

**Task Force Coordinating Committee Nutrient Reduction Strategy Development:  
Virtual Workshop on Watershed Prioritization  
5 January 2012**

**Workshop Summary**

**Introduction and Background**

The 2008 Mississippi River/Gulf of Mexico Nutrient Reduction Task Force’s Hypoxia Action Plan calls for the development and implementation of State nutrient reduction strategies. Task Force States are actively working on the development and implementation of these nutrient reduction strategies. To assist the states in this effort, a series of workshops are being conducted to facilitate discussion among the States and federal partners on selected topics, ranging from watershed prioritization to annual reporting of progress.

**Virtual Workshop Series**

The purposes of the virtual workshops are to encourage information exchange among States and their federal partners on selected strategic elements in the State nutrient reduction strategies, promote comparability and consistency among State strategies within the Mississippi River Basin, and identify areas where Task Force members can assist and support partners in the development and implementation of these State nutrient reduction strategies.

The first virtual workshop was held on 5 January 2012 to discuss State approaches for prioritizing watersheds within the State. The virtual workshop agenda and list of participants is attached. It is envisioned that monthly virtual workshops will be held on the topics listed below.

<u>Date</u>	<u>Topic</u>
Feb. 2	Setting Watershed Load Reduction Goals
March	Ensuring Effectiveness of Point Source Permits
April	Nutrient Reduction Efforts in Agricultural Areas
May	Storm Water and Septic Systems
June	Accountability/Verification Measures
July	Annual Public Reporting of Activities

Additional topics may be added as issues arise in future workshops.

**Watershed Prioritization**

One of the initial activities in developing and implementing nutrient reduction strategies is determining which watersheds are high priority for nutrient reduction. Therefore, this was the topic for the first virtual workshop. The Task Force States are all at different stages in the nutrient reduction strategy process; some have completed and are implementing their strategies, while others are in the early stages of development. However, this is an iterative process so as additional information becomes available and management practices are implemented, priority watersheds might change, so everyone can benefit from a discussion on on-going or proposed approaches.

## State Approaches To Watershed Prioritization

The workshop format was to have two States provide examples of their approaches for prioritizing watersheds and then have an open forum where all the Task Force States had the opportunity to discuss the approaches that they are implementing or that they are considering for implementation.

The discussion of watershed prioritization approaches was initiated by having Jan Boydston, LA DEQ, and Steve Walker, MO DNR present the approaches their two States have used for prioritizing watersheds. Their Powerpoint presentations are attached.

Following these two presentations, each of the Task Force States discussed the approaches that their State had initiated or were considering initiating for watershed prioritization. These discussions were guided by the following set of questions:

- How have other states prioritized or plan to prioritize watersheds?
- How have or will other agencies/organizations be/been involved in the prioritization process?
- How have MRBI watersheds been considered?
- What barriers were faced or are being faced in prioritization? Can Task Force members help break down barriers?
- What tools were used or are planned for use in prioritizing watersheds (e.g., SPARROW, TMDLs, 303(d) lists)?
- How were external stakeholders involved or proposed for prioritization?
- What collaboration or federal support would be assist in this effort?

Common elements that were considered by nearly all the States for watershed prioritization are listed in Table 1. Additional elements that were considered by selected States are also listed in Table 1. Other thoughts that emerged during the discussion of watershed prioritization are listed in Table 2. Issues, barriers, or challenges related not just to watershed prioritization, but also the development and implementation of State nutrient reduction strategies, are listed in Table 3.

### Common Elements

Because State concerns are related to nutrient impacts on State waters as well as nutrient loading to the Gulf of Mexico, every State considered their impaired waters list [303(d)], watersheds with completed TMDLs, and input from partnering sister agencies or organizations (Table 1). Completed TMDLs also provided nutrient reduction targets. Stakeholder engagement and input was a critical element for each State, although the phasing of this input varied by State. Some States initiated the process with stakeholder involvement, while others developed a strawperson draft for discussion before engaging stakeholders. MRBI priority watersheds were considered by all the States as part of the prioritization process. The USGS SPARROW model results were

used by nearly all States in identifying both the magnitude and source of nutrient loading from watersheds. Nearly all States used multiple data layers and GIS coverage in identifying priority watersheds. In addition, most states used approved watershed-based management plans in prioritization because this indicated stakeholder involvement and willingness to participate in reducing nutrient loading.

