



## Chesapeake Bay Program

*Science. Restoration. Partnership.*

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Dr. Lisa Wainger, Chair  
Scientific and Technical Advisory Committee  
Chesapeake Bay Program  
645 Contees Warf Road  
P.O. Box 28  
Edgewater, Maryland 21037

Dear Dr.  Wainger:

Thank you for the opportunity to respond to the Scientific and Technical Advisory Committee's (STAC) report entitled "Exploring Applications of Behavioral Economics Research to Environmental Policy-making in the Chesapeake Bay Watershed."

The long-term success and sustainability of the Chesapeake Bay restoration effort will ultimately depend on the actions and support of the 18 million residents who call the watershed home. The cumulative impact of these individuals and their daily actions can both positively and negatively affect the health of watersheds, streams and rivers. Hundreds of local conservation and watershed organizations and a growing number of community associations, religious institutions and other groups are leading efforts to engage and empower citizens to restore local streams, reduce pollution, protect the environment, and improve their communities. The efforts of these groups and of community leaders also result in an ever increasing number of citizens adopting behaviors and taking individual actions that ultimately reduce our collective impact on the Bay.

We are addressing the specific recommendations as follows.

***Research human behavior before developing outreach and other engagement programs. In general, the complexity of human decision-making was perceived by workshop participants as a necessary consideration to better understanding the audience before conducting an educational/outreach campaign (i.e., "thinking before doing"), or there may be unintended consequences.***

This recommendation is directly in line with a number of the factors influencing progress identified in the Citizen Stewardship Management Strategy. Activities to address this are already underway and additional management approaches are called for in the management strategy that will promote and provide technical assistance to encourage the use of social marketing frameworks to design citizen engagement programs. These frameworks emphasize the need to conduct audience research before designing programs to ensure marketing and outreach strategies target specific barriers and benefits associated with behavior adoption. One project underway is an effort to develop a practical and value-added method to track changes in public attitudes, behaviors, and actions related to stewardship. The results of this general population survey will be shared with the community of practitioners to inform

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program design and will guide future management strategies. Data collected through this process will assist in prioritizing and targeting future actions.

***Research on how CBP can embed stewardship and water quality improvements into farmers' social identity, including considerations of geographical location, sense of place, and ownership. Questions to pursue include: (1) at what point do people take ownership of their location and establish a sense of place, (2) how does that connection to the land impact their decisions, (3) how does social identity differ in different regions, and (4) how do dairy farmers differ from corn farmers, and at what level do they care about the water quality issues enough to change their behavior.***

An FY14 Habitat Goal Team funded project surveying farmers and landowners to better understand some of the questions outlined above in respect to their perceptions and interest in increasing wetland acres on their property is currently in progress. As part of this project, the Wetland Workgroup is conducting a needs assessment of barriers/obstacles to wetlands restoration (e.g., increased outreach, on-the-ground work with private landowners, technical assistance, incentive program, etc), and to prioritize those barriers, select one barrier, and then implement solutions to address these obstacles. The success and cost-effectiveness of removing obstacles to restoration will then be analyzed.

***There may be a number of efforts to apply behavioral economics or marketing to environmental problems in the Bay watershed or across the country. These efforts represent learning opportunities for organizations and individuals that could apply those same techniques in other places. A database of such efforts, including key characteristics of the environmental problems and solutions, would facilitate learning and expansion of the application of behavioral sciences to environmental issues. Information and studies in the appendices and suggested references following this report can be the start of such an effort. The Chesapeake Bay Trust (CBT) and USDA-Economic Research Service's Center for Behavioral Agri-Environmental Research (CBEAR) would be appropriate partners in such an effort.***

An FY14 Stewardship Goal Team funded project to develop a crowd sourced database that will house key information about successful and unsuccessful outreach programs is currently in progress. The Chesapeake Bay Trust is leading this project in collaboration with many others, including the National Fish and Wildlife Foundation, and intend to have their grantees submit information to this database to facilitate learning across programs and issue areas.

As the Stewardship Goal Team was not involved in the workshop or the drafting of the STAC report, it has not yet had the opportunity to formulate specific plans for the remaining recommendations provided in the report listed below. These will be taken into consideration by the Stewardship Goal Team, as well as other GITs, as they continue to work on their respective management strategies and workplans and identify any potential needed revisions to those strategies and workplans.

***Research ways to recognize the implementation of BMPs by homeowners (such as a sign or list in the newspaper). This area is largely unexplored, and there may be opportunities.***

***Research on the efficacy of informing homeowners about their links to the Bay. A current strategy is the placement of signs on storm sewers to make homeowners who are thinking about dumping motor oil feel "guilty."***

*Develop methods that can be used to cultivate peer pressure related to stewardship in order to encourage change. One example that is gaining traction in USDA is “community conservation,” where groups of landowners are encouraged to work together to solve a water quality problem through an incentive based on a joint outcome.*

*Research effective visual communication techniques that encourage behavioral change among various communities. For example, a video of what happens with water movement, sediment removal, erosion, changes in terrain, and damage during a storm event might be a way to increase the visibility of problems among the general population.*

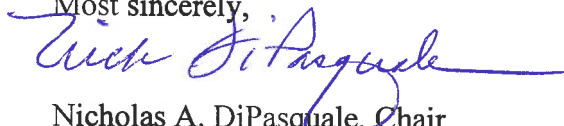
*Research how information provided to farmers can increase participation in conservation programs.*

I encourage increased participation from STAC scientists, especially those that were involved in this workshop and final report, in the Stewardship Goal Team’s efforts. The knowledge and expertise the STAC scientists gained through this workshop is well suited to assist in the GITs ongoing effort to measure stewardship and behavior.

The Stewardship Goal Team is in the final phase of developing a Stewardship Indicator that focuses on behavior change. I would encourage STAC to schedule a presentation on the Stewardship Indicator at its Spring 2017 meeting. Al Todd, Executive Director of the Alliance for the Chesapeake Bay, is the point of contact for this effort.

On behalf of the Management Board, I want to thank you for your valuable recommendations. Please extend our gratitude to STAC and the workshop steering committee for the time and effort involved in the production of this report. We greatly appreciate the ongoing role of STAC in serving as an independent review body directed towards continually improving our overall management of the Chesapeake Bay and watershed restoration efforts.

Most sincerely,



Nicholas A. DiPasquale, Chair  
Management Board

cc: Management Board Members  
Rachel Dixon, STAC Coordinator