

US EPA ARCHIVE DOCUMENT

## Agenda

### State Level Nutrient Reduction Strategies Workshop—Agricultural Component Hyatt Regency Columbus June 13–15, 2011

The *Mississippi River/Gulf of Mexico Hypoxia Task Force Action Plan* calls for the reduction of excessive nutrients to the Gulf of Mexico. As part of this overall effort, states are developing Nutrient Reduction Strategies. The individual state strategies need to outline how states will reduce nutrient impairments within their jurisdiction, improve the quality of life for citizens, and contribute to reducing the size of the hypoxia zone in the Gulf of Mexico. Each state's Nutrient Reduction Strategy needs to answer four basic questions:

1. What nutrient load reductions are achievable?
2. How will these reductions be achieved?
3. What are the implementation schedule and corresponding milestones for this effort?
4. What is the value to each stakeholder of these reduction efforts?

The state strategies are to cover all major sources within the states.

Agriculture has been identified as the largest source of nutrients impacting the Gulf. The diversity of agriculture throughout the Upper Mississippi and Ohio River basins and the range of agricultural intensity between states requires that each state develop a state-specific plan to address agriculture.

This workshop is intended to help states in the basins develop the agricultural component for their State Nutrient Reduction Strategies.

## June 13

### 1:00–2:15 Welcome and Introductory Remarks

*Tom Davenport, U.S. Environmental Protection Agency (EPA) (Moderator)*

*Leonard Jordan, Regional Conservationist—East, Natural Resources Conservation Service*

*Justin Schneider, Indiana Farm Bureau*

*Donn Waage, Director, Central Partnership Office, National Fish and Wildlife Federation*

### Managing Nutrients to the Gulf

*Timothy Henry, Deputy Director, Water Division, Region 5, EPA*

### 2:15–2:55 The Scientific Axioms of Solving Water Quality Problems

The significant water quality challenges we face necessitate the use of the best available science in a format that can be applied across spatial scales and with highly variable institutional resources. This presentation will be organized around several axioms that should guide the organization and application of this science and any program or policy

resources. The premise behind offering these axioms is that we are working to solve water quality problems rather than using science to justify the management of water quality programs. Building on this distinction, and several critical science-based axioms, an alternative approach to addressing water quality challenges will be offered.

*Pete Nowak, Professor, Nelson Institute for Environmental Studies, University of Wisconsin-Madison*

### **2:55–3:15 When Nutrients Run Amuck: The Grand Lake Dilemma**

The Grand Lake St. Marys watershed is legally declared a “watershed in distress.” Dramatic change in how nutrients are managed is needed in the Grand Lake St. Marys watershed, as well as throughout areas of Ohio. Multiple federal, state, and local partners are working together to assist with the restoration of Grand Lake. This talk explores some of the methods that Ohio EPA and others are implementing to improve nutrient management and to reduce the impacts of nonpoint-source nutrients in agricultural dominated watersheds such as Grand Lake.

*Russ Gibson, Nonpoint Source Program Manager, Ohio EPA, Division of Surface Water*

### **3:15–3:45 Break**

### **3:45–4:05 Managing Agricultural Nutrients: State-Level Effort**

Agriculture is the largest land use in the Midwest. As we produce food, fuel, and fiber, it is critically important that we take water quality into consideration. The off-site impacts of agricultural production must be minimized to alleviate downstream problems. Collectively, stewardship and targeted implementation efforts are keys to sustaining production and improving water quality. Whatever is proposed must pass a reality check for day-to-day agricultural production.

*Jerod Chew, Director of Soil Conservation and Environmental Stewardship, Indiana State Department of Agriculture*

### **4:05–5:15 Differing State-Level Approaches in Action (Panel Discussion)**

After brief presentations, panelists will answer questions, including the following: What were the barriers you overcame to get this program going? How is this approach funded? What are you hoping to achieve? What results have you seen? Since this program began, what have you changed/adapted based on the results so far? How are stakeholders involved in establishing the program or making changes?

