

November 3, 2011

**MEMORANDUM**

**SUBJECT:** Recommendations on the CBP's Formal Response to the NAS/NRC May 2011 Report

**FROM:** Nicholas DiPasquale  
Chair, Management Board



**TO:** Shawn Garvin  
Chair, Principals' Staff Committee

The Management Board (MB) is writing to respond to the May 2011, charge of the Principals' Staff Committee (PSC) for the Chesapeake Bay Program (CBP) Partnership to: 1) provide a formal written response to the National Research Council's (NRC) 25 science based conclusions (SBC) within 90 days, the MB extended the deadline to 180 days (by November 4, 2011); and 2) recommend the next steps to the PSC on the ongoing function of the Independent Evaluator and to do so in the context of their written formal response to the NRC report. This Memorandum contains the MB's recommendations to the PSC.

The MB recommendations are for BMP effectiveness, adaptive management, modeling laboratory, and the ongoing function of the independent evaluator are as follows. The last recommendations address finalizing the *Key Challenges and CBP Partnership Suggested Responses to May 2011 NRC Report* and creating the transparent public record of the Partnership's formal response to the NRC Report.

**BMP Effectiveness**

Adopt the following BMP effectiveness/monitoring recommendations.

1. As funding continues to become available, the CBP partners have a prioritized list of the next set of targeted small watersheds for monitoring and assessment to complete the long-term watershed monitoring network. These include additional monitoring in agriculturally and urban dominated watersheds as well as the coastal plain filling existing gaps in the network.
2. To quantify effects on nutrient and sediment runoff, supplement the existing monitoring strategy in small watersheds and by making a long term commitment (5-10 yr+) to four essential tasks in all studies of targeted small watersheds: 1) maintain conservation practices; 2) assemble and share spatially explicit data on conservation practices and other activities; 3) conduct watershed monitoring following the procedures and protocols recommended in the Science and Technical Advisory Committee (STAC) workshops and reviews; and 4) conduct follow up data analyses.

3. Continue to seek innovative multi-agency strategies (e.g., USGS, USDA, NRCS, and FSA MOUs 2010) to overcome institutional and legal barriers to assembling and sharing data on conservation practices and agricultural activities.
4. Continue to compile evidence of lag times and threshold responses in the Bay and watershed apply new findings and insights into the ongoing data analysis, progress interpretation, and the adaptive management cycle.
5. Incorporate the use of inexpensive, low frequency (e.g., quarterly) sampling of baseflow nitrate from many study watersheds selected to represent a wide range of levels of conservation practices; compare neighboring watersheds within each physiographic province of the Chesapeake Bay Watershed.
6. To quantify the effects on phosphorus and sediment discharge, use continuous automated water quality monitoring to capture the important effects of episodic high flows.
7. Actively create and carry out innovative funding models which seek to integrate non-traditional monitoring partners (e.g., watershed organizations, permitted dischargers, river keepers) into the Partnership's existing fixed station monitoring networks.
8. Address detailed questions about specific conservation practices or specific mixes of conservation practices through specific rigorously defined research efforts at the sites of practice implementation, not through watershed monitoring.
9. Use monitoring data to assess progress in load reductions in tandem with improving model simulation efforts.

Adopt the following BMP effectiveness/tracking and accountability recommendations.

10. Commit to sustained implementation of the NEIEN approach to the open exchange of BMP data across the partnership, collectively working to resolve reporting and tracking issues as they arise and bringing more and more partners and stakeholders who fund and conduct on the ground implementation into the network exchange.
11. Building on the strong foundation already established, bring forward through the Partnership a set of integrated recommendations for a comprehensive BMP tracking, verification and reporting system. While the implementation of this recommendation is directed toward verification of all BMPs (i.e., urban, ag and other), this work should be built on that done to date by the National Association of Conservation Districts, which is funded by USDA NRCS to coordinate development of data collection and verification protocols for non-cost shared agricultural conservation practices implemented in the Chesapeake Bay watershed and by the USGS's work with USDA and the states to propose guidance on improving cost-shared conservation practice data.
12. Actively expand the application of ChesapeakeStat as an analysis and decision making tool within the Partnership.

The Science and Technical Analysis and Reporting (STAR) will be tasked with lead responsibility for carrying out the BMP effectiveness/monitoring recommendations, and the Water Quality Goal Implementation Team (WQ GIT), and its source sector workgroups, will carry out the recommendations for BMP efficiency/tracking and accountability. Both STAR and WQ GIT are requested to provide

separate draft work plans/time lines to the MB by January 31, 2012, that each address completion of the above recommendations.

### **Adaptive Management**

Adopt the following adaptive management recommendations.

