

NC Wetlands Monitoring Technical Workgroup

October 6, 2015

Meeting notes

Attendees: Robert Truesdale (RTI), Kim Matthews (RTI), Ben Lord (RTI), Yiling Fu (RTI Intern from Duke University), Mike Burchell (NCSU), Cyndi Karoly (NC DEQ), Kristie Gianopulos (NC DEQ), Amanda Mueller (NC DEQ), Rhonda Evans (EPA Region 4), Mike Mallin (UNCW), Norton Webster (NC ERA), Rick Savage (Carolina Wetlands Association), Christine Pickens (TNC), Curt Richardson (Duke), Neal Flanagan (Duke), Leilani Paugh (NC DOT), and Ward Marotti (NC AEP).

North Carolina Department of Environmental Quality (formerly Department of Environment and Natural Resources) Wetland Monitoring Program Update

Cyndi Karoly provided an overview of how NC's wetland monitoring program started in the mid-2000s and was funded by EPA Wetland Program Development Grants. These grants were used to fund specific projects with individual goals and objectives. Most recently the program was moved to the Science Branch and NC will be participating in the 2016 National Wetland Condition Assessment. Amanda Mueller summarized the two-year effort to develop a Wetland Program Plan (WPP) for North Carolina. She is waiting for a few remaining comments on the final draft and is expected to submit the WPP to EPA for review soon.

NCSU's Wetland Monitoring Project

Dr. Mike Burchell of NCSU Biological and Agricultural Engineering leads the effort to continue data collection at 16 of the long-term wetland monitoring sites established by NC DEQ and analyze the long-term data record for trends. NCSU has installed new wells to monitor hydrology, conducted vegetation surveys, and collected water quality samples. Amphibian and macroinvertebrate sampling are planned for 2017, and processing and analysis of existing data by NCSU and RTI continues.

Discussion and agreement on Workgroup Goals and Objectives

Mission Statement: To provide technical guidance and coordination for wetlands monitoring in North Carolina and the integration, sharing, and effective use of the resulting data.

- The group should strive to create an environment of collaboration so researchers/monitoring groups voluntarily submit data.
- No changes to the mission statement were suggested.

Objective 1: To serve as a central technical organization for promoting wetlands monitoring in North Carolina.

- No comments

Objective 2: To Support efforts to catalog and inventory ~~recent and current~~ wetland monitoring activities in North Carolina

Discussion:

- Short-term goals of project are to raise awareness of wetland monitoring activities. We'll focus on the current data and later include historic data. However, we will inventory and

identify sources of historic data. For historic data, we suggest focusing on the major types of NC wetlands.

- For inventories and historic data, we need to make sure they are comparable and combinable if they are beyond the scope of NWCA
- (aside) Rhonda Evans asked the group if the collection of intensification data makes the NWCA monitoring data more useful at the state or regional level; the response was that it does.

Objective 3: To prioritize types of data need to evaluate and the importance of monitoring wetlands structure, characteristics and functions of different wetland types

-Wording changed.

Objective 4: To identify knowledge gaps in wetland monitoring data in North Carolina

-Wording changed.

Discussion:

Q: Were there specific criteria or wetland types for selecting the 16 long-term wetland sites?

Were pocosins included? Are there any sites that have monitored for sea level changes?

A1: There was no formal processes in selecting the sites. We have monitored a pocosin site but it is not included in the long-term sites. The previous grants have not focused on sea level changes.

A2: National Estuarine Program monitors sea level changes.

A3: For hydrology, every site has localized pressure and we will establish an upward/downward trend.

Objective 5: To develop and recommend a core set of data collection and analysis methodologies that consistently characterize and report the wetland productivity, decomposition, biogeochemistry, hydrology, and biodiversity

- Avoid the use of “standards” – wording can often spook local stakeholders.

- Wording changed. See slides.

Discussion:

- The 16 long-term sites were selected based on data availability and study purpose, and are not necessarily a representative sample of all NC wetlands.

- More resources are needed to increase the number of long-term sites.

- NWCA standards can serve as guidelines and a resource for developing methodologies, but shouldn't be explicitly adopted for NC – other methods need to be considered and used as appropriate.

Objective 6: To help build a NC wetlands monitoring database for North Carolina and make recommendations on determine how to use the data to protect and manage North Carolina wetlands for sustaining and evaluating wetland resources.

- Wording changed.

Objective 7: To develop methods and protocols to ensure wetland monitoring and data reporting remains sustainable and accessible in the future.

- Wording changed. “Sustainable” means building a self-sustaining data collection and reporting environment, not just finances.

-The key idea is to create something that can move forward

Existing Wetland Monitoring Data Discussion (see slides for further notes)

Discussion:

- Data from stormwater wetlands and mitigation sites should be included in the database, but such site types must be clearly identified, along with consistently specified stormwater wetland management methods
- Data should include links to any studies/reports for which they are used.
- Data quality should be tracked.
- Provider-submitted data will likely face public scrutiny in the database. However, much of this data is likely already public, just not in an easily extracted analytical form (e.g., in a .pdf file).

Potential uses and needs discussion (see slides for further notes)

Discussion:

- Uses and needs for wetland monitoring data were derived from the draft NC WPP
- Uses highlighted in discussion: data to support the economic valuation of ecosystem services, information for reducing uncertainty in mitigation design (agreement from mitigation professionals as the most critical need), and information to facilitate decision making about NC wetlands, such as prioritizing sites for mitigation/restoration.
- The dollar value (economic benefits) of wetland ecosystem services in NC are not clearly identified at this time, and the link between wetland functions and ecosystem services is not clearly and completely specified. However all agreed that it is very important to assess as a key to acceptance and funding of wetland preservation in this state. Work group members suggested starting with other efforts (e.g., a recent Delaware wetland ecosystem services project) to build similar results for NC.
- “Reference” sites and “baseline” conditions need to be identified and clearly defined in the database. Reference sites are sites are examples of the “best” of a particular wetland type, in terms of the services it provides. Baseline conditions are those encountered before stressors influence wetland functions.