#### **Ohio’s Distressed Watershed Rule**

In 2010, the Division of Soil and Water Resources adopted new rules for watershed in distress. The new rules resulted from harmful algal bloom outbreaks in 2009 and 2010 in the Grand Lake St. Marys watershed. Grand Lake is Ohio's largest inland lake, and its watershed is home to numerous agricultural and livestock operations. The new rules were developed to help address external loadings of phosphorus and nutrients in the watershed and to manage the risks associated with manure application, especially during the winter.

*Rob Hamilton, Administrator of Agriculture Pollution Abatement, Division Soil and Water Resources, Ohio Department of Natural Resources (DNR)*

### **Kentucky's Agricultural Water Quality Plan: 16 Years of Lessons Learned and Experiences from Implementing the Agricultural Water Quality Act of Kentucky**

The goal of the Act is to protect surface and groundwater resources from pollution as a result of agriculture and forestry activities. The Act requires all landowners with 10 or more acres that are being used for agriculture or forestry operations to develop and implement a Water Quality Plan based upon guidance from the Kentucky Agriculture Water Quality Plan. It is the sole responsibility of each landowner to develop, implement, and revise, when needed, a Water Quality Plan for their individual operations.

*Steve Coleman, Director of the Kentucky Division of Conservation*

### **Wisconsin's NR 151**

The current regulatory approach to nonpoint-source pollution reduction, in place since 2002, centers on statewide, enforceable agricultural and non-agricultural performance standards and manure management prohibitions, required by Chapter NR 151, Wis. Adm. Code. Performance standards are minimum expectations that apply to phosphorus delivery, cropland erosion, livestock and manure storage management, nutrient management, livestock process wastewater, construction erosion, post-construction storm water management, developed urban areas, and transportation facilities.

*Andrew Craig, Water Resource Engineer, Wisconsin DNR*

**June 14**

**8:00–9:30 Differing Project Level Approaches**

*Lyn Kirschner, Natural Resources Conservation Service (Moderator)*

### **Indiana Conservation Partnership Decision Making**

The mission of the Indiana Conservation Partnership is to provide the technical, financial, and educational assistance needed to implement economically and environmentally compatible land and water stewardship decisions, practices, and technologies. By working collectively, we best serve our common customers, the landowners of Indiana, and protect and improve Indiana's natural resources. As a partnership, each organization is committed to providing customers with quality service through effective communication, professional integrity, and mutual respect. The partnership is sharing resources that range from office space and phones to trucks and all-terrain vehicles. Through our common standards, joint training, and leveraging of dollars, our Conservation Implementation Teams pull together to put more practices on the land and deliver effective and efficient conservation.

*Jane Hardisty, Indiana State Conservationist, Natural Resources Conservation Service*

### **CP39: Developing an Implementation Program**

Minnesota has a significant amount of drained landscape used in agricultural production. These landscapes, located throughout the Midwest cornbelt, have been identified as significant sources of nutrients, in particular, nitrate nitrogen. One of the practices that has promise for helping mitigate export of nutrients is constructed wetlands. The ability

of constructed wetlands to reduce elevated loads of nitrate has been demonstrated in Iowa and other locations in the Midwest. This makes the practice a potentially important tool for achieving the reductions in nitrogen load that are anticipated to be needed to address hypoxia in the Northern Gulf of Mexico and is supported by the Farm Bill programs under the CP39 practice. The stated purpose of CP39 is, however, broader than nitrate removal. Within Minnesota, interest has been expressed in addressing reductions in phosphorus and sediment loads, mitigation of elevated storm flows that cause channel degradation, support of wildlife and biodiversity, and minimization of greenhouse gas generation. An interagency federal and state team of environmental, agricultural, and conservation agencies is teaming up with experts from the University of Minnesota and TetraTech to identify the most important design considerations and recommendation for a multipurpose practice design and siting tool for these practices.

