

A Water Quality Credit Trading Evaluation Framework for the Mid-Atlantic Region

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Evaluation Framework for Policy

- Focus: Evaluation of an Existing Public Policy
- Observation: Lack of Attention to Policy Evaluation
 - “...policy evaluations are often not done or, if done, are not done well...”
 - Dr. Elinor Ostrom
Political Scientist
University of Indiana, July 2008

Presentation Outline

- Need: Trading Policies Are Being Developed & Experiments Are On-going
- Previous MAWP Educational Efforts
- Current Project's Focus, Funding & Audiences
 - Deliverable: “white paper” to Chesapeake Bay scientific community (STAC)
- Activities & Outcomes To Date
- Lessons Learned So Far
- Possible Follow-up Steps

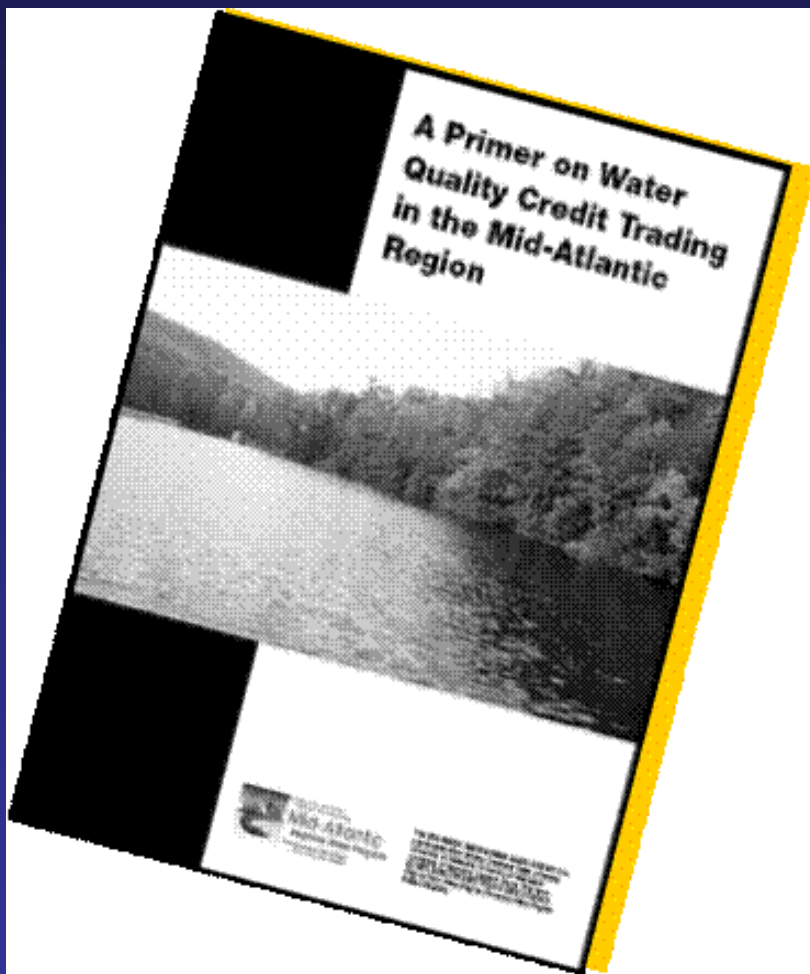
Trading Policies Are Being Developed & Experiments Are On-going

- Federal/state agencies
 - Have tended to view trading as a proven tool
 - Policies & programs have been developed quickly
 - Within the Mid-Atlantic region, states' programs have widely different components
- Rationale for a Project on Policy Evaluation
 - Trading programs are really experimental in nature
 - We need to learn from programs that are being attempted
 - Systematic evaluation of ongoing experiments can help adapt and change programs to meet state/regional/national water quality goals

Previous MAWP Educational Efforts on Water Quality Trading

- Regional Publication on Water Credit Trading & state fact sheets (2006-07)
 - *A Primer on Water Quality Credit Trading in the Mid-Atlantic Region*
- Authors
 - Kristen Saacke Blunk, Penn State University
 - Tatiana Borisova, University of Florida (formerly at West Virginia University)
 - Charles Abdalla, Penn State University
 - Doug Parker, University of Maryland

Ways to Improve Communication & Reduce Confusion About WQ Trading



Topics:

- Why the interest now?
- How does trading work?
- Components of a trading program
- Challenges
- Emerging programs
- Resources



<http://www.mawaterquality.org>

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Previous MAWP Educational Efforts on Water Quality Trading

- National Workshops
 - Workshop at January 2007 USDA Water Conference
- Regional Workshops
 - “Nutrient Trading & Implications on Mid Atlantic Waters” (March 2007)
- Published articles
 - *Choices*. May 2007 & December 2008

