NORTH DAKOTA'S
Nutrient Reduction Strategy

Watershed Prioritization and Load Reduction Targets Workgroup

Conference Call #1 Summary

The watershed prioritization and local reduction targets workgroup conference call took place Wednesday, March 12, 2014. Mr. Mike Ell (North Dakota Department of Health, NDDoH) began the conference call and began roll call. The following individuals were present on the line when the call began:

Name	Affiliation
Al Basile	USEPA Region 8
Vern Berry	USEPA Region 8
Andre Delorme	Valley City State University
Mike Ell	North Dakota Department of Health, Division of Water Quality
Scott Elstad	North Dakota Game and Fish Department
Dennis Fewless	North Dakota Department of Health, Division of Water Quality
Rebecca Fisher	Tetra Tech
Arthur Friesen	Environment Canada
Ann Fritz	North Dakota Department of Health
Doug C. Goehring	North Dakota Department of Agriculture
Iris Griffin	Environment Canada
Jim Hausauer	City of Fargo
Susan Hazelett	Apex Engineering Group
Liz Hiett	Tetra Tech
Heather Husband	North Dakota Department of Health
Kendall Nichols	North Dakota Soybean Council
Mike S. Noone	North Dakota State Water Commission
Ken Nysether	Short Elliott Hendrickson Inc.
Melanie Parvey	City of Grand Forks
Mary Podoll	USDA Natural Resources Conservation Service
Karl Rockeman	North Dakota Department of Health, Division of Water Quality
Jerry Sautes	North Dakota Department of Agriculture
Eric Sikora	North Dakota Department of Health, Division of Water Quality

Name	Affiliation
Andrea Travnicek	Office of the Governor
Leo Walker	Dakota Resource Council
Pete Wax	North Dakota Department of Health, Division of Water Quality
Jason Wirtz	North Dakota Department of Agriculture

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 in December of 2013, and the Workgroup carousel activity that resulted in a list of ranked answers to: Why Prioritize? How to Prioritize? What are Elements of Prioritization? And what are the potential Roadblocks to prioritization? The top two results in each category are presented below and were discussed during the call.

Why?	count
Achievable watersheds	13
Most "bang for the buck" (addressing fisheries and wildlife and public health and recreation, instead of just one)	17

How?	count
Beneficial water uses (to protect)	9
Prioritize by achievable results and restorability	16

Elements and Considerations	count
Social significance and acceptance	8
Improvement potential/make a difference?	10

Roadblocks	count
Political boundaries (decision making with multiple groups involved)	10
Stakeholder buy-in (lots of stakeholders, and lots of opinions)	11

Mr. Ell noted that while the Workgroup made very good progress during this process, the group was not able to delve into the specifics of what it means to prioritize waterbodies to protect designated uses. This conference call was the first in a series of discussions to begin developing a framework to prioritize waters in North Dakota for protection and/or restoration. Mr. Ell also mentioned that while the title of the group is Watershed Prioritization and Load Reduction Targets, the tasks and discussions of this Workgroup will focus mostly on prioritization as an initial first step.

Mr. Ell summed up the results from the Prioritization Workgroup Session at the December stakeholder meeting stating that the group supports projects that give us the most “bang for the buck” and involve achievable goals. The greatest roadblock will likely be generating stakeholder and political buy-in. He

then asked if he had missed anything. Mr. Scott Elstad (North Dakota Game and Fish Department) stated that he and his agency are most concerned with the recreational aspect of North Dakota's waterbodies, and that ensuring these uses can be maintained is very important. Mr. Elstad emphasized the importance of making smart investments, and not spending large amounts of state funding on waterbodies where no real improvements are achievable. Mr. Ell stated that as the Workgroup develops a prioritization ranking system, they can choose to give more weight to such indicators as recreational uses. The issue of restorability is critical – Mr. Ell agreed.

To preface the discussion regarding prioritization methods, Mr. Ell explained that the Planning Team had initially tasked him with finding a prioritization method to use, but as he began his research, he found that this was a tall order, as there were many options and ways of prioritizing. Therefore, the prioritization workgroup was created to assist the NDDoH in this decision making process.