*Wayne Anderson, Principal Engineer, Minnesota Pollution Control Agency (MPCA)*

### **Improving Nutrient Management and Water Quality through Farmer Engagement: The Watershed Council Model**

Since 2005, farmer-led watershed councils in northeast Iowa have been meeting to plan, implement, and evaluate watershed improvement projects. Each council uses an innovative performance-based incentive program to target and promote best management practices (BMPs). Extension facilitators assist the farmer councils as they investigate the water quality impairments, set watershed improvement goals, and use field-level performance tools that are tied to the impairments. The councils work with scientists to develop water monitoring plans that measure on-going water quality improvement progress. High farmer participation in two of the watersheds led to a new partnership with the local soil and water conservation district (SWCD) and a successful Mississippi River Basin Healthy Watersheds Initiative (MRBI) project application. The watershed improvement projects are supported by a combination of federal, state, and commodity group funding.

*Chad Ingels, Iowa State University Extension*

### **9:30–10:15 Best Management Practices (BMPs) & Technologies for Addressing Nutrient Management**

#### **Ag Drainage Management Practices and Results**

*Harold F. Reetz, Jr., Executive Director, Agricultural Drainage Management Coalition*

#### **Drainage Ditch Management: Barriers, Challenges, and Resource Needs to Make Two-Stage Ditch Implementation a Part of a State-Level Effort to Reduce Nutrients**

*Larry Clemens, Assistant State Director for Conservation Programs, Indiana Field Office  
The Nature Conservancy*

### **10:15–10:30 Break**

**10:30–12:00 Data and Measures for Non-NPDES Livestock Operations, Cropland Erosion Control**

*Cyd Curtis, U.S. Environmental Protection Agency (Moderator)*

**Available Data and Constraints for Sharing**

*John Wilson, Natural Resources Conservation Service*

**Establishing a Baseline**

To know what we need to do to get to our goal, we must have a starting point. For state-level strategies to provide a management framework and provide accountability, they must include programmatic and environmental baselines. Once baselines have been established, measures for program effectiveness and outcomes can be developed.

*Dan Dudley, Standards & Technical Support Section, Division of Surface Water, Ohio Environmental Protection Agency*

**Load Reductions, BMPS, Acreage and Feet, and Issues of Scale (HUC/Watershed)**

Simply reporting the “number of BMP acres installed” is not an indicator of progress well suited to accounting for nutrient reductions; however, tracking the effectiveness of conservation initiatives and implemented conservation practices is difficult due to the variability in landscapes and individual site dynamics. Demonstrating conservation success with precious, limited financial resources is critical.

*Jerod Chew, Director of Soil Conservation and Environmental Stewardship, Indiana State Department of Agriculture*

**Interim State Water Quality Goals and Measures**

State-level comprehensive nutrient management will consist of integrating technology-based and water quality-based approaches on a watershed-by-watershed basis to address identified problems while preventing future ones. A combination of administrative and resource-based goals and measures must be established to guide the adaptive management process. This presentation will offer some ideas for water quality in terms of goals, what is tracked (measures), and how it feeds the reporting/decision-making process.

*Tom Davenport, National Nonpoint Source Expert and Regional Ag Advisor, U.S. Environmental Protection Agency*

**12:00–1:00 Lunch****1:00–1:30 Nutrient Trading: What’s Getting in the Way?**

The evolution of numeric nutrient standards and eutrophication policies are creating the necessary conditions to foster emissions trading between point and nonpoint sources. Ideally, Clean Water Act permit holders could enjoy least-cost compliance paths by buying offsets or trading with nonpoint sources, particularly agriculture. However, such emissions-trading schemes have been slow in coming. The speaker will address what is



getting in the way of these market-driven mechanisms and what can be done to overcome these hurdles.

*Mark Gibson, Vice President Government Relations, Hach Company*

**1:30–3:00 Engaging at the Local and Statewide Level: How to Engage Private Sector/Non-Governmental Organizations (NGOs)**

How do you convey efforts to reduce nutrient runoff to solve local concerns while helping alleviate hypoxia in the Gulf of Mexico in a way that resonates with the public? How do you get them to be engaged and understand the importance of reducing nutrient levels? What can we/they do now with what is available?