13. Reaffirm that the implementation of the Decision Framework under Goal Implementation Team 6 (GIT 6) will include the adaptive management principles described in the NAS report and those contained in other studies published by the National Research Council of NAS.
14. Use the decision framework and an annual planning process to identify specific areas of uncertainty and prioritize the need for reducing high priority uncertainties largely by learning from instances where goals are and are not met.
15. Encourage the GITs, with oversight provided by the Management Board, to systematically identify uncertainties and design activities to reduce those uncertainties that have the highest potential to improve the program's abilities to reach established goals.
16. Encourage continued implementation of the decision framework, which will prompt regular review of whether valid monitoring data is answering the critical questions that will create greater certainty that future actions will be successful.
17. Encourage the partnership to conduct analyses, supported by monitoring and the use of current modeling tools, to explain why management actions are or are not having intended results and to document how the results are used to adjust strategies for reducing nutrients and sediment. EPA should consider evidence of such analyses in deciding on applying federal actions as a consequence of not meeting milestone targets.
18. Request a joint assessment from the WQGIT and GIT 6 on barriers to adaptive management in the TMDL/Watershed Implementation Plan process. For identified barriers, CBP will consult with other watershed restoration programs, adaptive management experts and regulatory experts and propose regulatory and governance changes to reduce barriers. Recommend that GIT 6 be responsible for coordinating and tracking changes.

The GIT 6 will be assigned the responsibility for carrying out the adaptive management recommendations and will be asked to provide the MB by January 31, 2012, with a draft time line/work plan for doing so.

### **Modeling Laboratory**

Adopt the following modeling laboratory recommendations.

19. Commit to proceeding forward with more in-depth evaluation of the recommendation for establishing a Chesapeake Bay Modeling Laboratory and other alternatives to achieve the recommendations of the NRC committee.
20. Establish an action team charged with responsibility for developing a more definitive set of implementation options.
21. Appoint action team members with well recognized expertise in modeling, monitoring data and management decision making in order to represent multiple perspectives.

22. The action team's charge would include:

Evaluation of other existing modeling laboratories, including those cited by the NRC committee, and adaptive management programs that encompass modeling, addressing how they function and how applicable their structure and mandate is to the Chesapeake Bay Program Partnership.

- a. Consideration of the range of options for what would constitute a Chesapeake Bay modeling laboratory, a virtual laboratory, or responsive program reorganization that is capable of carrying out the functions outlined by the NRC committee and addressing the series existing STAC and the jurisdictions' recommendations on modeling and integration with monitoring to support adaptive management.
- b. Development of options and recommendations for actual institutional sponsorship and how the laboratory would function for carrying out mandates.
- c. Assessment of the possible range of financial investments and funding mechanisms required for the establishment and long-term operation of a Chesapeake Bay modeling laboratory and its alternatives.

23. Request the action team to report back to the Management Board on its findings, options, and recommendations within nine months. In turn, the Management Board would then decide on what specific recommendations to put forward for deliberation and final decisions by the Principals' Staff Committee.

The MB will establish a new Modeling Laboratory Action Team charged with the responsibility outlined in the *Key Challenges* document. Additionally, the Modeling Laboratory Action Team will provide the MB with a draft work plan/time line by January 31, 2012, which addresses completing the listed recommendations.

#### **Ongoing Function of the Independent Evaluator**

24. The MB recommends that GIT 6 establish a process for independent evaluation with input from the Citizens Advisory Committee (CAC), STAC and Local Government Advisory Committee (LGAC).

The MB requests that GIT 6 provide a draft work plan/time line that outlines the steps and analytical work to establish the process by January 31, 2012. The *Key Challenges* paper contains options and opinions for the issues that, at a minimum, need to be analyzed by GIT 6 to establish the process for independent evaluation.

#### **CBP Partnership's Formal Response**

25. The MB recommends that the *Key Challenges* and *CBP Partnership Suggested Responses to May 2011 NRC Report* be final.

The *Key Challenges* document focuses on four areas that were identified by the Independent Evaluator Action Team for special focus, discussion by, and recommendations to the MB and PSC. These four areas addressed 13 of the 25 science based conclusions offered in the NRC report. Of four key

challenges areas, three come directly from the NRC report and one at the request of the PSC in May 2011. The four areas are:

- Best Management Practice (BMP) Effectiveness (Monitoring/Tracking and Accountability) in the Chesapeake Bay Watershed.
- Adaptive Management of the Chesapeake Bay Program and Partnership.
- Chesapeake Bay Modeling Laboratory.
- Ongoing Function of the Independent Evaluator in the Chesapeake Bay Program Partnership.

The *CBP Partnership Suggested Responses to May 2011 NRC Report* is a supporting (to the *Key Challenges*) document which addresses three objectives as follows.

- Documents the actions already being taken by the CBP Partnership to address each of the 25 science based conclusions.
- Documents specific suggestions for addressing individual science based conclusions not address within the *Key Challenges* document.
- Provides detailed documentation for the record that the Partnership actively considered each of the 25 science based conclusions.

26. Further, it is recommended that these two documents comprise the formal response of the CBP Partnership to the May 2011; NRC report entitled *Achieving Nutrient and Sediment Reduction Goals in the Chesapeake Bay: An Evaluation of Program Strategies and Implementation*.

27. Finally, the MB recommends that these two Partnership response documents, along with a link to the NRC report be placed on the CBP Partnership's website and become part of the transparent public record on this body of work.

Attachments:

*Key Challenges*

*CBP Partnership Suggested Responses to May 2011 NRC Report*