

NORTH DAKOTA'S

Nutrient Reduction Strategy

Nutrient Criteria Development Workgroup

Conference Call #1 Summary

The first conference call of the Nutrient Criteria Development Workgroup took place on March 14, 2014 at 10:00 am CST. Mr. Mike Ell (North Dakota Department of Health, NDDoH) began the conference call and read out the names of those who had accepted the invitation, then asked those individuals who did not register for the call to state their name and affiliation. The following individuals were present on the line when the call began:

Name	Affiliation
Britt Aasmundstad	North Dakota Department of Agriculture
Al Basile	USEPA Region 8
Kristi Carlson	North Dakota Farmers Union
Ken Demmons	HDR Inc.
Mike Ell	North Dakota Department of Health, Division of Water Quality
Kristina Farmer	Environment Canada
Rebecca Fisher	Tetra Tech
Dr. Dave Franzen	North Dakota State University
Arthur Friesen	Environment Canada
Jim Gray	North Dakota Department of Agriculture
Iris Griffin	Environment Canada
Lareina Guenzel	USEPA Region 8
Trace Hanson	North Dakota Conservation District
Susan Hazelett	Apex Engineering Group
Liz Hiett	Tetra Tech
Heather Husband	North Dakota Department of Health
Jessica Johnson	US Fish and Wildlife Service
Andy Job	City of Grand Forks
Craig Kopp	Cargill Malt
Jeff Lewis	Red River Basin Commission
Kendall Nichols	North Dakota Soybean Council
Paul Overby	Verdi-Plus

Name	Affiliation
Mary Podoll	USDA Natural Resources Conservation Service
Michael Quamme	Apex Engineering Group
Shaun Quissell	North Dakota Department of Agriculture
Dr. Shafiqur Rahman	North Dakota State University
Jerry Sauter	North Dakota Department of Agriculture
Bill Schuh	North Dakota State Water Commission
Leo Walker	Dakota Resource Council
Pete Wax	North Dakota Department of Health, Division of Water Quality
Jim Ziegler	Minnesota Pollution Control

Following the roll call, Mr. Ell began the discussion by going over the previous milestones from the overall Strategy development process. He briefly described the Stakeholder Meeting held on December 19, 2013, and the Workgroup carousel activity that resulted in a list of ranked answers to: Why develop nutrient criteria? How to develop nutrient criteria? What are the primary elements and considerations to consider when developing nutrient criteria? and What are the potential Roadblocks to nutrient criteria development? The results for each category are presented below and were discussed during the call.

Why?	count
Defines goal	5
Basis for strategy	6
Protect downstream interests	7
Protect our water resources	11

How?	count
Gather data, modeling	7
Look at naturally occurring vs. inputs	7
Develop understanding of desired endpoint	11

Elements and Considerations?	count
Consider ecoregions (vs. state wide criteria)	4
Scientifically supported	11
Achievable levels/realistic	15

Roadblocks?	count
Political opposition	4
Differing opinions on values depending on stakeholder	6

Supporting data collection and interpretation	7
Everything on the Prioritization “Roadblocks” chart	8
Variability in watersheds and waterbodies	10

Mr. Ell then discussed that while this work group did hold a meeting back in December it was a joint meeting with the Prioritization Workgroup, and was primarily focused on that issue. Mr. Ell expressed that the results of the carousel process were a good starting point, but that the items set out during that meeting were quite broad and lacked the level of detail this topic requires. Mr. Pete Wax (NDDoH) provided a brief overview of nutrient criteria during that December meeting, but agreed that not enough time was dedicated to first explaining what nutrient criteria actually are and then how we might go about developing and implementing them. Mr. Ell explained that the Nutrient Criteria Development Workgroup and the Prioritization Workgroup are interrelated and he encouraged stakeholders to participate in both if they can.

Mr. Ell stated that as we were unable to discuss the details of how to develop numeric nutrient criteria at the December meeting, it may be most appropriate to set up a face-to-face meeting in the next month or so to delve further into the details. This meeting would likely include:

- A clear and thorough explanation of water quality standards and the current policy framework in North Dakota related to water quality standards (WQS);
- A clear and thorough explanation of numeric nutrient criteria and why they are needed;
- Overview of NDDoH’s existing nutrient criteria development plan and how input from stakeholders could shape the future direction of nutrient criteria development in the state; and
- Available approaches for developing numeric nutrient criteria.

Several attendees agreed with the suggestion of a face-to-face meeting and noted that this would serve as a path forward and allow everyone in the Workgroup to get to know each other. Mr. Ell suggested that Mr. Wax give another presentation on state water quality standards and why nutrient criteria are necessary, with the help of Al Basile with EPA Region 8. Then, Mr. Ell could provide a summary of the existing nutrient criteria development plan that was developed a few years ago and use that as a springboard for the Workgroup’s task of developing recommendations for nutrient criteria development in the state. He encouraged participants to read the current nutrient criteria development plan for the state, but stated that they might be better served by learning about the plan through a presentation at the next workgroup meeting when the group can discuss it in person. There were several participants that agreed with this approach as well.

