EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Ohio River Basin Trading Project

Spring 2010 **Quarterly Update**

Manager Message

During the last quarter we have made progress in mapping out a high-level program structure that focuses on stakeholder engagement, drafting an interstate MOU that will facilitate consensus on program implementation, and developing plans for outreach to the agriculture community. We have continued engagement of the power companies, wastewater treatment plants, and federal offices at USDA and EPA. As a project team, our intention is to develop this program on a consensus platform, encouraging involvement and input from all levels of stakeholders. I'd like to provide clarity that no decisions have been made regarding the recommended rules of the program, and such recommendation will not be made prior to the active engagement of the local stakeholder groups. The project's focus during the next quarter will be to finalize plans for local stakeholder engagement, rollout the interstate MOU for signature, and finalize the high-level program organization structure for input.

In February, we executed an MOU with EPA Office of Research and Development and USDA Office of Environmental Markets to collaborate on ecosystem service research in the Upper Mississippi and Ohio River Basins. We expect this collaboration to inform the design of the water quality trading project and lay a foundation for not only reducing pounds of nutrients, but ensuring the long-term access to natural resources on which local communities and businesses depend.

We have been very happy with the traffic on the project website (see website hit chart below), and anticipate this being an important resource as we implement our stakeholder communication plans. Please check out the updated website, which now includes information on the watershed model we are developing, project reports, a reference page, and other resources. We will be posting video quotes from the project collaborators, stakeholder-specific pages, and project updates during the next quarter.

Sincerely,

Jessica Fox

Jessica Fox

Jessica Fox is a Research Scientist in the Environmental Services area of the Environment Sector. Her research activities focus on market-based approaches for natural resource protection, particularly water quality trading and endangered species conservation banking. Ms. Fox received a BS degree in biological sciences from the University of California, Davis and an MS degree in biological sciences from Stanford University. She is certified as an Associate Ecologist by the Ecological Society of America.

Jessica Fox

Project Overview

Water quality trading is a market-based approach to achieving water quality standards through programs that allow emitters to purchase pollution reductions from another source. EPRI's Ohio River Basin Trading Project will be a first-of-its-kind regional multi-credit trading program and includes portions of Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia, and West Virginia. The successful implementation of this project will allow power companies, farmers, and other industrial dischargers to work together to improve water quality, minimizing costs to the public and stakeholders. The program will also benefit receiving water bodies that are now threatened by nitrogen and phosphorus pollution.

Project Updates

Summary of Strategy Meeting

On April 20th and 21st, the project collaborators including representatives from EPRI, EPA, ORSANCO, Kieser & Associates, Hunton & Williams, American Farmland Trust, and Hoosier Energy meet in Palo Alto, CA to discuss the development of the Ohio River Basin Trading Program. The goals of the meeting were to discuss program structure, finalize the interstate MOU for rollout in June, develop a list of priority program issues, define the stakeholder groups, discuss the stakeholder engagement process, and review project budget and funding status. The collaborators left the meeting with a list of action items and key priorities that will support to a basic framework for this large effort. We expect to be publishing several outputs of this meeting on our website during Q3 and Q4 of 2010.

Interstate MOU to Reach Consensus on Trading

As mentioned on our previous webcast, we plan to propose an interstate MOU for the eight states in the project area: Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia, and West Virginia. The MOU will commit resources of each state to engaging in discussions regarding the Ohio River Basin Trading Program, eventually leading to consensus on the rules of the program. While we may not get engagement from all the invited states, but we expect enough states to sign the MOU to make this a useful effort. The MOU is now drafted and will be presented to the permitting authority of each state in early June.

Ecosystem Service MOU between EPRI, USDA and EPA

In February of 2010, the Assistant Administrator of EPA, Paul Anastas, Under Secretary of USDA, Harris Sherman, and Vice-president of EPRI, Bryan Hannegan, signed an MOU to Collaborate on Ecosystem Service Research in the Upper Mississippi and Ohio River Basin. The purpose of the MOU is to agree to mutual goals to help inform the sustainable use of ecosystem services in the Upper Mississippi and Ohio River Basins. The specific goals are to: 1. Coordinate related organizational research and activities; 2. Support collaborative efforts for data collection and analysis; 3. Explore barriers to sustainable ecosystem service management and ways to overcome them; and 4. Support demonstration projects that inform sustainable approaches for ecosystem service use.

