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## **Evaluation Framework for State Water Quality Credit Trading Programs in the Mid-Atlantic Region**

Charles W. Abdalla\*, Doug Parker: University of Maryland, Kurt Stephenson: Virginia Tech University  
Penn State University; \* cabdalla@psu.edu

### Abstract:

Water quality credit trading is being promoted as a mechanism to help states meet water quality goals. Within the Mid-Atlantic Region, Maryland, Pennsylvania and Virginia have created water quality credit trading programs while other states are drafting trading rules. These policies must recognize their experimental nature and create mechanisms to learn and adapt. To do so, program managers need to build in evaluation criteria and procedures.

Economic theory suggests significant gains may be realized from trading in a controlled and regulated markets for environmental goods or services. Such markets must account for heterogeneous environmental conditions and uncertainties. No evaluation method is yet available that accounts for the specific issues faced by water quality credit trading programs. Successful markets require verification of actions and outcomes. A need exists for a framework for evaluating state water quality credit trading programs.

With funding from the EPA Chesapeake Bay Program's Scientific and Technical Advisory Committee and USDA-CSREES funded Mid-Atlantic Water Program, the authors convened a workgroup of academic, government and other professionals to prepare a white paper on the elements of a framework for evaluating water quality trading programs in the Mid-Atlantic Region. The framework considers environmental and institutional conditions unique to water quality trading, including issues of environmental uncertainty, BMP performance uncertainty, and verification of actions and outcomes. Important principles that have guided development of a white paper include: the need to be "neutral" (not advocate for a particular form of trading as opposed to command and control and subsidy approaches to pollutant control at the source); evaluating the likely outcomes of trading programs relative to an alternative without trading policy for meeting water quality goals; identifying the major challenges to water quality trading programs and describing how to access trading programs; and describing "market-based" principles for water quality credit trading program design.

### Impact Statement:

**Outputs:** A 25 page white paper delivered to EPA Chesapeake Bay Program's Scientific and Technical Advisory Committee and disseminated to state water program managers and other interested parties in the Mid-Atlantic Region and national level.

**Outcomes:** Identified evaluation criteria in 3 Mid-Atlantic states. Paper will also serve as the starting point for a discussion of how to incorporate better evaluation procedures into existing trading programs in the Mid-Atlantic and possibly other EPA Regions.

**Partnerships formed:** Funding from EPA Chesapeake Bay Program's Scientific and Technical Advisory Committee and in-kind resources. Academic, government, NGO, and industry participation.

**Lessons Learned:** Need for precise definition of terms and that neutrality is needed to foster communication and progress in diverse workgroups.

Category: Human Dimensions

Type of Presentation: Oral Presentation