

Comments on 5-28-10 SAB Integrated Nitrogen Committee Draft Advisory Report –

General Comment

The report generally includes good comprehensive goals, targets and recommendations. However, in a number of cases, the report includes recommendations without assessing the implementability of the recommendations, associated challenges, or their approximate cost to the agency. Some of the recommendations to EPA are for actions for which EPA does not currently have authority (e.g. construction grants program, regulating some agricultural non-point sources).

Specific Comments on Individual Recommendations

1. Recommendation 15a, pages 14 and 100:

Evaluate the suite of regulatory and non regulatory tools used to manage Nr in populated areas from nonpoint sources, stormwater and domestic sewage and industrial wastewater treatment facilities, including goal-setting through water quality standards and criteria. Determine the most effective regulatory and voluntary mechanisms to apply to each source type with special attention to the need to regulate nonpoint source and related land use practices.

Comment: It can be argued that this is what the Nutrients Innovations Task Group already did in preparing the report: *An Urgent Call to Action, Report of the State-EPA Nutrient Innovations Task Group*, August 2009. I am assuming that the SAB reviewed this report but it is not clear if they agree with its findings and whether they agree with some or all of its recommendations/action options.

2. Recommendation 15b, pages 14 and 100:

Review current regulatory practices for point sources, including both wastewater treatment plants and stormwater, to determine adequacy and capacity towards meeting national Nr management goals. Consider technology limitations, multiple pollutant benefits, and funding mechanisms as well as potential impacts on climate change from energy use and greenhouse gas emissions, including nitrous oxide.

Comment: This is an extensive and time consuming effort that only addresses one source of Nr and the report is not clear what additional benefits such an effort will result in. Adequacy to meet national goals is a function of a number of unknown factors including extent of reduction from other sources, timing of State development of water quality standards for various waterbodies, and point source loading allocations.

We agree that considering technology limitations and potential impacts from energy use and greenhouse gas emissions is an important issue towards selecting the most sustainable reduction options. EPA has over the past three years conducted studies and collaborated with the Water Environment Research Foundations and other stakeholders to assess municipal nutrient removal technology performance and limitations as well as means to conserve and recover energy at WWTPs and to share the information with utilities and other stakeholders. However EPA's authority under the CWA limits its ability to base regulatory practices on these considerations. In addition, authority to regulate non-point sources is not currently available and is of the essence in selecting the most sustainable Nr reduction options. The report should acknowledge and address these issues.

3. Recommendation 15c, pages 14 and 100:

Set Nr management goals on a regional/local basis, as appropriate, to ensure most effective use of limited management dollars. Fully consider “green” management practices such as low impact development and conservation measures that preserve or re-establish Nr removing features to the landscape as part of an integrated management strategy along with traditional engineered best management practices.

Comment: Under current regulations, loading allocations result from a TMDL and decisions on loading allocations are made by the States. EPA has and continues to promote green management. In the case of the Chesapeake Bay, an integrated management strategy was developed.

4. Target Goal 3: Recommendation on pages 18 and 145 (one of four target goals based on near-term results).

*The Committee suggests a goal of decreasing livestock-derived NH₃ emissions by 30% (a decrease of **0.5 Tg N/yr**) by a combination of BMPs and engineered solutions. Additionally we recommend decreasing NH₃ emissions derived from fertilizer applications by 20% (decrease by **~0.2 Tg N/yr**), through the use of NH₃ treatment systems and BMPs.*

Comment: EPA does not have the authority to regulate NH₃ emissions derived from non-point source fertilizer applications.

5. Target Goal 4: Recommendation on page 145 (one of four target goals based on near-term results).

*The Committee recommends that a high priority be assigned to nutrient management of stormwater, nonpoint sources and wastewater treatment plant effluents. This will decrease Nr emissions from human sewage by between **0.5 and 0.8 Tg N/yr**, with additional decreases likely with increased stormwater and nonpoint source BMP application support.*

Comment: Report needs to acknowledge challenges related to states adoption of nutrient criteria into water quality standards and propose solutions.

6. Recommendation on page 18 (one of four strategies based on near-terms targets).

*The Committee suggests that a high priority be assigned to nutrient management through a targeted construction grants program under the CWA. This will decrease Nr emissions by between **0.5 and 0.8 Tg N/yr**.*

Comment: The CWA currently does not authorize a construction grants program.

7. Recommendation 20 on page 135

This recommendation states that “In cooperation with the Departments of Agriculture and Army, the Fish and Wildlife Service and the Federal Emergency Management Agency, the EPA should develop programs to encourage wetland restoration and creation with strategic placement of these wetlands where reactive nitrogen is highest in ditches, streams, and rivers. The agency should also address the means of financing, governance, monitoring and verification. Such programs might be modeled on the Conservation Reserve Program or extant water quality and environmental trading programs, but need not be limited to current practices”

Comment: While this recommendation suggests that EPA “develop programs to encourage wetland restoration and creation” and that “such programs might be modeled on... extant water quality and environmental trading programs,” the report does not offer recommendations on expanding the use of water quality trading programs to address Nr challenges. This is surprising given that the report’s authors see value in this approach as a model for wetland restoration and creation. The report devotes several pages to describing market mechanisms, notably water quality trading, including two case examples, but then does not take the next step in offering recommendations on the application of other market mechanisms (beyond wetland restoration and creation) to address Nr. Further exploration of this approach would be particularly timely given the increased international interest by governments, NGOs and the private sector in utilizing market mechanisms to address climate change, water quality, habitat and other environmental objectives.

In this regard, EPA, in collaboration with USDA and other federal partners, is developing environmental markets as an element of the “Strategy for Protecting and Restoring the Chesapeake Bay Watershed.” The strategy can be accessed at: <http://executiveorder.chesapeakebay.net/>. The Environmental Markets section of the report (beginning on page 93) states that:

“Environmental markets are an innovative approach to natural resource management that can accomplish environmental protection goals, encourage new technologies, improve efficiencies, reduce costs and help manage growth. The basic premise of environmental markets is that an entity that needs to reduce impacts to the environment buys credits representing an equivalent or greater amount of environmental improvement from a provider of that improvement.”

The report goes on to describe how “USDA and EPA will work together to develop the technical tools, documentation and tracking methods and other mechanisms that will help ensure the integrity and compatibility of water quality and environmental market programs in the Bay.”

Regarding one of the case examples referenced above, the Long Island Sound Trading Program, presented on pages 123-126 in the report, the program is described on page 123 as resulting in “more than \$22 million in economic activity” during the period from 2002-2006. While this may be an accurate accounting of the total credits purchased during this period, it does not reflect the net savings for the trading partners resulting from the use of a trading mechanism versus individual facilities being required to make upgrades under a more conventional regulatory approach. According to the September 30, 2009 “Report of the Nitrogen Credit Advisory Board for Calendar Year 2008” prepared by the Connecticut Department of Environmental Protection:

“Through 2008, Connecticut and its municipalities have invested more than a half billion dollars in upgrade projects at facilities involved in the NCE. Almost \$200 million of that investment has gone towards nitrogen control. Currently, it is estimated that total upgrade costs to meet the nitrogen control target will exceed \$1 billion, with more than \$400 million of that relevant to nitrogen control upgrades. However, the trading of nitrogen credits with its economic efficiencies is estimated to save the state in the range of \$300 - \$400 million compared to a traditional individual permit program where every facility would be required to meet its individual limit.”

The report can be accessed at:

http://www.ct.gov/dep/lib/dep/water/lis_water_quality/nitrogen_control_program/nitrogen_report_2008.pdf