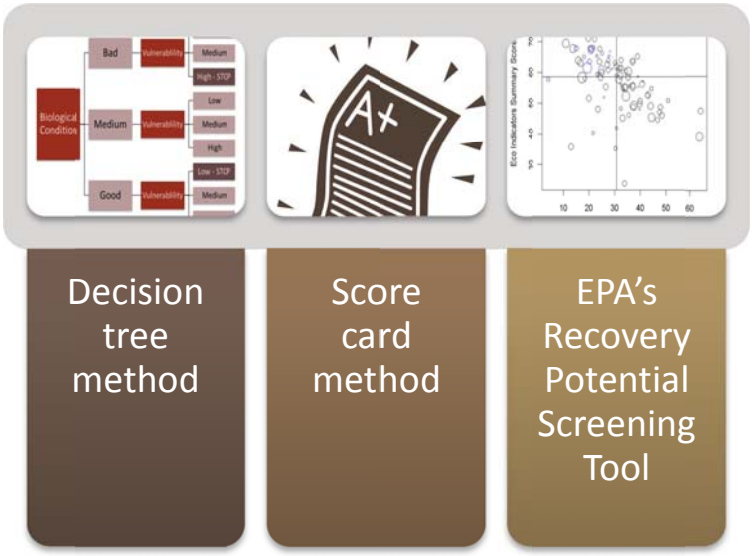
Mr. Ell directed the participants to the power point presentation he had sent out to the group, titled Options for Watershed Prioritization in North Dakota. Mr. Ell began by asking why should we prioritize, explaining that it was only natural to want to rank watersheds in this way because most of us prioritize on a daily basis, such a system promotes more thorough decision making and also allows us to manage our resources in the most efficient way possible.

Mr. Ell asked the group to look at slides 4, 5, and 6, displaying maps of different watershed sizes, represented by Hydrologic Units, showing that prioritization can be tiered. In other words, prioritization can take place at different scales. He then described all of the various indicators that can feed into prioritization and grouped them into ecological, stressor, and social indicators. He suggested that we can also add weighting factors to certain indicators that we care most or least about.

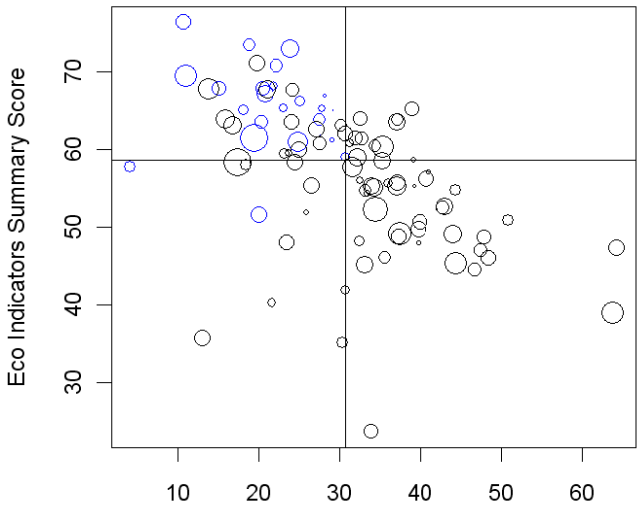
Mr. Ell showed the group three different prioritization decision tools and explained the pros and cons of each approach. He stated that the task of this Workgroup is to determine which tool would work best for North Dakota, keeping in mind our goals, available data, and timeframe. The three tools are the decision tree method, score card method, and EPA's recovery potential screening tool.

The decision tree method sets out a decision framework that provides a starting point for decision makers. As you move from left to right on the template, you are asked a sequence of questions about the waterbody that is linked to previously selected indicators. It is a somewhat arduous process, but once the methodology is set up it can be replicated across various waterbodies.

The score card method may be the most simplistic of the three, as Mr. Ell explained. Whatever your indicators of choice are, you assign each waterbody a score for how they fair in that indicator category. For example, the Watershed X could get a score of 4 for percent natural cover, 2 for community engagement, a 1 for phosphorus loadings, and a 3 for the economic value of its fishery. Then the overall score for Watershed X is compared to Watershed Y and Z and a ranking is created based on which watershed received the most points.



