols in preparation for the workshop and a discussion of how the data will be (or is currently) utilized.

- NEIWPCC will conduct a FQA workshop in 2012. Potential agenda items include: review of the CoC lists, identification of problems/solutions, identification of the use of FQA in wetland M&A in the region, and the utility of a FQA database.
- NEIWPCC will continue to work on updating the NEBAWWG website to improve dissemination of information to the group.