**Table 1. Common, and Selected, Attributes Used by Task Force States in Watershed Prioritization**

<b>Common Attributes Used by Task Force States in Watershed Prioritization</b>
<ul style="list-style-type: none"> <li>• Stakeholder involvement and input (albeit, with different phasing on involvement among States).</li> <li>• Watersheds with impaired water body segments on the 303(d) list.</li> <li>• Watersheds with completed TMDLs and nutrient reduction targets.</li> <li>• MRBI watersheds for agricultural nonpoint nutrient sources.</li> <li>• Water quality monitoring information for current nutrient status and historical trends.</li> <li>• Multi-spatial data layers overlaid to identify watersheds with characteristics typical of nutrient contributing areas.</li> <li>• USGS SPARROW model results for both N and P yield estimates from watersheds.</li> <li>• Approved watershed-based management plans, indicating watersheds with stakeholder involvement and commitment to participate in implementing management practices.</li> </ul>
<b>Additional Attributes Used by Some Task Force States in Watershed Prioritization</b>
<ul style="list-style-type: none"> <li>• State watershed characterization tools such as MS Watershed Characterization and Ranking Tool (MWCRT), MO Watershed Evaluation and Comparison Tool (MWECT), MO Watershed Information Network (MoWIN).</li> <li>• Drinking water supply watersheds.</li> <li>• Stakeholder willingness to implement nutrient management practices.</li> <li>• Best professional judgment for ranking watersheds.</li> <li>• Proximity to major water bodies.</li> <li>• USDA ARS SWAT model.</li> <li>• WI Pollutant Load Ratio Estimation Tool (PRESTO) for source identification.</li> <li>• NRCS At-risk soils assessments.</li> </ul>

**Additional Watershed Prioritization Elements**

Several states have used additional attributes or tools for watershed prioritization (Table 1). For example, drinking water supply watersheds receive higher priority in some states. Specific watershed characterization software programs, USDA ARS SWAT model and the WI PRESTO model, were also used in prioritizing watersheds. In addition, several States mentioned that stakeholder willingness to participate in implementing management practices or having active watershed partnerships were also factors considered in prioritizing watersheds.

### **Additional Thoughts**

The watershed prioritization topic led to discussions on other nutrient reduction strategy considerations (Table 2). While considerations were not necessarily related specifically to watershed prioritization, they did relate to the nutrient reduction strategy process. These considerations ranged from piloting the strategies in selected watersheds prior to implementing the strategies state-wide and maintaining the continuity of Work Groups throughout development and implementation of nutrient reduction strategies to integrating point and nonpoint nutrient reduction practices by simultaneously adding nutrient limits to all NPDES permits in the priority watershed.

**Table 2. Additional Thoughts Emerging from Discussion of Watershed Prioritization**

<b>Additional Thoughts</b>
<ul style="list-style-type: none"><li>• Pilot the nutrient reduction strategy approach in a few watersheds before adopting it statewide.</li><li>• Nesting research and demonstration sentinel watersheds within MRBI watersheds to increase understanding and transferability of information to other watersheds.</li><li>• Maintaining continuity of Work Groups from nutrient reduction strategy development through implementation in priority watersheds.</li><li>• Iterative process throughout nutrient reduction strategy development and implementation</li><li>• Focus on State waters with cumulative benefits accruing to the Gulf of Mexico.</li><li>• Integrate point-nonpoint nutrient reductions in priority watersheds by simultaneously issuing nutrient limits for all NPDES permits in priority watersheds.</li><li>• Concurrently moving forward with activities outside watershed prioritization and management practice implementation such as nutrient criteria development and nutrient trading policy development.</li><li>• USDA NRCS has initiated the 4R's (Right source, Right rate, Right time, Right place) standard practice for precision agriculture nutrient management.</li></ul>

