

Scientific and Technical Advisory Committee

Request for Responsive Workshop Proposals

May 20, 2008

Workshop Title

An Economic Analysis of Agricultural Conservation Practices within the Chesapeake Bay Watershed

Workshop Proposal Requestors

- Mr. David Kindig, VADCR; Agricultural Nutrient and Sediment Reduction Workgroup (AgNSRWG)
- Dr. Tom Simpson, UMD; Nutrient Subcommittee (NSC)

Workshop Steering Committee

- Mr. David Kindig- AgNSRWG Chair, VA DCR
- Mr. Mark Dubin- AgNSRWG Coordinator, UMD
- Ms. Sally Bradley- NSC Staff, CRC
- Ms. Kelly Shenk- EPA CBPO
- Dr. Jim Pease- STAC Representative, VATECH
- Dr. Doug Parker- Principal Investigator, UMD/MAWP
- Ms. Daphne Pee- Regional Coordinator, UMD/MAWP
- Ms. Suzy Friedman- Center for Conservation Incentives- Environmental Defense Fund
- Ms. Pat Stuntz- The Keith Campbell Foundation

Workshop Objectives

- This proposal is for a pre-workshop session to analyze and evaluate the data that is available on the costs and benefits of agricultural conservation practices in order to prepare for a workshop that will be held the following year (FY 2009). The data that will be analyzed will include the results of a proposed economic study by the University of Maryland to be conducted by Dr. Doug Parker that is entitled “**Evaluation of Costs and Cost Effectiveness of Agricultural BMPs**”. Sponsored by the Maryland Department of Natural Resources and focused on conservation practices from the University of Maryland/Mid-Atlantic Water Program’s BMP Project, the study is expected to be completed at the end of March 2009 for the State.

Objectives of the pre-workshop session include:

- Establish criteria to assist in determining which agricultural conservation practices to focus on in the workshop and identify the practices that meet those criteria
- Focus on a condensed list of conservation practices based on implementation levels, data availability, and conservation program investments
- Analyze the economic cost versus economic benefit potential of commonly used conservation practices within the region
- Identify opportunities to reduce input costs vs. increasing cost-share rates
- Look at opportunities for cost-share vs. incentive based programs
- Incorporate physiogeographic regional differences

- Regionalize the findings of the University of Maryland's economic study entitled **Evaluation of Costs and Cost Effectiveness of Agricultural BMPs**

This session will be used to help prepare for a two-day workshop that will be held in FY 2009. This proposed workshop will provide a forum to evaluate the current economics of agricultural production costs and benefits of agricultural conservation practices being generally implemented by the Chesapeake Bay Program Partnership, with a focus on several specific practices identified in the pre-workshop session. The workshop will utilize current research and data to evaluate the applicability of incentive versus cost-share based programs for implementation by federal, state, county and non-profit organizations.

Topic Background

The Chesapeake Bay 2000 agreement calls for significant improvements to the water quality of the Bay which will remove it from the EPA Impaired Waters classification, otherwise known as the 303(d) list. Agricultural land uses accounts for approximately 22 percent of the Bay's watershed, the second largest land use after forests. Consequently, agricultural production contributes approximately 41 percent of the nitrogen load, 46 percent of the phosphorus load and 62 percent of the sediment load to the Bay annually.

In response to the Chesapeake Bay 2000 agreement, the watershed states were required to develop new strategies for implementing actions to achieve new stringent water quality goals. The Chesapeake Bay Tributary Strategies developed by each of the jurisdictions propose to implement nearly thirty different agricultural practices to address the nutrient and sediment goals of the *Chesapeake 2000* Agreement. For Maryland, Pennsylvania and Virginia, these new Tributary Strategies were an improved version of former strategies developed over the past two decades, and for all the watershed states, agricultural nutrient and sediment reduction practices were relied upon to achieve a significant portion of the total nutrient and sediment goals.

The Chesapeake Bay Commission's (CBC) report entitled *Cost-Effective Strategies for the Bay* (www.chesbay.state.va.us/Publications/cost%20effective.pdf) published in December of 2004, found that five out of the six smart investments for short term achievements in nutrient and sediment reductions for the Bay were agricultural practices (the fifth practice was wastewater treatment plant upgrades). The most effective agricultural practices identified were traditional and enhanced nutrient management, conservation tillage, and cover crops for cropland production; and diet and feed adjustments for animal production. This report and other analyses encouraged watershed states to invest heavily into agricultural cost-share programs for implementing conservation practices.

Despite long-term continued implementation of agricultural conservation practices through federal, state, and non-profit organization cost-share programs within the watershed, there remains strong interest in considering an economic approach to determining costs versus benefits. Recent fluctuations in energy and commodity prices are exerting tremendous influences on the cost/benefit dynamics of agricultural production, making past economic analyses obsolete. The workshop will address the current research and data to evaluate the present economic costs and benefits of common conservation practices being implemented by federal and state partners in the Bay watershed to consider applicability of incentive versus cost-share programs.