Mr. Ell then described the third method, the Recovery Potential Screening Tool. He defined recovery potential as the likelihood of an impaired waterbody or watershed to meet water quality standards, given its ecological, stressor, and social indicators. He explained that this tool uses a spreadsheet of sorts to track each waterbody's score within three broad categories (ecological, stressor, and social). Weighting factors can be assigned to one or a few of the indicators in each category if desired. From this spreadsheet, a bubble plot is created that visually displays all of the indicators for all of the region's waterbodies in relation to each other. The y-axis is the Ecological indicator score, the x-axis is the Stressor indicator score which together determine where a waterbody's "bubble" will appear on the graph. Then the third indicator, social, is expressed as the size of the bubble. The larger the bubble the greater the social engagement in the watershed. Mr. Ell explained that in this way all of the waterbodies can be viewed on one graph that takes account of all indicators at once. It is a very powerful tool in this sense.



Mr. Ell then asked if there were any questions regarding the prioritization options he had just presented. There were none so he then transitioned the call into a discussion of possibly integrating prioritization into a basin management framework. Mr. Ell explained that the NDDoH has been talking internally about moving towards a basin management scale for its Surface Water Quality Management Programs (e.g., monitoring and assessment, TMDLs,

biological monitoring, 319 Nonpoint Source Management). Currently, most, if not all, water quality programs are implemented on a state-wide scale. This means, for example, that when the state solicits or reviews projects for 319 funding they are from across the entire state which makes it difficult, if not impossible, to focus on basin specific priorities. A basin management approach would allow the NDDoH to focus on certain basins one year at a time and then focus on another basin the next year. This would help to prioritize resources and increase our chances of successfully restoring and/or protecting the state's water resources.

Mr. Ell explained that in the prioritization context, rather than prioritizing across the state, we could do it on a basin scale as well. We could prioritize watersheds within a basin, so that each basin receives the attention it deserves. There would be no statewide competition, in terms of high, medium, and low priority, all of that would be on a basin scale. From there we could also develop different priorities within each basin unique to that geographic area. Mr. Ell emphasized that a critical aspect of the basin management framework is to ensure it is a stakeholder driven process, and by bringing prioritization to the basin level we allow for more local involvement. Mr. Ell noted that this wouldn't usurp any other basin planning or managing efforts, and that the Department's water quality based basin management approach should complement and/or enhance other basin planning and management efforts.

Mr. Elstad mentioned that he and his colleagues had discussed this a bit, and identified that there are positive and negative aspects to both scales. Mr. Elstad also stated that he does like the score card method because it's easy to understand, whereas the graphs and trees of the other methods may be more difficult to explain to the public. He stressed that as a state we have good data no matter what method is picked and that data covers 20-30 years at least -- we don't want to collect data for another 10 years, we want to move forward with implementation now. Heather Husband (North Dakota Department of Health) mentioned that if we decided to use the Recovery Potential Screening Tool, it does not have to dictate the way we explain the results to the public. We could use a score card to explain it if we so choose.

Anne Fritz (North Dakota Department of Health) mentioned that if we are worried about the data's accuracy that should not be an issue. Ms. Fritz works directly with this data and stated that the 8 digit HUC level is just as accurate as the 12 digit HUC level. Another participant asked Ms. Fritz to explain what was meant by 8/10/12 digit HUC. She stated that a HUC is based on terminology that is part of a national framework for maintaining watershed boundaries. It is essentially a hierarchical system, with a region at the top (e.g. Red River Region), then sub-basin (also called an 8 digit HUC), then watershed level (10 digit HUC), and a sub-watershed (12 digit HUC). There are federal standards for how to delineate these based on scientific and hydrologic principles. She offered to send out a fact sheet about the HUC hierarchy.

Mr. Ell then moved onto the next subject regarding the information needed to move forward with watershed prioritization tools. The Workgroup participants agreed that more information on each strategy, particularly the Recovery Potential Screening Tool would be helpful. He also asked the group if a face-to-face meeting would be more effective, and many participants agreed. Mr. Ell suggested this meeting take place about a month from this call. There were also requests from the participants for the

information regarding TMDLs in the state, the lake tiers from the Game and Fish Department, and the HUC info sheet that Ms. Fritz mentioned. Mr. Ell stated that he would send all of this information out to the group.

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