



Nutrient Management: Implications for Mitigation
NCWRA/NCAEP Workshop
October 1, 2015

Agenda:

1:00-1:50 Rich Gannon, NC Division of Water Resources

2:00-2:50 Michael Ellison, NC Division of Mitigation Services

3:00-3:30 Networking Break

3:30-4:20 Marc Recktenwald and Kyle Hall, City of Charlotte Water Quality Program

4:30 -5:00 Panel Q&A with all speakers

5:30 Social at Foothills Brewery



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Abstracts/Speaker Bios:

In-Lake Mitigation, Source Controls, and Nutrient Strategies Going Forward

Rich Gannon, Nonpoint Source Planning, NC Division of Water Resources

Rich will provide an overview of the state's current activities to address nutrient over-enrichment. He will discuss possible implications for nutrient strategies of recent legislative outcomes regarding in-lake mitigation. He will share ongoing progress on expanding the toolbox of load-reducing measures for existing and new development purposes, and will touch on the nutrient criteria and nutrient strategy development process unfolding for High Rock Lake.

Rich Gannon is Nonpoint Source Program Supervisor within the Planning Section of the NC Division of Water Resources (DWR). The program develops and coordinates implementation of large-watershed regulatory nutrient restoration strategies and administers the state's Section 319 and 205j grants for watershed restoration and water quality planning, respectively.

Rich has 20 years of North Carolina-specific NPS management experience. Prior to working in NC, Rich worked for 10 years with wetland and stormwater regulation in central Florida. Rich has his Bachelors of Biology from the University of South Florida and a Master of Environmental Management, Water Resources from Duke University School of the Environment.

Public and Private Roles in Nutrient Management

Michael Ellison, Director, NCDENR Division of Mitigation Services

What should the State of North Carolina be doing to manage nutrients in the state's waterways? Specifically, what activities are legitimately performed by the state? What activities might best be performed by the private sector, NGOs, or local governments? Are there roles or tasks the state should avoid with ten foot poles? There are many differences between what a state can do and what a state should do, and water quality objectives are most definitely achievable when the state's activities are constrained by prudence and informed by experience.



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Abstracts/Speaker Bios:

Michael Ellison spent over twenty-five years as a restoration contractor and environmental consultant specializing in the analysis, restoration and management of disturbed landscapes. He has analyzed river systems all over North America, completed over 250 stream and wetland restoration projects, and restored over 35,000 acres of forest and prairie habitats. Project work has supported mining, energy, transportation, timber production, commercial and residential development, and industrial site management. Since December 2010 Michael has worked for the North Carolina Department of Environment and Natural Resources. He is presently Director of the Division of Mitigation Services and North Carolina's delegated trustee for Natural Resource Damage Assessment and Restoration cases.

Multiple Funding Tools for Watershed Improvement

Marc Recktenwald, Water Quality Program Manager, City of Charlotte Storm Water Services

The City of Charlotte has many water quality compliance requirements issued under state and federal rules. When appropriate, the City has implemented ordinances that address new and historic impacts while maintaining flexibility for development by allowing part of the compliance requirement to be addressed through payment into a City sponsored In-Lieu Fee Program. These ILFs combined with the City's Stream and Wetland Mitigation Bank and its Capital Improvement Program allow the City to use multiple funding tools to address watershed improvement.

Marc Recktenwald is the Water Quality Program for the City of Charlotte. He accepted this position in January 2014 after eleven years with the North Carolina Ecosystem Enhancement Program where he served several roles including the Watershed Planning and Project Implementation Manager. Prior to EEP he was the Stormwater Program Manager for NC State University. He has a B.S. in Natural Resources from NC State University College of Physical and Mathematical Sciences and has over 20 years of experience in surface water related ecosystem services.



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Abstracts/Speaker Bios:

City of Charlotte Monitoring Program Results and Trends

Kyle Hall, Senior Water Quality Engineer, City of Charlotte Storm Water Services

Charlotte-Mecklenburg Storm Water Services (CMSWS) has been monitoring the local streams since the early 90's. In the last 8 years the monitoring program has also been geared towards detecting long term trends in over 20 different water quality parameters through Fixed Interval Monitoring (FIM). Through a combination of FIM, continuous monitoring, and biological monitoring CMSWS works to understand the stressors on the system and improve water quality and the ecology of the system. Historically, nutrients have not been the primary cause of impairment but these parameters have been monitored and some valuable insights have been gained.

Kyle Hall is the Senior Water Resources Engineer for the City of Charlotte. Prior to this position he was the Water Quality Modeler responsible for helping the City of Charlotte meet its NPDES water quality requirements and advancing the science of watershed restoration. With a B.S. in Fisheries and Wildlife Science, he has worked in both estuarine and freshwater systems. After obtaining his M.S. in Biological Systems Engineering, he gained experience in the private sector with groundwater and GIS analyses. Kyle has a strong background in statistics including regression and multivariate analyses and he has a passion for communicating complex environmental data in an understandable manner to support water quality management decisions.