Mr. Ell then began a discussion regarding the state’s idea of a rotating basin approach to water quality management, stating that NDDoH has been thinking about moving towards a basin management framework for most of the NDDoH’s water quality programs. Mr. Ell stated that the NDDoH currently implements its water quality programs on a state-wide scale, this means that when, for example, the NDDoH reviews projects for Section 319 NPS funding, they are from across the state which limits the NDDoH’s ability to take into account any basin specific priorities. A rotating basin approach would allow the NDDoH to focus on certain basins one year at a time and then focus on another basin the next year, thereby allowing the NDDoH to focus its resources on one area at a time. He emphasized that we can discuss this in more detail at our face-to-face meeting. Mr. Ell then asked if there were any questions.

Mr. Jim Gray (North Dakota Department of Agriculture) asked if what we are discussing encompasses the following: 1) existing water quality data exists to document existing nutrient levels; 2) numeric

nutrient criteria will define where we should be; and 3) the nutrient reduction strategy will tell us how to get there. Mr. Ell said that is exactly what we are after, and that this is a very succinct way of stating the process ahead of us. Mr. Gray then asked if NDDoH could show the group the current data regarding nutrient levels across North Dakota at the face-to-face meeting. He said that it would be good to know how much of a reduction we are talking about, so we can determine the feasibility of the criteria we set. Mr. Ell said that sounds reasonable, and that USGS would be the best source for such data.

Mr. Bill Schuh (ND State Water Commission) stated that one item that is fairly technical, but should be discussed by this Workgroup is a waterbody's response time to nutrient reductions. He explained that over time nitrogen and phosphorus are deposited at the bottom of lake and river systems and those deposits will continue to release the nutrients into the waterbody no matter the reductions made. What we need to figure out is the residence time for these inputs in the system and determine how long of a lag-time is needed to document improvements in these systems. In other words, how soon can we determine whether reductions needed to meet nutrient standards are working or not working. Mr. Ell agreed, and stated that he is aware of some research out there that has shown that this buildup does occur but it is variable across waterbodies and regions.

Mr. Schuh stated that the reason he brings this up is that he has heard about examples in the Chesapeake Bay where farmers did everything they possibly could but the levels of nutrients in the Bay and its tributaries did not significantly decline. We don't want this to be the case for us, and if we do have systems that will have these types of feedbacks we should know this ahead of implementation. Others agreed.

Dr. Dave Franzen (North Dakota State University) stated that it seems like we will just be focusing on river and stream systems in this criteria development effort. He then asked if EPA was aware of this and alright with the fact that this approach would leave off all of North Dakota's lakes and prairie pothole wetlands.

Mr. Al Basile (USEPA Region 8) stated that this process is a stakeholder driven process and if that is the direction the workgroup would like to focus on as a first step that is acceptable. He added that the ultimate goal is to put in place nutrient criteria for all waters of the state. He also mentioned that of all the waterbody types it is much easier to develop nutrient criteria for lakes.

Dr. Franzen also mentioned some research he had seen regarding certain best management practices implemented in the Chesapeake Bay that reduced particulate phosphate. However, here in North Dakota, most of our phosphorous is in the form of soluble phosphate and therefore the buffer that vegetation provides to reduce the particulate form of phosphorus which addresses nutrient issues along the east coast will not be present here in North Dakota. We will need to find scientifically defensible ways of addressing the issue of soluble phosphate reaching our lakes, reservoirs, rivers and streams. Mr. Paul Overby (Verdi-Plus) stated that he had read a similar study and that in the case of soluble phosphate, the key is reducing the amount of water flowing off the fields in the first place. Mr. Ell agreed that the scientific understanding of nutrients in North Dakota waters is critical and that the points made were very pertinent and valuable. He recognized that addressing the right sources and the right forms of pollutants will need to be a part of the Statewide Strategy. This will play into the numeric criteria we set as we will need to determine whether we are measuring dissolved phosphorus, total phosphorus, etc.

Mr. Ell then discussed that the third part of the face-to-face meeting would be discussing these technical issues. He also mentioned that we may need to have another meeting to fully address such topics. Once we educate ourselves, we can then start fleshing out the technical issues that are integral to setting nutrient criteria. This will ultimately lead to a discussion regarding data gaps and additional research. Then of course, we will discuss what nutrient criteria approach we want to use.

Mr. Ell then asked if there were any other questions regarding the content of the Workgroup's next meeting, there were none. He asked the group if they would prefer scheduling the Nutrient Criteria and Prioritization Workgroup in-person meetings on consecutive days. Many attendees stated that would be preferable since a number of participants were members of both Workgroups. Mr. Ell said he would look to schedule the next two workgroup meetings the week of April 14th and would send out a doodle poll to the group in the coming days. He asked for any final questions, there were none.

Mr. Ell ended the call, thanking everyone for their continued participation in this process.