### **Issues, Challenges, and Barriers**

A number of issues, challenges and barriers were identified during the open forum discussion (Table 3). The greatest barrier or challenge is resources – funding, personnel, and time. In addition, there are restrictions (e.g., geographic location, matching requirements, time limits) on many funding sources that make it difficult to develop and implement a functional framework for reducing nutrients. The scale of watershed prioritization was also raised as an issue. For the system to respond to the implementation of nutrient management practices in a reasonable period of time, the watershed needs to be small. However, for the cumulative benefits to be observed downstream, the watershed needs to be large, which also means the response time will be long. In addition, comprehensive monitoring networks are critical if the responses are to be observed, but over the past two decades, monitoring networks have been discontinued. Stakeholder and

public expectations for seeing reductions in nutrient loadings and water quality improvements are currently high. These expectations may be realized in the short-term. Developing and gaining acceptance of a shared vision and goals among stakeholders with different perspectives, objectives, and beliefs continues to be an issue that can only be resolved by continued involvement with stakeholders. With finite funds, personnel, and time, some of the activities in which States are currently engaged will have to change if the development and implementation of nutrient reduction strategies are to be accommodated. It would be interesting to conduct a virtual workshop on what these changes are likely to be among States.

**Table 3. Issues, Challenges and Barriers Related to State Nutrient Reduction Strategies**

<b>Issues, Challenges, and Barriers</b>
<ul style="list-style-type: none"> <li>• Resources – Limited funding, personnel, and time.</li> <li>• Promulgation of numeric nutrient criteria could change watershed priorities</li> <li>• Prioritization scale – must be small enough to measure change, but large enough to see cumulative benefits. All available resources could be devoted to one HUC8 watershed (See first bullet above).</li> <li>• Nonpoint source priority watershed doesn't necessarily correspond to watersheds with greatest point source contributions. Integrating point-nonpoint source management practices can be difficult.</li> <li>• Available funding sources and mechanisms also have use restrictions, which can make it difficult to implement a functional nutrient reduction framework with these funding constraints.</li> <li>• Difficulty reaching consensus on a shared vision and goals for nutrient reduction in the State and subsequent lack of stakeholder affinity for implementing nutrient reduction practices to achieve these goals.</li> <li>• High expectations for early success on a long-term issue.</li> <li>• Need for a coordinated, comprehensive, collaborative federal agency monitoring network within States and throughout the Mississippi River Basin.</li> <li>• Integrating nutrient limits in NPDES permits without numeric nutrient criteria.</li> <li>• In a finite environment of funding, personnel, and time, States will need to change some of the things they are doing to accommodate the development and implementation of nutrient reduction strategies.</li> </ul>

**New Funding Sources**

J. Piotrowski, EPA, announced the USDA NRCS recently announced two RFPs for funding projects: Conservation Innovation Grants (CIG) RFP ~ \$20 million (pre-proposals required by February 29, 2012); and the Wetlands Reserve Program (WRP) RFP ~ \$11.47 million.

**Next Steps**

Virtual workshop participants were asked to forward thoughts and comments to Aaron Kornbluth ([Kornbluth.Aaron@epa.gov](mailto:Kornbluth.Aaron@epa.gov)) on how these virtual workshops could be improved: 1) what you would like to see revised, added, or deleted; and 2) what you would like to see retained. Send these comments by 20 January.

The next virtual workshop will be on Thursday, 2 February 2012 from 10:00 until noon EST (9:00 – 11:00 am CST). The topic will be *Setting Watershed Nutrient Reduction Goals*. The workshop agenda and registration instructions will be forwarded at a later date.

### **Action Items**

1. Send comments on the virtual workshop to A. Kornbluth – All Task Force States, 20 January.
2. Forward agenda and registration to Task Force participants – A. Kornbluth, 27 January
3. Submit pre-proposals for NRCS RFP funding opportunities – All interested parties, see text for submission dates.
4. Next virtual workshop, *Setting Watershed Nutrient Reduction Goals* – All, 2 February, 10:00 to noon, EST.