Current Project's Focus, Funding & Audiences

- Title: “Water Quality Credit Trading: Issues in Uncertainty, Evaluation and Verification”
- Funding (2007 – present)
 - Mid-Atlantic Water Program (USDA – CSREES)
 - Chesapeake Research Consortium & Chesapeake Bay Program’s Scientific Technical Advisory Committee (STAC)
- Major Goals and Outputs
 - Develop an Evaluation Framework for state trading programs
- Methods
 - Form a team of academic and other trading professionals
 - Convene a two-day workshop
 - Develop and refine the Evaluation Framework
 - Present “white paper” to STAC membership (March 2009)

Workgroup Members

Academic

- University of Delaware
 - David Hansen
- University of Maryland
 - Dennis King
 - Doug Parker
- Penn State University
 - Charles Abdalla
 - James Shortle
- Virginia Tech University
 - Kurt Stephenson

Non-Academic

- US EPA
 - Bob Rose
- World Resources Institute
 - Cy Jones
- Resources for the Future
 - Leonard Shabman
- Industry/Trade Assoc.
 - Bill Angstadt, DE & MD
Agri-business Association

White Paper's Objectives

- Recognize and describe different forms of trading programs
- Identify processes and general criteria to evaluate trading programs
 - For each process and associated goal, measurable indicators will be identified to assess the degree to which the goal has been met

Workgroup Activities & Progress So Far

Workgroup Meeting - May 2008

- Outcome: We reached consensus on:
 - The need to be “neutral” – not advocate for any form of trading, as opposed to conventional command and control and subsidy approaches to pollutant control at the source.
 - Describe how to assess trading programs
 - Describe the structure and expected performance of, but not advocate for, trading or “market-like” water quality program designs

Workgroup Activities & Progress To Date

Two sub-teams have been writing separate sections of the report

- Performance-based Approaches, Innovation and Cost-savings
- Quality Assurance

Performance-based/Innovations/Cost-savings sub-team

The team's focus was on:

- Flexibility & Technology
- Cost Savings
- Economic & Social Indicators
- Distributional & Equity Issues

Quality Assurance sub-team

- Public Administration & Practical Implementation Issues to Ensure Water Quality Goals Are Met
- Some Concepts of Interest
 - Equivalence
 - Additionality
 - Accountability

White Paper – Synthesis

- Evaluation Involves:
 1. Identifying criteria for judging outcomes
 2. Selection of a reference condition against which to compare the expected and/or realized outcomes
- The “white paper” identifies two general approaches to policy evaluation
 - A. Simple: Does the program meet its stated objectives? (fairly descriptive)
 - B. Complex (more normative)

Evaluation Approach A: Does the program meet its stated objectives?

- Compares a pre-existing program with a program that includes some form of trading
 - “Before and after” experimental design
- Evaluation criteria are extracted from statements from program designers
- Expected or realized outcomes are then compared with original stated goals
- Help program designers decide whether the trading program was an improvement from the former regulatory approach relying on their own internal program criteria.

Evaluation Approach B: (More Complex)

- Two steps
 - Establishing a common set of evaluation criteria that reflect broader management goals
 - Then evaluating the existing trading program against alternative trading program designs
- Advantage: More defensible than Approach A
- Disadvantage: More complex and challenging evaluation to undertake
 - Clearer conceptual model & description of alternatives
 - Experimental design issues (quasi-experimental design – “with vs. without”)

White Paper Draft Outline

- Introduction
- Evaluation Approach A
 - Maryland, Pennsylvania, Virginia programs' identify stated goals and criteria
- Evaluation Approach B
 - Taxonomy (design & behavioral requirements)
 - Trading Program evaluation
 - Structural criteria
 - Performance/Conduct criteria
- Challenges in Application of these Approaches

Lessons Learned So Far

- Diversity of our work group has been a strength & a weakness
 - Time to get to know each other & work together
 - Challenges in building consensus for an evaluative approach
- Evaluation Approaches Can be Difficult to Implement
 - Example: Identifying & extracting policy goals/criteria in state policies/programs (Approach A)

Lessons Learned So Far (continued)

- Trading and Market-based Approaches continue to be popular and in the news. There is funding available.
 - Recommendation: Build evaluation into the policies & programs in the very beginning
- Reality check:
 - Policy evaluations are often not done, or, if done, not done well
 - Elinor Ostrom - University of Indiana
 - Why?

Possible Follow-up Steps

- Distribution of white paper to state-level policy-makers & program managers
- Broader workshop for state agency policy-makers, program managers & selected stakeholders in the Mid-Atlantic Region
- Conduct policy evaluation(s) using one or more approaches in the white paper
- Use of approaches in other regions?

Where to Obtain the White Paper

- When?

- Mid-March 2009

- How to get a copy:

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