Collaboration between these parties will better ensure that focused and effective research priorities for ecosystem services are identified and pursued in a coordinated manner that leads to practical implementation of ecosystem services protection and management actions. EPRI anticipates the collaboration to inform the effective implementation of the Ohio River Basin Trading Project, with consideration of long-term sustainability targets. The full MOU can be found on the project website.

Credit Stacking Survey

EPRI formed a collaborative team with World Resources Institute, Stetson University College of Law, and the University of Kentucky to develop an electronic survey that was distributed to key contacts in the mitigation credit field throughout the United States. The growing markets in carbon sequestration, water quality trading, and wetland and species banking have brought attention to the need for understanding protocols, case studies, and opinions for how credits can be stacked among these different markets. EPRI initiated its credit stacking project in 2009, with funding through the Ohio River Basin Water Quality and Greenhouse Gas Trading Supplemental project (See Supplemental Project Opportunity below).

The motivation for this research is to fully vet opportunities for multiple credit types in the Ohio River Basin, initially focusing on water quality and carbon with possible expansion to other ecosystem markets. To inform the effort in the Ohio River Basin, EPRI is conducting broader research into credit stacking activities and approaches across the United States. This project will uncover the current involvement in credit stacking by credit sellers and purchasers, exchanges and brokers, researchers and academic institutions, and regulatory agencies. The resulting analysis and its associated case studies will lay the foundation for developing a peer-reviewed publication summarizing the current state and viable opportunities for credit stacking in the United States.

EPRI's National Credit Stacking Survey was launched on January 12, 2010 via e-mail to thousands of market practitioners and regulators nationwide. The survey is now closed. The project team is now working on analyzing the data from more than 300 recipients and expects publication of results in the summer of 2010.

Complementary EPRI Projects

Linkage Between Existing Air Quality and Watershed Management Models

Environmental concerns related to atmospheric deposition are, by definition, multimedia issues. These multimedia issues acidification and nutrient enrichment in sensitive ecosystems. In order to analyze the impact of air emissions and estimate the contribution to these environmental concerns, it is necessary to develop a coupled air-land-water modeling framework that represents the transport, chemical transformation and fate of emissions in the atmosphere and the biogeochemical cycling of the deposited material in a watershed in combination with other direct point and non-point releases that may also influence acid and nutrient levels.

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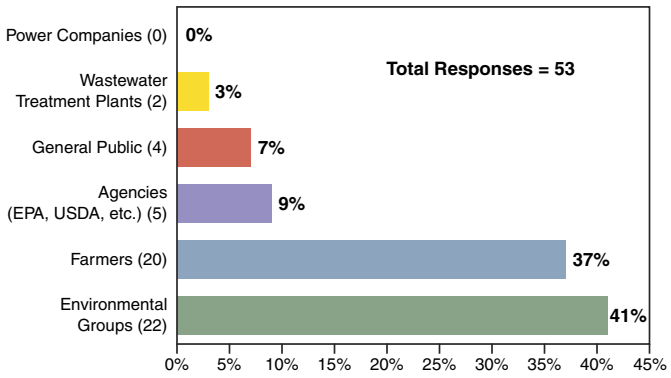
To better address these issues, the Technology Innovation Program at EPRI has funded the development a linkage between existing air quality and watershed management models. The developers of both models have worked together to reconcile the treatment of meteorology, air pollutant concentrations and atmospheric deposition across the two modeling platforms. In this webcast, we describe these tools and how they can be used in a consistent modeling framework to inform environmental management decisions.

Quarterly Public Webcasts

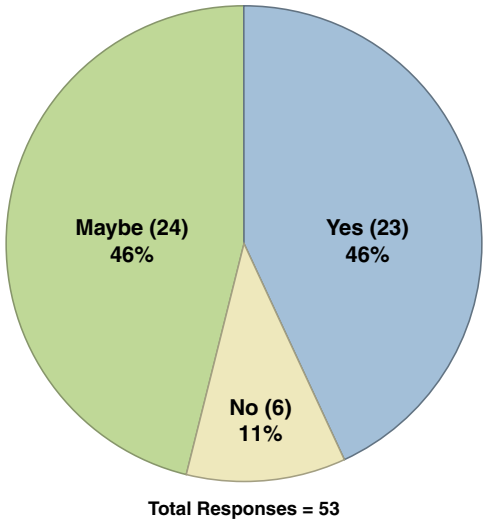
The first quarterly public webcast of 2010 was held on February 17th with an audience of more than 80 people. Jessica Fox gave a project update including the status of the National Credit Stacking Study, the forming of project Steering Committees, and the progress on Watershed Modeling. Besides the project update, a brief presentation was given by EPRI project manager Adam Diamant on Developing Greenhouse Gas Emissions Offsets by Reducing Nitrous Oxide (N_2O) Emissions in Agricultural Crop Production, and project collaborator Tim Lohner of AEP offered his comments on the project.