Topic Identification

As part of a re-evaluation of the Chesapeake Bay Program's governance structure, the AgNSRWG has developed a revised scope and purpose, identified three main focus areas, and formulated a prioritized list of projects for the 2008 to 2009 period. The workgroup is currently implementing the work plan in collaboration with the Chesapeake Bay Program and its partnership. The proposal herein submitted to STAC for consideration of technical and financial support originated with the development of the new focus areas and the prioritized project list for the workgroup. It represents the collaboration and support of not only the multi-state agricultural partnership, but also the Chesapeake Bay Program Office and the greater Chesapeake Bay Program partnership. In short, the workgroup has received broad support for evaluating current economics of agricultural conservation, and increasing the level of knowledge and effectiveness in implementation across the watershed.

Workshop Details

The pre-workshop session would be a one-day session with approximately 10-15 participants. It would be held in early 2009 (February/March) in order to provide the group with the opportunity to review the draft results of the University of Maryland's economic study entitled the **"Evaluation of Costs and Cost Effectiveness of Agricultural BMPs"**. Participants would include workshop steering committee members and additional economic experts from across the region. The session would be held in either Frederick or Hagerstown, MD.

Funding for the actual workshop is not being requested at this time, however details on this workshop are relevant to this proposal since the pre-workshop session is being held in order to prepare for this future workshop.

The proposed workshop would be held in FY 2009 at a centralized watershed location. Due to intense interest in agricultural conservation practice programs and implementation by agricultural and environmental organizations within the Chesapeake Bay watershed, the audience for the proposed workshop would be extensive. A conservative estimate of workshop participants is between 50 and 100 individuals. Holding the workshop at a centralized workshop would facilitate participation from all six states within the Chesapeake Bay watershed. Possible centralized locations with adequate facilities would include Frederick and Hagerstown within Maryland; and Chambersburg and Gettysburg within Pennsylvania. All of these localities are easily accessible by major interstate arteries and offer multiple options for meeting facilities, catering, overnight accommodations, etc.

A two-day workshop is envisioned providing for a general forum session on the first day and a committee type session on the second day. The general forum session would allow participation from a diverse group of stakeholders, including federal and state agencies, university faculty, county staff, private consultants, non-profit organizations and agricultural industry representatives. The second day would allow a subset group of stakeholders to distill the previous day's discussion and create a draft set of recommendations for the Chesapeake Bay Program partnership to consider, as well as to be added to the workshop proceedings. The proceedings and recommendations will be published for distribution and implementation.

Workshop recommendations would be aimed towards federal and state agencies, as well as NGOs, and would be utilized in a revised cost analysis of Tributary Strategy implementation.

Anticipated Audience

Targeted workshop participants would include persons involved with agricultural conservation practice planning and programs; including federal and state agency representatives, county conservation district staff, non-profit organizations, private sector consultants and agricultural industry representatives. Proposed speakers would include university and USDA economists and agronomists, federal and state agricultural program managers, private agricultural consultants, and agricultural industry representatives.

Workshop Partners

- Environmental Defense Fund: In-Kind/Financial Support Pledged (\$500.00)
- University of Maryland/Mid-Atlantic Water Program: In-Kind/Financial Support Pending
- Keith Campbell Foundation for the Environment: In-Kind/Financial Support Pending
- Maryland Department of Natural Resources: Proposed Project Match (\$100,000.00)

Cost Estimate

Estimated budget for the pre-workshop session

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| - Facility rental | \$ 300.00 |
| - Catering (\$35 per person, 15 people) | \$ 525.00 |
| - Honorariums | \$ 3,000.00 |
| - Travel Expenses | \$ 1,500.00 |
| - Materials | \$ 175.00 |

STAC Request: \$ 5,000.00

Previous Nutrient Subcommittee Workshops

Title: Atmospheric Deposition of Nitrogen: Estimating local emission sources, near-field deposition, and fate on the landscape

Date(s): May 30, 2007

Location: SUNY Binghamton, Binghamton, New York

Description: This workshop brought together key experts to document the current state of knowledge and identify priorities and recommendations for advancing scientific knowledge and improving monitoring and modeling efforts for atmospheric deposition of nitrogen. With a better understanding of atmospheric deposition, scientists can more appropriately advise future management actions.

Title: Understanding Fertilizer Sales and Reporting Information

Date(s): May 1, 2007

Location: Holiday Inn - Ft. Detrick, Frederick, MD

Description: STAC and the Chesapeake Bay Program's Nutrient Subcommittee co-hosted a workshop in May 2007 aimed to initiate a discussion that would address some of the key concerns with current state fertilizer accounting systems and provide recommendations for syncing state collection methods.

Title: An Introduction to Sedimentsheds- Sediment and its Relationship to Chesapeake Bay Water Clarity

Date(s): January 30 - 31, 2007

Location: Doubletree Hotel, Annapolis, MD

Description: The STAC funded workshop provided a forum for the Sediment Workgroup to share a draft of their Sedimentshed Report with watershed-wide expertise for review and comments. The group was also able to collect invaluable insight on sediment, and its impacts on water clarity and SAV health.

Title: Urban Tree Canopy

Date(s): May 24, 2004

Location: Radisson Hotel, Annapolis, Maryland

Description: This workshop was held in order to help partners implement the urban canopy cover goals of the Riparian Forest Buffer Directive No. 03-01. The workshop brought together urban forestry researchers and practitioners from federal, state, and local levels in the Chesapeake Bay region and beyond. The workshop and its report are technology transfer tools intended to help local jurisdictions accomplish the directive's goals.