*Rebecca Power, Co-Director, Great Lakes Regional Water Program, University of Wisconsin (Moderator)*

**Striving for Efficient Use of Nutrients**

Producers continually strive for the most efficient use of nutrients— it just makes sense for the farming business. With the right management, technology, and assistance, farmers manage inputs for efficient use, productive systems, and profitable outcomes. Throughout the region, the Conservation Technology Information Center (CTIC) leads several projects that connect farmers with partners from both the private and public sectors for the common purpose of improving nutrient management and addressing nutrient concerns in their watersheds. Stakeholder involvement and outreach efforts associated with these projects spread the message to the broader community and help form sustainable dialogues for long-term improvements.

*Karen Scanlon, Executive Director, Conservation Technology Information Center (CTIC)*

**Fertilizer as a Component of Sustainable Crop Production Systems**

The fertilizer industry recognizes the need to efficiently utilize these nutrients. 4R Nutrient Stewardship is a framework for applying fertilizer best management practices while ensuring they address the Right nutrient source at the Right rate, at the Right time, and in the Right place. The Fertilizer Institute and its 4R partners provide science-based information on nutrient stewardship for stakeholders to utilize for education, implementation, and advocacy of crop nutrient stewardship. When correctly implemented, fertilizer best management practices reduce nutrient losses from the cropping area and increase farmer productivity and profitability. The Fertilizer Institute has several tools available and is working with its partners on projects and outreach efforts to increase the implementation of the 4R framework by both fertilizer retailers and crop producers.

*Lara Beal Moody, Director of Stewardship Programs, The Fertilizer Institute*

*Tracy Blackmer, Iowa Soybean Association*

*Jim Gulliford, National Executive Director, Soil and Water Conservation Society*

*Dennis Busch, Research Manager, University Wisconsin-Platteville Pioneer Farms*

**3:00–3:30 Break**

**3:30–5:00 Engaging at the Local and Statewide Level. How to Engage Private Sector/NGOs (Panel discussion continued)**

**June 15**

**8:00–9:30 Using Monitoring and Modeling to Track Progress and Evaluate Success**

This presentation and discussion will explore options for using monitoring and modeling to estimate nutrient loads and nutrient load reductions at a range of temporal and spatial scales. Discussion will focus on data availability, measurable change, attribution of measured changes to source activities, budget uncertainty, and other considerations important to designing an evaluation strategy.

*Steve Dressing Senior Environmental Scientist, Tetra Tech, Inc.*

**9:30–9:45 Break**

**9:45–10:15 Voluntary and Regulatory Approaches to Reducing Nutrients: Lessons Learned from the Mississippi River Basin and the Chesapeake Bay**

State-level effort to reduce agricultural sources of nutrient pollution has varied by both approach (voluntary and regulatory) and by policy-development process. For example, most states rely only on federal sources of funds for farmer cost-share, while a few states also commit state resources and some states have employed location-specific, problem-solving projects. A few states have implemented comprehensive-style regulatory approaches, while other states have chosen particular practices to set as environmental performance standards. This talk will pull out highlights from voluntary and regulatory approaches being implemented in ten Mississippi River border states and six Chesapeake Bay states. The talk will also share lessons learned about how a state's policy development process can affect farmer regulatory compliance.

*Michelle Perez, Senior Associate, World Resource Institute*

**10:15–11:15 State Experiences to Date**

Indiana, Ohio, and other states in attendance will discuss what they learned from creating the first draft of their Nutrient Reduction Strategies. The discussion will focus on the types of flexibility needed to address the unique situations each state must address while staying within the confines of general measures and approaches. This balance of flexibility and standardization is critical so that each state is able to pursue a strategy most effective to their situation while identifying methods and data that are useful across all groups.

*Wayne Anderson, MPCA (Moderator)*

**11:15–11:45 Workshop Summary/Next Steps**

**12:00 Adjourn**