In an effort to create a more interactive atmosphere during these webcasts, the project team piloted the use of LiveMeeting polls. Some of the results from those polls can be seen here.

Which stakeholder group will be the hardest to gain support from?

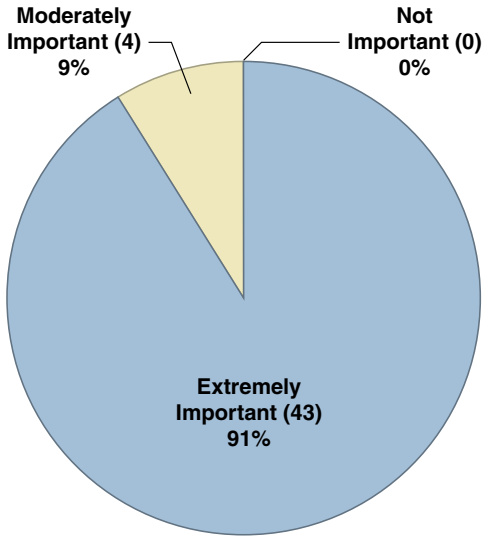


Do you think it will be possible to get regulatory approval to stack carbon and water quality credits in the Ohio River Basin?



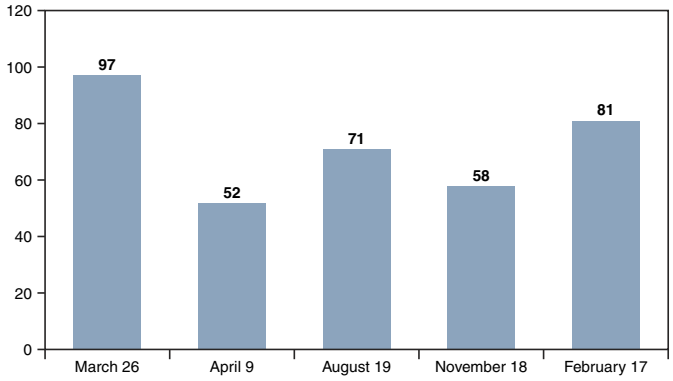
Total Responses = 53

How important is it to establish an ecological defensible foundation for this WQT project?



Total Responses = 47

Total Webcast Attendees



Webcast Attendance

There has been continued high levels of attendance at the quarterly public webcasts since the project's first public webcast in March of 2009. Representatives from local, state, and federal regulatory agencies, electric utilities, academia, members of local stakeholder groups, environmental organizations, and many others have participated on a quarterly basis.

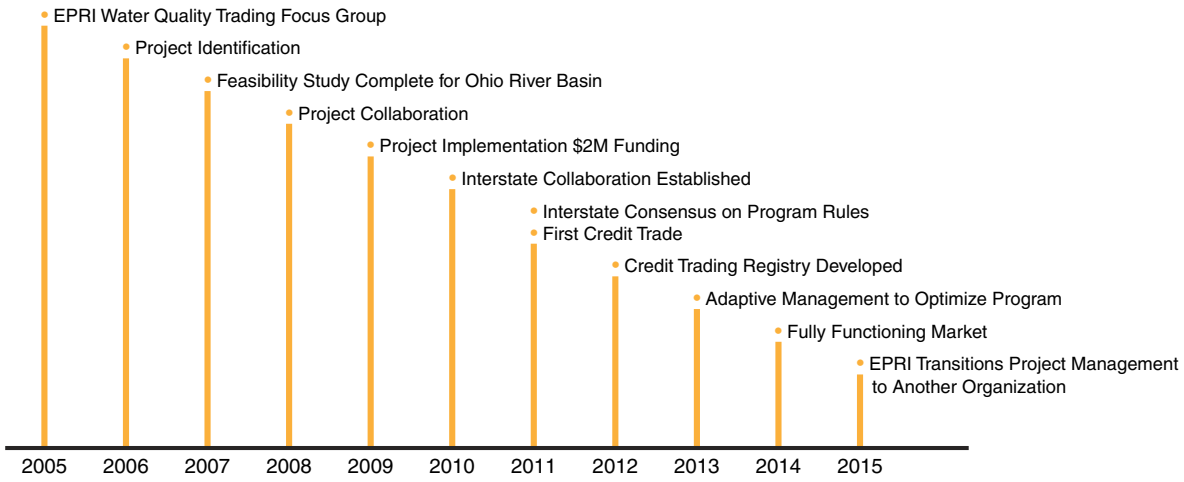
Spring 2010

- Public Webcast: May 19, 2010, 10 a.m. PST

Summer 2010

- Public Webcast: August 18, 2010, 10 a.m. PST

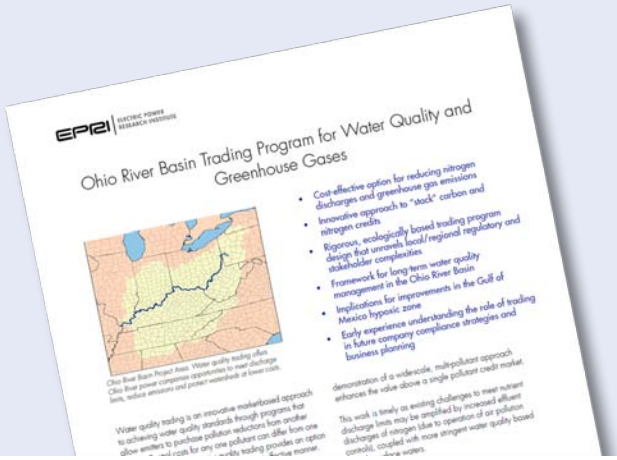
Project Timelines



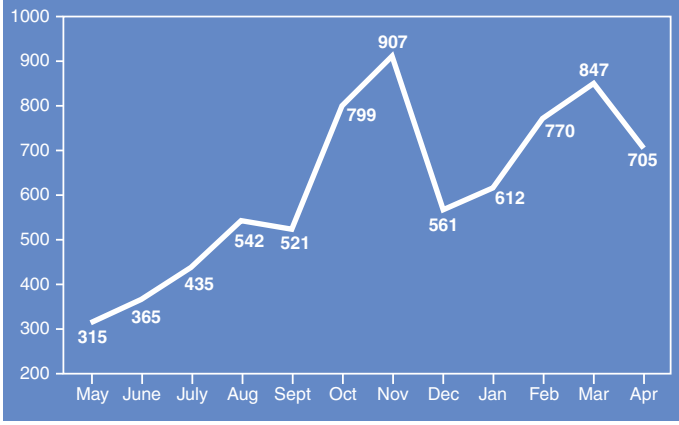
Supplemental Project Opportunity

EPRI's Supplement Project is a subset of the scope of work that will be needed to develop the Ohio River Trading Project. It creates a funding mechanism for interested organizations to directly engage in the development of the trading program. By funding the supplemental project, your organization will have access to all the reports and deliverables generated out of this project and will have a seat at the table during project discussions and program development.

The full description of the Supplemental project can be found on www.epri.com/ohiorivertrading



Ohio River Basin Trading Pilot Project
Web Hits



Project Contact
Jessica Fox, Project Manager
Phone: 650-855-2138
Email: JFox@epri.com
Project e-mail: ohiorivertrading@epri.com
www.epri.com/ohiorivertrading

EPRI intends to support a collaborative process for the development of this project. The project website was designed to facilitate communication of important project materials, and to solicit questions, comments, and feedback from the many interested stakeholders. Please visit the project website for more information and to download meeting materials, related EPRI reports, Frequently Asked Questions, and additional project resources.

1021365 Spring 2010

Electric Power Research Institute
3420 Hillview Avenue, Palo Alto, California 94304-1338 • PO Box 10412, Palo Alto, California 94303-0813 USA
800.313.3774 • 650.855.2121 • askepri@epri.com • www.epri.com